

CHAPTER 51

THESES OF THE PREVIOUS YEAR (A List of Theses Accepted for Awarded of the Degree of Ph.D. in 100th Annual Convocation-2024)

Doctoral Theses

AFRICAN STUDIES

01. RAI (Saurav)
Role of Development Communication in Social Change in Ethiopia and India: A Comparative Study.
Supervisor: PROF. Pravin Kumar Jha
Th 27278

Abstract

This thesis investigates the pivotal role of development communication in driving social change in two diverse yet dynamic countries. In the ever-evolving landscape of global development, the significance of effective communication strategies in steering societal transformations cannot be overstated. This thesis delves into the multifaceted realm of development communication and its pivotal role in instigating social change, with a focus on the distinctive contexts of Ethiopia and India. Through a comparative lens, the research seeks to unravel the intricate dynamics that shape the efficacy of communication interventions in these two diverse nations. Ethiopia and India, both marked by rich histories, diverse cultures, and complex socio-economic structures, offer an intriguing canvas for this study. The comparative framework allows for a nuanced exploration of how development communication initiatives interact with the unique challenges and opportunities presented by each context. The study employs a comprehensive methodology that integrates qualitative and quantitative analyses, drawing on a range of secondary data sources, including media content, government policies, and public perceptions. By scrutinizing the interplay between communication strategies and social development policies. Additionally, the research explores the impact of policy contexts on the implementation and effectiveness of development communication initiatives in both countries. The findings of this study contribute to the growing body of knowledge on development communication, offering insights that can inform policy decisions, shape communication strategies, and foster a deeper understanding of the role of communication in effecting social change. Ultimately, the comparative analysis serves as a valuable resource for policymakers, communication professionals, and scholars seeking to navigate the intricate terrain of development communication in diverse global contexts. Keywords: Development Communication, Social Change, Ethiopia, India, Comparative Study, Socio-cultural dynamics, Economic, Health and Education, landscape, Communication Strategies, Public Participation.

Contents

1. Introduction of Research 2. Theoretical dynamics of development communication 3. Development communication in India 4. Development communication in Ethiopia 5. Economy, Health and Education: a comparative analysis of social change in Ethiopia and India 6. Conclusion. Bibliography.

ANTHROPOLOGY

02. GAUTAM (Himanshu)

Mental Illness, Ritual Healing and Caregiving Practices: An Anthropological Study of Mehandipur Balaji Temple, Rajasthan, India.

Supervisor: Dr. Mitashree Srivastava

Th 27290

Abstract

The present study offers an anthropological insight into the intricate dynamics surrounding mental illness, ritual healing and caregiving practices within the socio-cultural milieu of Mehandipur Balaji Temple in Rajasthan. This study set out to explore multiple aspects of mental illnesses that are experienced by the sankatwale/ the afflicted visiting the temple for the cure and the complex web of beliefs influencing their help-seeking behaviour. The study encompasses a deep understanding of the mystical phenomenon of ritual healing provided in the temple by the bhagats/ healers. A thorough analysis of the caregiving strategies is also taken into account, shedding light on the challenges encountered by caregivers in carrying out their duties. Its scope is expanded to evaluate the after-effects of healing rituals on the mental, physical and emotional health of the sankatwale and their committed caregivers. The study navigates its course through three important themes drawing its theoretical orientation in the works of Arnold Van Gennep (1960), Erving Goffman (1963), Erika Bourguignon (1968), Victor Turner (1969) and William Sax (2004). First, it disentangles the complex relationship between spirituality and therapeutic methods by examining the basic role that rituals play in the recovery of sankatwale in the temple. Second, the subtle tactics employed by the caregivers in managing the treatment and ritual practices for their afflicted family. Lastly, why do people with mental illnesses continue to be drawn to Mehandipur Balaji Temple even after getting cured, exploring their reasons for choosing ritual healing over conventional mental health procedures. A wide range of respondents participated in the research, including the healers at the temple complex, those who were ill and their committed caregivers. Employing a comprehensive ethnographic approach, the research unveils the lived experiences, perceptions and narratives of these individuals, providing a rich and nuanced understanding of the intricate dynamics at play.

Contents

1. Introduction 2. Literature Review 3. Area and People 4. Research methodology & Fieldwork Experiences 5. Mental Illness: Perception and symptomatology 6. Ritual Healing: Battle against affliction & curative therapies 9. Findings and Conclusion 8. References. Appendices. Published Paper. Conference. Seminar Certificate.

03. PRASAD (Sweta)

Female Reproductive Trajectories and Outcomes in Cardio-Metabolic Health: A Genetic and Epigenetic Study from Punjab.

Supervisor: Prof. K. N. Saraswathy

Th 27294

Abstract

Cardio-metabolic disorders (CMD), are the main causes of morbidity and mortality in both sexes. However, CMDs in women remain significantly understudied, under-recognized, under-diagnosed, and under-treated. CMD risk components have complex etiology and genetic and epigenetic factors are thought to play an important role in their causation. Apart from this, there are various female-specific risk factors mainly in terms of female reproductive trajectories. Hence, the present study aims to understand the association of female reproductive trajectories with cardio-metabolic health independently and also in light of genetic and epigenetic signatures. The present study was conducted on 702 ever-married women from Mansa, Punjab. Data pertaining to socio-demographic and reproductive factors were collected from each participant using a pre-tested and modified interview schedule. Somatometric and physiological measurements were taken from each participant following standard protocol and 5mL blood of 591 participants (used for biochemical, genetic and epigenetic analyses) were collected after consent, while extracted DNA samples were stored in -80°C. Stored DNA was used for the analysis of selected genetic polymorphisms (MTHFR C677T, MTR A2756G, CBS 844ins68) and global DNA methylation. Statistical analyses were performed using SPSS version 22.0 and MDR software. In the present study, the prevalence of various cardio-metabolic risk factors in terms of obesity and hypertension was found to be very high as compared to the national average. Late age at menarche and high parity was associated with underweight, Adverse pregnancy outcomes were associated with overweight and obesity, Late age at menarche and menstrual status were associated with abdominal obesity, gravidity was associated with high fasting blood glucose, menstrual status was associated with TC and HDL. None of the reproductive trajectories were associated with BP, TG, LDL and VLDL. Of various risk factors considered (reproductive trajectories, genetic and epigenetic factors), the study indicated that reproductive variables are more strongly associated with late-life cardio-metabolic risk factors than selected genetic and epigenetic markers. However, their role cannot be undermined. Identifying associations between reproductive trajectories and cardiovascular risk allows for early intervention and prevention strategies. This could include targeted screening, lifestyle modifications, and personalized healthcare plans for women at higher risk. Keywords: Female reproductive trajectories, Pregnancy outcomes, Cardio-metabolic health, Cross-sectional study, One carbon metabolic pathway, Single nucleotide polymorphisms, Global DNA methylation.

Contents

1A. Introduction 1B. Literature Review 2. Area and People 3. Materials and Methods
 4A. Results and Discussion: General characteristics, reproductive trajectories, pregnancy outcomes and cardio-metabolic health variables of the recruited women
 4B. Results and Discussion: The effect of reproductive trajectories and pregnancy outcomes on the cardiometabolic health variables independently and in light of selected gene polymorphisms 4C. Results and Discussion: Global DNA methylation

and cardio-metabolic health variables, female reproductive trajectories and outcomes
 5. Summary and Conclusion 6. References. Annexures. List of Publications

04. TYAGI (Shivani)
Elovl2 Gene Specific Methylation an Age Prediction: Health and Forensic Implications.
 Supervisor: Prof. K. N. Saraswathy
Th 27297

Abstract

Age estimation is crucial for reconstructing the biological profiles of individuals, predicting disease risks across common disorders, and mortality. Epigenetic modifications such as DNA methylation, which varies in an age-dependent manner in specific genes, is the most promising candidate biomarker for age estimation. Through genome wide association studies (GWAS), various candidate genes have been established, of which ELOVL2 (ELOVL Fatty Acid Elongase 2) is the most widely investigated age associated gene. Additionally, ELOVL2 gene as a biomarker of ageing tends to play important roles in biological functions as well as have forensic implications (personal identification) in age prediction. The aim of the study is to understand the ELOVL2 gene specific methylation patterns in age prediction and its implications in health and forensic science. A total number of 402 individuals, aged 25-65 years have been selected from Palwal district of Haryana, India. Data pertaining to socio –demographic (Age, sex), health (blood pressure, BMI) and life style variables (smoking status, alcohol consumption, dietary patterns), were collected using a pre-tested and modified interview schedule. Genomic DNA extraction was done using the salting out method and bisulfite conversion was done using EpiTect bisulfite conversion kit. After bisulfite conversion of the gDNA, respective methylation levels at selected CpG sites of ELOVL2 gene was quantified using real time PCR and droplet digital PCR (302 samples RT-PCR; 100 samples DD-PCR). Data was analyzed using graph pad prism software 9.2 and SPSS software version 22.0. The methylation levels of ELOVL2 gene were found to be highly correlated with chronological age showing mean absolute deviation (MAD) of ± 8.43 years in RT-PCR, and ± 5.15 years in DDPCR. However, none of the health and life style variables were shown to have any association with ELOVL2 gene specific methylation levels, indicating ELOVL2 gene as a conserved and best biomarker of age prediction. Furthermore, the present study suggests the usefulness of RT-PCR and DD-PCR as a reliable age estimation technique. Keywords: DNA Methylation; ELOVL2; Ageing; epigenetics; forensic science

Contents

1. Introduction 2. Literature Review 3. Area and People 4. Materials and methods 5. Results 6. Discussion 7. Summary and Conclusion. References. Annexures. List of Publication.

ARABIC

05. JAMAL AHMAD

Daur al-mirat al-Kuwaitia fi asrai al-arbi fi al-nisf al-sani min al-qarn alashreen risala qidmat laneel shadat aldakturah (The Role of Kuwaiti Women in Enrichment of Arabic Prose in the Second Half of the Twentieth Century).

Supervisor: Dr. Mohammad Akram

Th 27301

Abstract

Kuwaiti women have prominent position, where they used their pens to prove themselves in various fields such as culture, media, business, sports, medicine, etc. They have an active role in Kuwaiti society, and emerged in the fields of intellectual activity, and have been able to be a leader. The second half of the twentieth century witnessed a comprehensive Kuwaiti renaissance in various fields of life. It has a prominent role in this renaissance, and many are distinguished, innovated and superior to men. They have a glorious history in all fields and in the preparation of national cadres of politicians, intellectuals, innovators and leaders. The literary, political, social, economic and educational life of Kuwaiti women has the same contribution side by side with the men, where a large number of poets, writers, and journalists appeared, including: Fatima Yousef Al Ali, Laila Al Othman, Najmah Idris, Thuraya Al-Baq sami, Qarna Al Qarini, Fatima Al Abdullah and others who expressed their cultural and literary reality in Kuwait.

Contents

1. Daula al-Kuwait: al-auzaa al-ajtamaiya wa al-qatsadiya wa al-siyasiya 2. Qazaya al-mirat al-ajtamaiya fi al-Kuwait fi al-nisf al-sani min al-qirn al-mashreen 3. Daur al-mirat al-Kuwaitia fi asrai al-asrati al-nasr al-qasasi al-nisf al-sani min al-qirn al-mishreen 4. Masahamta al-mirat fi asrai al-nasr ghair al-qasasi fi al-nisf al-sani min al-qirn al-mashreen 5. Antajat al-mirat al-Kuwaitiya: nazara amat. Khatma al-behas. Al-musadir wa al-meraja.

06. MOHAMMAD SALMAN

Al-qazaya al-ajtamaiya wa al-siyasiya fi riwayat Hanna Mina dirasa tehliiya larvayata al-mukhtarrah (Social and Political Issues in Hanna Mina's Novels: An Analytical Study of His Selected Novels).

Supervisor: Prof. Sayed Hasnain Akhtar

Th 27302

Abstract

There is no doubt that the Arabic novels in Syria arose in general, having been influenced by Western literary arts at both artistic and substantive levels, but Syria's independence in 1946 could be said to be the basic starting point for building a storytelling movement. As far as Hanna Mina is concerned, he has written more than forty novels throughout his life. As for the important issues are concerned, which have been addressed by Hanna Mina in his novels, there are quite a few. So Hanna Mina, being a realistic writer raised many issues in his various novels, including colonialism, war, women, class conflict, religion, the issue of Palestine, the problems of the working class, imprisonment, political organization, and the establishment of the union, among others. Here it is worthy to mention that the novels which have been selected for critical study in this thesis are: "The Blue

Lanterns”, “The Swamp”, “Fragments of Memory”, The Sail and the Storm”, The Sun on a Cloudy Day” and a few others. This thesis contains the preface/ introduction, 4 chapters, and a summary. The first chapter deals with the Social and political conditions of Modern Syria and the origin and evolution of the Syrian Arabic Novels. The second chapter is about the life and literary works of Hanna Mina. Except that, this chapter sheds light on the styles and patterns used by the writer. The third chapter talks about some important social issues discussed by Hanna Mina in his novels, like the sea, women, class conflict, and religion. The fourth chapter discusses some important Political issues addressed by the writer in his novels, like the war, the colonization, the prison, the political organization, and the unions. After that, the thesis concludes with the conclusion which summarizes the most important findings and outcomes.

Contents

1. Al-surah al-khalfiya 2. Hanna Mina kirwai 3. Al-qazaya al-ijtemaiya fi riwayat Hanna Mina 4. Al-khatma. Qaima al-musadir wa al-meraja.

07. MOHAMMAD YAHYA
Mohammad Mustafa al-Aazmi hayata wa amala fi al-lughat al-arabiya (Mohammad Mustafa al-Azmi: Life and Works in Arabic Language).
 Supervisor: Dr. Mujeeb Akhtar
Th 27303

Abstract

Mohammad Mustafa Al-Azmi is among Indian distinguished scholars. He wrote many books in Arabic Language which are praised by Arab Scholars. In spite of his great services, he did not receive much attention of specialized Arabic researchers to introduce him to the people, to highlight his works to the Arabic language and Hadith whereas he enriched the modern library with contemporary scientific works of distinctive authorship, investigation and creativity in Arabic Language. Mohammad Mustafa Al-Azmi: Mohammad Mustafa Al-Azmi was born in Mau, Uttar Pradesh, India around 1930A.D (1350A.H). He graduated from a well-known Islamic seminary of the Indian subcontinent Darul Uloom Deoband U.P. India in 1952A.D (1372A.H). Afterwards, he moved to Egypt and got the “Certificate of Alimiyat with permission to teach” from Al- Azhar University in 1955A.D. In 1964A.D, he joined Cambridge University, UK for Ph.D. under the guidance of A.J. Arberry and Prof. R.B. Serjeant. His topic was "Studies in the Early Hadith Literature". After completing doctorate he returned to Qatar and served as the director of the National Public Library for two years there. In 1968, he was appointed as Associate Professor at Ummul-Qura University, Makkah. In 1973 he joined King Saud University as Professor of Hadith sciences. He remained there until his retirement in 1991. From 1968 up to his retirement, he oversaw many research works on different subjects of Hadith which were carried out by the students of both Ummul-Qura and King Saud Universities. He also served as member of various educational and research institutions across the Kingdom of Saudi Arabia. In 1980, he was given the prestigious King Faisal Award for his works on Hadith from the Government of Saudi Arabia. He died on Wednesday morning, 2 Rabi `al-Thani 1439, 20 January 2017 in Riyadh.

Contents

1. Musahama al-almal al-hinood al-lughat al-arbiya 2. Sairah Mohammad Mustafa al-Aazmi al-zatiya 3. Jahood Mohammad Mustafa al-Azmi fi mukhtalafa al-mujalat 4. Musahama Mohammad Mustafa al-Azmi fi al-taleef wa al-tehqqeq 5. Usloob Mohammad Mustafa al-Azmi wa minhija min khilal kitabata wa taqeeq al-amala 6. Al-khatma. Al-nataij. Al-musadir wa al-meraja. Al-mahtuyat.

BOTANY

08. ANITA KUMARI

Integrated Transcriptomic, Methyloomic and Meta-QTL Analyses: Identifying Key Candidate Genes and Haplotypes in *Oryza Sativa* (L.) During the Reproductive and Grain-Filling Stages Under Elevated Temperatures.

Supervisors: Prof. Manu Agarwal and Prof. Suman Lakhanpaul
Th 27355

Abstract

Rice, vital for global sustenance and farmer livelihoods, faces production challenges due to global warming. Specifically, high temperatures during anthesis impair pollen fertility, causing spikelet sterility, and heat waves during grain filling produce chalky grains. Addressing these multigenic heat tolerance traits requires discovery of genomic regions that overlap across multiple associated QTLs. Despite the identification of multiple overlapping QTLs, comprehensive identification of consistent and specific QTLs across varied genetic and environmental contexts is needed for breeding. Additionally, while many important QTLs for these traits have been identified, the exploration of haplotypic variations associated with both the traits remains incomplete. Given this backdrop, we strategized to identify the minimum genomic regions associated with high spikelet fertility and low grain chalkiness by performing a Meta-QTL analysis. Our analysis resulted in compression of genetic information from 129/403 QTLs to 31/64 MQTLs, encompassing 3788/5262 genes. Out of these 27/49 genes were found to be differentially expressed in the published datasets and were therefore considered as “candidate genes”. Haplotype analysis identified natural variations within these genes, while our evaluations on a 3k RG subset panel, including 63 and 60 rice genotypes, highlighted alleles linked to enhanced thermotolerance and reduced chalkiness. Our efforts spotlighted optimal allelic combinations in OsHsp16, GBSSI, and SSIIa, linked to heat tolerance and minimal grain chalkiness. We also undertook RNA sequencing and whole-genome bisulfite DNA sequencing to understand the expression and DNA methylation shifts in two contrasting rice genotypes amidst HT stress during the reproductive phase. Our study revealed several differentially regulated genes (DEGs), differentially methylated regions (DMRs) and a subset of overlapping DEGs and DMRs under HT in contrasting rice genotypes. Overall, our findings will be helpful in developing climate resilient rice plants either through marker assisted breeding or CRISPR-Cas based genome editing.

Contents

1. General introduction 2. Review of literature 3. Methods - in silico pipelines 4. Methods - in silico pipelines 5. Transcriptome and DNA methylome landscapes in response to high temperature at booting, in anthers of contrasting rice genotypes 6. Meta-QTL and haplo-pheno analysis reveal superior haplotype combinations associated with low grain chalkiness under high temperature in rice 7. Summary and Conclusions. References. List of annexures and List of publications and conferences.

09. GUPTA (Samta)

Arbuscular Mycorrhiza-Mediated Physiological and Metabolic Adjustments for Attenuation of Arsenic Toxicity in *Triticum aestivum* L.

Supervisor: Prof. Rupam Kapoor
Th 27359

Abstract

Utilization of symbiotic interaction between plants and microbes, such as arbuscular mycorrhiza (AM), is a promising approach to alleviate arsenic (As) contamination in agricultural soil. Present study investigated the ability of an arbuscular mycorrhizal fungus, *Rhizophagus intraradices*, in alleviating As toxicity in wheat (*Triticum aestivum* L.) subjected to three levels of As, viz., 0, 25, and 50 mg As kg⁻¹ soil supplied as sodium arsenate. Comprehensive findings of this research contributed to a deeper understanding of the strategies employed by AM to ameliorate As toxicity. The study demonstrated the potential of AM in developing a conventional bio-fortification strategy that can ensure appropriate mineral levels in wheat grains while reducing the risk of dietary As exposure since mycorrhizal (M)-plants maintained lower concentrations of As and higher concentrations of Zn, Mn, Fe, Ni, Se, and Mo than non-mycorrhizal (NM)-plants. In furtherance to this, the symbiosis improved photosynthesis in *T. aestivum* under As stress and confronted As-mediated alterations in C/N ratio in wheat by restoring As-mediated alteration in sugar and starch metabolism, TCA cycle, and nitrogen metabolism. The study also represented a significant step toward understanding As uptake and detoxification in wheat using AMF. Decreased As concentrations in M-plants by virtue of lower expression of high-affinity phosphate transporters in comparison with NM-plants, supported the significance of AM in reducing As uptake. Additionally, subcellular fractionation showed that As was predominantly concentrated in cell wall and vacuolar fractions of M-plants, supported by augmented levels of hydroxyl and aldehyde groups in cell wall fraction of roots and elicited expression levels of C-type ATP-binding cassette transporters in root and leaf, respectively, that enabled M-plants to alleviate As toxicity. Therefore, deployment of AMF in As contaminated regions to reduce As accumulation, improve growth, uphold nutritive value, and augment As tolerance in crop plants is strongly advocated.

Contents

1. Introduction 2. Review of literature 3. Efficacy of arbuscular mycorrhiza in defining nutritive value of wheat grain 4. Influence of arsenic contamination and arbuscular mycorrhiza on physiological and metabolic processes of wheat 5. The effect of arbuscular mycorrhiza on uptake, translocation, detoxification, and subcellular distribution of arsenic 6. Summary and conclusions. References, Conferences and Publications

10. SHARMA (Priya)

Investigating the Functional Importance and Evolutionary Conservation of Diphthamide Biosynthesis Pathway in Plants.

Supervisors: Prof. Manu-Agarwal and Dr. Chandan Sahi

Th 27365

Abstract

Diphthamide (DPH) is a post-translational modification located on a conserved histidine in the eukaryotic EF2 protein. It is synthesized by a set of seven enzymes and is pivotal in ensuring protein synthesis accuracy and translational fidelity. Eukaryotes with mutations in DPH biosynthesis genes often present significant growth and developmental anomalies. Despite the high conservation of DPH biosynthetic genes, it was only in the recent past that DPH's presence in plants was confirmed. Aiming to deepen our understanding of DPH's conservation and functional relevance in plants, we employed *in silico* sequence comparisons and evolutionary analyses to identify all seven genes tied to DPH biosynthesis in *Arabidopsis*. Interestingly, three of the Dph genes we identified in *Arabidopsis* were capable of functionally rescuing their counterpart yeast mutants. *Arabidopsis* plants

with mutations in Dph genes exhibited developmental anomalies, including stunted primary roots. Furthermore, these mutants had increased vulnerability to hygromycin B, pointing to potential defects in protein translation. Among these, the dph5 mutant was notably affected, displaying a dwarfed and dense growth pattern, stunted roots and leaves, late-onset senescence, and diminished seed production. A deep dive into the proteome and transcriptome of the dph5 mutant revealed DPH5's broad influence over several protein homeostasis-related processes. Digital expression datasets unveiled differential regulation of DPH genes under cold and oxidative stress, hinting at their potential role in the plant's cold-response mechanisms. Furthering this line of inquiry, our meta-QTL (MQTL) analysis on cold-stressed rice seedlings pinpointed Dph1 and Dph6 within MQTL 2.5, and Dph3 within MQTL 6.4. In conclusion, our study unveils fresh perspectives on DPH's instrumental role in modulating translation. This modulation of protein homeostasis by DPH proves vital for both the stress responses and typical growth and developmental processes in plants.

Contents

1. Introduction 2. Review of literature 3. Materials and methods 4. Investigating the evolutionary conservation of Diphthamide Biosynthetic Pathway Genes and their functional importance in Arabidopsis thaliana 5. Meta-QTL and ortho analysis reveal transcriptional regulatory network for cold tolerance mechanism in rice 6. Discussion 7. Summary and conclusions. References and list of annexures. List of Publications and Conferences.

11. THOKCHOM SARDA DEVI

Elucidation of Arbuscular Mycorrhiza-Mediated Elicitation of Pharmaceutically Important Secondary Metabolites in Two High Yielding Genotypes of Ocimum tenuiflorum L. through Physiological, Biochemical, and Molecular Profiling.

Supervisor: Prof. Rupam Kapoor

Th 27356

Abstract

The interaction of arbuscular mycorrhizal fungi (AMF) and plants is known to have significant impact on plant performance and productivity. The present study aimed to explore the potential of AMF in improving the commercial and pharmaceutical values of *Ocimum tenuiflorum* (syn. Tulsi), a perennial shrub belonging to the family Lamiaceae, immensely valued for its medicinal properties. Inoculation with *Rhizophagus intraradices* improved plant biomass, essential oil yield, and the concentrations of active principles such as eugenol, β -elemene, and β -caryophyllene in two high yielding genotypes of Tulsi. The effectiveness of arbuscular mycorrhiza in terms of growth and essential oil content was found to be highly dependent on the plant genotypes. Furthermore, NMR-based non-targeted metabolite profiling of primary metabolites was carried out to explain change in the secondary metabolite profile. Changes in the metabolite profile was further related with various physiological responses and activities or expression levels of key enzymes involved in primary and secondary metabolism. Colonization by AMF boosted the concentrations of non-structural sugars, amino acids derived from glycolysis and shikimic pathway in mycorrhizal (M) plants as compared with non-mycorrhizal (NM) plants. On the contrary, organic acids and amino acids obtained from Krebs cycle were present in lower concentrations in M-plants over NM-plants. Nevertheless, M-plants showed increased activities and expressions of enzymes involved in terpenoid biosynthesis, shikimate, and phenylpropanoid pathways, thereby resulting in augmented production of terpenoids, phenylalanine, and phenols, respectively, when compared with NM-plants. Thus, metabolic reprogramming downstream of glycolysis was apparent wherein mycorrhizal association resulted in allocation of more carbon

resources to secondary metabolism as opposed to primary metabolism. The study also examined how phylogeny of AMF influences plant growth and various other parameters. The results suggested that the taxonomic relatedness of AMF and their symbiotic strategies can be used to predict the functional outcome of the symbiosis.

Contents

1. Introduction 2. Review of literature 3. Effect of arbuscular mycorrhiza on industrial and therapeutic features of *Ocimum tenuiflorum* 4. Mechanisms underlying AM-Mediated changes in secondary metabolite profile 5. Functional coherence among four phylogenetically diverse AMF 6. Summary and Conclusions. References, Conferences and Publications.

12. VERMA (Pratima)
Studies on Effector Biology, DNA Methylome and Dualtranscriptome Analysis to Delineate the Molecular Mechanism of Phytoplasma Infection in Sesame (*Sesamum Indicum L.*)
 Supervisor: Sr. Prof. Suman Lakhanpaul
Th 27367

Abstract

Sesame (*Sesamum indicum L.*, Family- Pedaliaceae), is an important oil-yielding crop cultivated in Asia, Africa, and South America for over 3000 years. It is known as the `Queen of Oil Seeds` as it is rich in protein, oil, oleic acid, linolenic acid and antioxidants. India has been a major producer of sesame for years. However, yield-limiting factors such as photosensitivity, biotic and abiotic stresses are causing the crop`s decline. Among these, phytoplasma infection is a major contributor to yield losses. Phytoplasmas are gram-positive, uncultivable bacteria that lack cell wall and can cause severe symptoms in plant species like phyllody, virescence, fasciation, and witches broom. They hijack host plants by secreting effector proteins to modulate development and defense systems. This study explores the effectomics, methylomics, and transcriptomics of phytoplasma infection in sesame for the first time thereby, filling a knowledge gap. The thesis begins with the introduction providing the updated status of knowledge on the agronomic importance of the sesame crop and omics studies focused on sesame and phytoplasma. It also provides a brief account of the molecular mechanism underlying phytoplasma infection. The first chapter focuses on the effector biology of phytoplasma, detecting major effectors such as SAP54, SAP11, SAP21 and SAP05 from diverse phytoplasma groups infecting sesame in India and their evolution. The second chapter explores DNA methylation changes in sesame in response to phytoplasma infection. The third chapter explores transcriptional changes in sesame and the transcriptome of phytoplasma using a dual RNA-seq approach. The fourth chapter covers a detailed study of the Lateral Organ Boundary Domain (LBD) gene family and its role in phytoplasma infection. Overall, the study aims to delineate the role of effectors in phytoplasma symptom development and unravel its molecular mechanism using newer approaches like methylomics and transcriptomics to reduce agronomic losses caused by phytoplasma worldwide.

Contents

1. Introduction 2. Detection of phytoplasma groups and associated effector molecules namely SAP54/PHYL, SAP21 and SAP11 and SAP05 from phytoplasma infected sesame (*Sesamum indicum L.*) collected from different parts of India and study their evolutionary relationships 3. Comparative methylome analysis of healthy and phytoplasma infected *Sesamum indicum (L.)* plants 4. Dual RNA-Seq analysis of

Sesamum indicum (L.) plants and the phytoplasma to uncover distinct transcriptional signatures 5. Genome-wide identification and expression of sesame (Sesamum indicum L.) lateral organ boundaries domain (LBD) gene family and its putative role in phytoplasma-associated symptom development. Results Discussion. Summary and conclusions. References, Annexures and publications, presentations and awards.

BUDDHIST

13. DESHWAL (Deepika)
A Historical Survey of the Origin and Growth of the Buddhist Samgha (Till the Mauryan Period).
 Supervisor: Dr. Shalini Singhal
Th 27369

Abstract

The development of Buddhism during the Mauryan period in India is studied through archaeological and literary sources. During this period, Buddhism emerged as an institutionalized religion under the patronage of Emperor Ashoka, leading to its expansion and the split into two branches, the Mahāsāṃghika and the Sthaviravāda. Sangha refers to the monastic community of ordained Buddhist monks or nuns and lay followers. The earliest days of Buddhism saw no organized monastic community and women were ordained, but over time, certain rituals and rules were established. The rules governing the behavior of monks originally included ten precepts such as not taking life, not stealing, etc. Buddhism declined in India after the Gupta reign but has been reemerging in the past century. The Mauryan period saw the rise of Buddhism as an institutionalized religion under the rule of Ashoka, who was a patron of the religion. This led to its expansion in the empire and other kingdoms and Ashoka gave donations to the Sangha, redistributed the Buddha's relics, and called the third Buddhist council. Buddhism was based on the teachings of Siddhartha Gautama, also known as the Buddha, and split into two branches under Ashoka: the Mahāsāṃghika and the Sthaviravāda, each of which split into numerous sub-sects. Buddhism declined in India after the Gupta reign but continues to be practiced in the Himalayan regions. Sangha refers to the monastic community of ordained Buddhist monks or nuns, as well as lay people dedicated to the discipline of Dharma-Vinaya. In the early days of Buddhism, there was no organized monastic community and women were among those ordained, but by the time of the First Council, monastic buildings (viharas) were constructed to accommodate monks and certain rituals and rules were established for the Sangha. The behavior of monks was governed by ten rules, including abstaining from taking life, stealing, and sexual misconduct.

Contents

1. Introduction to buddhism 2. Formation and development of buddhist sangha 3. Buddhist monastic life 4. Expansion of buddhism during the Moryan period 5. Mauryan art and architecture. Conclusion and bibliography.

14. **हौशला प्रसाद**
यी-चिंग कृत नॉन-हाय-चि-के-नेइ-फा-च्चान का समालोचनात्मक मूल्यांकन ।
 निर्देशक: डॉ. मनोज शर्मा
Th 27382

सारांश

यी-चिंग की "नॉन-हाय-चि-के-नेइ-फा-च्चान", जिसे "दक्षिण सागर के बौद्ध प्रथाओं और रीति-रिवाजों का अभिलेख" के रूप में भी जाना जाता है, 7वीं शताब्दी के दौरान भारत में उनकी यात्राओं और टिप्पणियों का एक व्यापक और व्यावहारिक विवरण प्रस्तुत करता है। यह शोध-प्रबंध तत्कालीन युग के दौरान भारतीय समाज, संस्कृति, चिकित्सा, शिक्षा और बौद्ध धर्म के विभिन्न पहलुओं में बहुमूल्य अंतर्दृष्टि प्रदान करता है। यी-चिंग के काम का एक केंद्रीय विषय भारत में बौद्ध धर्म की खोज थी, जो इस धर्म का जन्मस्थान था। उन्होंने बौद्ध धर्मग्रंथों को एकत्र करने और बौद्ध प्रथाओं की अपनी समझ को गहरा करने के प्राथमिक लक्ष्य के साथ भारत की यात्रा शुरू की। रास्ते में, उन्होंने कई बौद्ध मठों, पुस्तकालयों और शिक्षा केंद्रों का दौरा किया। यी-चिंग का लेख भारतीय जीवन, धार्मिक अनुष्ठानों, चिकित्सा, और सैद्धांतिक बहसों के विवरणों की एक समृद्ध चित्रयवनिका है। वह भारतीय बौद्ध भिक्षुओं द्वारा मनाई जाने वाली दैनिक दिनचर्या, ध्यान प्रथाओं और धार्मिक त्योहारों का विशद विवरण प्रदान करता है। यी-चिंग का अभिलेख धर्म से परे भारतीय समाज और संस्कृति के व्यापक पहलुओं को शामिल करती है। वह भारतीय उपमहाद्वीप की भौगोलिक विविधता, सांस्कृतिक विविधता और पवित्र स्थलों तथा मंदिरों की समृद्ध विरासत पर चर्चा करती हैं। उनके लेखन में भारत की बहुसांस्कृतिक छवि, इसके धार्मिक बहुलवाद और विभिन्न परंपराओं के सह-अस्तित्व को दर्शाया गया है। यी-चिंग का काम भारत में जीवन की व्यावहारिकताओं पर भी प्रकाश डालता है, जिसमें व्यापार और वाणिज्य के विवरण की झलक भी शामिल है। यी-चिंग का लेख एक मूल्यवान ऐतिहासिक दस्तावेज़ के रूप में कार्य करता है जो न केवल भारत में बौद्ध धर्म का विस्तृत विवरण प्रदान करता है बल्कि 7वीं शताब्दी के दौरान भारतीय समाज और संस्कृति का बहुआयामी दृष्टिकोण भी प्रस्तुत करता है। उपरोक्त किए गए उल्लेख को मैंने अपने मौलिक कार्य के अंतर्गत करने का प्रयास किया है।

विषय सूची

1. यी - चिंग का जीवन परिचय एवं यात्रा 2. यी - चिंग द्वारा वर्णित शिक्षा प्रणाली का वर्णन 3. समाकालीन चिकित्सा पद्धति का विवरण 4. तत्कालीन भारतीय भौगोलिक और परिस्थिति। उपसंहार। संदर्भ ग्रंथ-सूची।

15. **लामा (बुद्ध चन्द्र)**
किन्नौर में बौद्ध धर्म: सामाजिक एवं सांस्कृतिक अध्ययन ।
 निर्देशक: डॉ. एल.बी.स्वर्णकार
Th 27384

सारांश

किन्नौर में सामाजिक सौहार्द एवं सांस्कृतिक सहिष्णुतापूर्ण वातावरण बनाए रखने में बौद्ध धर्म की प्रमुख भूमिका है। आज भी यहा की संस्कृति शान्ति एवं सौहार्द पर ही आधारित है। साम्प्रतिक युग जो कि भौतिकता प्रधान है। सामाज एक बड़ा वर्ग अपनी सम्पन्नता धन-वैभव माकन जन आदि की विपन्नता होने को मानता है। जिसका अनुधावन सभी कर रहे हैं। बढ़ते प्रौद्योगिकीकरण एवं टेक्नोलॉजी से किन्नौर भी अछूता नहीं है। किन्नौर भी इस वैश्वीकरण के युग में शिक्षा, यातायात एवं आधुनिक शिक्षा तथा वैश्विक जनसम्पर्क से परिपूर्ण है। इनका किन्नौर के विकास में सकारात्मक एवं नकारात्मक दोनों ही प्रभाव पडा है। जहाँ किन्नौर ने आधुनिकता से सर्वसुलभता को प्राप्त किया है। वही अपनी संस्कृति में उत्तरोत्तर हास को भी प्राप्त कर रहा है। यातयात की सुलभता से बढ़ता व्यापारिक सम्बन्ध इसे आर्थिक रूप से सम्पन्न कर रहा है। वही बाहरी आवागमन से यहाँ की संस्कृति मे पूर्ण सङ्करता व्याप्त हो रही है। जो किन्नौर के लिए सबसे बड़ी चुनौति के रूप में उपस्थित है। प्रस्तुत शोध प्रबन्ध में किन्नौर की सामाजिक एवं सांस्कृतिक आधारों का अध्ययन साङ्ग-पाङ्ग अध्ययन किया जाएगा।। प्रथम अध्याय-प्रकृत स्थल मे किन्नौर का सम्पूर्ण परिचय जिसमे यहाँ की जनसंख्या दर एवं क्षेत्रीय परिमाप या शामिल है। किन्नौर की विशिष्ट जलवायु के विषय मे पूर्ण विमर्श किया गया है। किन्नौर की लोकभाषा का विमर्श एवं किन्नौर के प्राचीन

उपभागों का सविस्तृत निरूपण किया गया है साथ ही किन्नौर में बौद्ध धर्म का आगमन कहाँ से हुआ एवं उसके क्या आधार है इसका निरूपण किया गया है। किन्नौर के छोटे-बड़े गोनपाओं का निर्माण किया गया है। कुछ नवीन गोनपा जो जार्णोद्धार किये गये हैं। उनका विमर्श भी किया गया है। ग्राम देवताओं के सांस्कृतिक वैशिष्ट्य एवं सामाजिक उपयोगिता का प्रतिपादन किया गया है। किन्नौर के धार्मिक एवं सांस्कृतिक व्यवस्थापन को दर्शाया गया है। इन्हीं दोनों के आधार पर यहां के जीवन प्रणाली प्रचाल्यमान है। किन्नौर का जनमानस सांस्कृतिक एवं धार्मिक मानदण्डों पर किस प्रकार अपना जीवन यापन करता है इसकी सोदाहरण व्याख्या की गयी है। किन्नौर के धार्मिक एवं सांस्कृतिक आधार कौन-कौन है इसका सविस्तृत विवेचन किया गया है। तथा उनमें आने वाली विसङ्गतियों अर्थात् चुनौतियों एवं समाधानों की चर्चा की गयी है। और यही इस शोध का प्रमुख अंग मी है। किन्नौर सहित समूचे हिमालय पर वैश्वीकरण का क्या दुष्प्रभाव पड़ रहा है। जिसके कारण यहाँ की सांस्कृति तथा धार्मिक सम्पदा प्रभावित हो रही है इसकी विस्तृत गवेक्षण की गयी है। उपर्युक्त प्रभावों से बचने का उपाय एवं आगामी पीढ़ी के लिए इसका हस्तान्तरण कैसे किया जाए, यह विचार किया गया है। अपनी परम्परा को बचाने एवं उसके बिस्तार की नीतियों का निर्धारण किया गया है। किन्नौर में बौद्ध धर्म के संरक्षण एवं प्रचार प्रसार में जिन महापुरुषों का योगदान है। उनका जीवन वृत्त एवं योगदान है। उनका जीवन वृत्त एवं योगदान का निरूपण किया गया है। जिन लोगों ने यहाँ कं धार्मिक एवं सांस्कृतिक मान बिन्दुओं बनाए रखने में अपना सर्वस्व दिया उनकी जीवनी भी इस अध्याय में उल्लिखित है। इसी प्रकार किन्नौर के महत्वपूर्ण देवता जो यहाँ की धार्मिक एवं सांस्कृतिक गतिविधियों में अन्तर्सम्बन्धित है उनका भी उल्लेख प्रस्तुत अध्याय में किया गया है।

विषय सूची

1. किन्नौर का परिचय 2. किन्नौर में बौद्ध धर्म का आगमन ग्राम देवता, धार्मिक विश्वास एवं मान्यताएं 3. धार्मिक एवं सांस्कृतिक जीवन 4. धार्मिक एवं सांस्कृतिक परम्परा का आधुनिक सभ्यता के साथ चुनौतियाँ एवं समाधान 5. किन्नौर में बौद्ध धर्म के प्रचार प्रसार में विशिष्टजनों का योगदान । उपसंहार । ग्रन्थ सूची । चित्र सूची ।

16. मेधावी कृष्णा

पाल काल में बौद्ध धर्म का विकास- एक समीक्षात्मक अध्ययन ।

निर्देशक: डॉ. आशीष कुमार

Th 27380

सारांश

पाल काल का शासन पूर्व मध्यकाल का महत्वपूर्ण शासन के रूप में माना जाता है। गुप्त साम्राज्य के विघटन के बाद कोई ऐसी सार्वभौमिक सत्ता का उदय नहीं हुआ था जो सम्पूर्ण भारतवर्ष को ऐक्यबद्ध कर सके। गुप्त साम्राज्य के विघटन के बाद हर्षवर्धन एक शक्तिशाली राजा बना किन्तु वह सम्पूर्ण उत्तर भारत पर राज्य नहीं कर सका। गुप्त साम्राज्य तथा हर्षवर्धन के राज्यकाल के विघटन के बाद सम्पूर्ण उत्तर भारत में अराजकता की स्थिति व्याप्त हो गयी । उत्तरी भारत में छठवीं सदी के मध्य से लेकर सातवीं शताब्दी के मध्य तक कोई सत्ता अधिक दिनों तक कायम न रह सकी। इस समय सामंतों का प्रभाव प्रबल हो गया तथा केंद्रीय सत्ता का लोप हो गया। इसी अराजक व्यवस्था को समाप्त कर गोपाल ने पालवंश की स्थापना की। इस मत्स्यन्याय (जैसे बड़ी मछलियाँ छोटी मछलियों को खा जाती हैं) अराजकता को दबाने के लिए कुछ प्रमुख लोगों ने गोपाल को अपना चुना। इस प्रकार राजा का निर्वाचन एक अभूतपूर्व घटना थी। गुप्तकाल में ब्राह्मण धर्म यानि वैष्णव धर्म का काफी प्रभाव था । लेकिन पूर्वी भारत में पालवंश की स्थापना के बाद पाल राजाओं के द्वारा बौद्ध धर्म को काफी संरक्षण प्रदान किया गया ।उनके द्वारा बौद्ध धर्म के विकास में अभूतपूर्व योगदान दिया गया। सम्राट अशोक के बाद पाल राजाओं के द्वारा बौद्ध धर्म के विकास में दिए गए योगदान को दूसरा चरण के रूप देखा जा सकता है । सम्पूर्ण शोधकार्य को पाँच अध्यायों में बाँटा गया है , जो निम्नलिखितहै - 1. पाल शासन तथा बौद्ध धर्म के विकास से सम्बन्धित साक्ष्य । 2. पाल काल का राजनैतिक इतिहास । 3. पाल काल का धार्मिक इतिहास । 4. बौद्ध धर्म के विकास में पालवंश का योगदान । 5. पाल काल में बौद्ध कला का विकास ।

विषय सूची

1. पाल शासक तथा बौद्ध धर्म के विकास से सम्बन्धित अभिलेखीय साक्ष्य 2. पाल काल का राजनैतिक इतिहास 3. पाल काल का धार्मिक इतिहास 4. पाल काल में बौद्ध धर्म का विकास 5. पाल काल में बौद्ध कला का विकास । उपसंहार । सन्दर्भ ग्रन्थ-सूची । परिशिष्ट ।

17. शानू कुमार

आधुनिक परिप्रेक्ष्य में बुद्ध एवं अम्बेडकर के सामाजिक चिंतन का अध्ययन ।

निर्देशक: डॉ. कृष्ण मुरारी

Th 27385

सारांश

प्रस्तुत सार 'आधुनिक परिप्रेक्ष्य में बुद्ध एवं अम्बेडकर के सामाजिक चिंतन का अध्ययन', शोध-कार्य पर केंद्रित है। इस शोध-प्रबंध में बुद्ध एवं अम्बेडकर के सामाजिक चिंतन को बताते हुए वर्तमान समय में इसके महत्त्व और प्रासंगिकता को दर्शाया गया है। इसके अंतर्गत सर्वप्रथम बुद्धकालीन और अम्बेडकरकालीन सामाजिक व्यवस्था का अध्ययन किया गया है। भारत के इतिहास में वर्ण-व्यवस्था सामाजिक विभाजन के रूप में प्राचीन काल से आज तक निरंतर प्रवाहमान रही है। भारत के अब तक के इतिहास के अध्ययन में पाते हैं कि सभी जगह समाज के अंदर जाति-प्रथा, स्त्रियों की दशा, सामाजिक, आर्थिक, धार्मिक तथा राजनीतिक कुछ न कुछ समस्याएँ रही हैं। मानवता, मूल्यों, आदर्शों व नैतिकता का स्तर निरंतर गिर रहा था। उस काल, समय, परिस्थिति में समय-समय पर महापुरुषों का जन्म हुआ। इन महापुरुषों में अपने समय में भगवान बुद्ध और डॉ. अम्बेडकर सुप्रसिद्ध रहे हैं, जिन्होंने समाज को एक नई राह दिखाई। बुद्ध की शिक्षाओं के अंतर्गत सामाजिक चिंतन की अवधारणा ने समाज में सामाजिक असमानता को कम करने के साथ एक व्यावहारिक दृष्टिकोण भी प्रस्तुत किया। इस प्रकार उनके उपदेश व शिक्षाएँ समाज में बढ़ रही सामाजिक, धार्मिक बुराई, आतंकवाद, साम्प्रदायिकता, नक्सलवाद, हिंसा तथा मानसिक शोषण से मुक्त करवाने में एक अहम भूमिका निभा रही है। वहीं आधुनिक भारतीय समाज के संदर्भ में सामाजिक न्याय और सामाजिक परिवर्तन की व्याख्या यदि की जाती है तो डॉ. अम्बेडकर के नाम को अनदेखा नहीं किया जा सकता क्योंकि उनके सामाजिक चिंतन ने भारतीय संविधान में स्वतंत्रता और समानता पर आधारित न्यायपूर्ण सामाजिक संरचना की जो परिकल्पना की और उसे मूर्तरूप देने हेतु संविधान में समाज के वर्गों को न्याय सुनिश्चित करने की दृष्टि से उनके लिए जो सुरक्षात्मक प्रावधान किए, उनमें डॉ. अम्बेडकर का नाम अग्रणीय है। इस प्रकार, गौतम बुद्ध और डॉ. अम्बेडकर के सामाजिक चिंतन का वर्तमान परिप्रेक्ष्य में अत्यधिक महत्त्व एवं प्रासंगिकता है।

विषय सूची

1. परिचय 2. बुद्ध एवं अम्बेडकर का जीवन वृत्तान्त 3. गौतम बुद्ध का सामाजिक चिंतन 4. डॉ. अम्बेडकर का सामाजिक चिंतन 5. वर्तमान में बुद्ध एवं अम्बेडकर के सामाजिक चिंतन का महत्त्व एवं प्रासंगिकता 6. निष्कर्षात्मक अवलोकन । सन्दर्भ ग्रन्थ सूची ।

18. सुभाष चन्द

पश्चिमी हिमालय का कला एवं संस्कृति: एक समन्वयात्मक अध्ययन ।

निर्देशक: डॉ. गलदन सेंगें

Th 27381

सारांश

पश्चिमी हिमालय में हिमाच्छादित उतुंग पर्वत श्रृंखलाओं से घिरा किन्नौर, लाहोल-स्पीति, चंबा-पांगी हिमाचल प्रदेश का एक भोट देशीय सीमावर्ती क्षेत्र है। भोटवासियों (तिब्बतवासियों) तथा भोट भाषा भाषी किन्नौरवासियों के लिए खुनु और स्थानीय लोगों को कनोरिड नाम से प्रचलित है। भारत के हिमालयी क्षेत्रों में बौद्ध धर्म का प्रचार ईसा पूर्व तीसरी शताब्दी में आरंभ हुआ। लदाख - लाहुल स्पीति तथा किन्नौर जैसे भारत के पश्चिमी हिमालयी क्षेत्रों में यह प्रचार प्रसार करीब - करीब एक ही

कालखण्ड में हुआ। विगत करीब तेईस शताब्दियों के इतिवृत्त की प्रारम्भिक दस ग्यारह शताब्दियों के बारे में क्रमबद्ध एवं प्रामाणिक साक्ष्यों का अभाव है, किन्तु सातवीं शताब्दी ईसवी के बाद इतिहासकारों ने इन क्षेत्रों में बौद्ध धर्म, कला एवं संस्कृति का लेखा - जोखा तैयार किया। आधुनिक ज्ञान - विज्ञान के विकास के साथ हिमालय घाटी के परम्परागत जीवन और लोक संस्कृति में भी अनेक परिवर्तन हुए हैं, जो कुछ दृष्टियों से संगत तथा प्रतीत होते हैं। विज्ञान और तकनीकी साधनों से प्राप्त सुविधाओं के फलस्वरूप सीवावर्ती लोगो का जीवन के प्रति दृष्टिकोण बदल रहा है। प्राचीन परम्पराएं, आस्थाएं, प्रथाएं, सामाजिक व्यवस्थाएं, जिन्होंने शताब्दियों तक यहाँ के जनजीवन को सुव्यवस्थित रखा था, वे आज अपनी पहचान बनाए रखने के लिए संघर्ष कर रहे हैं। नवीन शिक्षा व्यवस्था में उस क्षेत्र के लोगों की अपनी भाषा को समुचित स्थान नहीं मिलने से भी उनकी संस्कृति संकटापन्न है। भोटी भाषा एवं लिपि में विशाल वाङ्मय उपलब्ध है, परन्तु नवीन पीढ़ी के लोगों का उससे अपरिचय बढ़ रहा है।

विषय सूची

1. पश्चिमी हिमालय का सांस्कृतिक इतिहास 2. लोक वाद्य व लोक नृत्य का स्थान 3. लोक संगीत एवं क्रमबद्ध विकास 5. पश्चिमी हिमालय में पहाड़ी शैली एवं चित्रकला का इतिहास । उपसंहार। संदर्भ ग्रंथ सूची । पारिभाषिक शब्दकोश ।

19. ZINTOO (Pinky)

The Role of Women in the Development of Buddhism in Kinnaur District of Himachal Pradesh (1960-2019): A Case Study.

Supervisor: Dr. Galdhan Sangai

Th 27376

Abstract

The research endeavors to explore the trajectory through which women in Kinnaur transitioned into followers of Buddhism and how the teachings of Buddha have impacted their domestic lives. This inquiry encompasses the establishment of Buddhism in Lower Kinnaur, the chronological emergence of women adherents, and the underlying motivations driving their engagement. Moreover, an investigation into the extent of Buddhism's influence on women's domestic lives, encompassing both tangible and psychological dimensions, is undertaken. The foundation of this study is the introduction and development of Buddhism in the Kinnaur district, as well as the implications that people belonging to the Schedule Caste category face in the context of Buddhism, the equal status that women achieve in their social environment alongside men, and the role that women play in fostering the growth of Buddhism in Lower Kinnaur. The impetus behind the relatively restrained representation of lower-caste individuals as nuns or monks can be attributed to the constrained educational avenues available to them within the domain of Buddhism. In a parallel vein, women's encounters with educational barriers and the perceptual facets pertaining to the incorporation of Buddhist studies within the sphere of their lives warrant examination. Interrogating nuns about the age at which they assume the monastic path and the opportunities that unfold subsequent to their initiation forms a crucial facet of this study. Scrutiny into the perceptions harbored by men regarding Buddhist women, given the amalgamated cultural backdrop and the prevailing predilection towards local deities, constitutes an essential area of investigation. Historical antecedents reveal that nuns in Kinnaur once encountered disparate levels of respect in comparison to their male counterparts, yet contemporary times have witnessed the attainment of parity in education and participatory rituals. As a result, women in Buddhism now enjoy equal rights to men to participate in Buddhist practices.

Contents

1. Introduction 2. Beginning of the awareness among women in buddhist Studies and secular education 3. Reinforcement of buddhist education and religious practices through women empowerment 4. Women's prospective and prospect in buddhist education in kinnaur 5. Social engagement of women in development of buddhism in kinnaur 6. Women as messenger and the guardian of buddhism in kinnaur. Conclusion and recommendations. Bibliography, Appendix and Glossary.

CHEMISTRY

20. AASHISH
Metal-Organic Frameworks and A Gel of Functionalized Pyridine-Amide-Based Ligands for Sensing and Catalytic Applications.
 Supervisor: Prof. Rajeev Gupta
Th 27388

Abstract

This dissertation aims to understand the fundamental concepts of catalysis and sensing via the development of functionalized Metal-organic frameworks. This dissertation is divided into five chapters. Chapter 1 is introductory in nature and discusses the selected examples of functionalized MOFs that have been utilized for sensing and catalytic applications. Chapter 2 discusses the synthesis of an alkyne-functionalized Zn(II)-based luminescent metal organic framework 1 for the ultrasensitive detection of Cu⁺ and Pd²⁺ ions in aqueous medium. Competitive binding studies, detection limits and Stern-Volmer constants illustrated notable sensing ability of MOF 1 towards Cu⁺ and Pd²⁺ ions. The mechanism of $\pi - d$ interaction was inferred with the help of solid-state NMR, FTIR and XPS spectral studies; zeta potentials and EDX measurements. Chapter 3 discusses the synthesis of a series of Zn(II)-MOFs, 3□7, based on hydrophilic pyridine-2,6-dicarboxamide-based scaffolds that are additionally decorated with hydrophobic alkyl chains. Such Zn-MOFs were found to enhance the interfacial interaction between the two immiscible layers, aqueous vs. organic, and acted as the true Phase-Transfer Catalysts (PTCs). Molecular docking, and NMR and FTIR spectral investigations were employed to support HB-PTC based mechanism. Chapter 4 discusses the synthesis of a bifunctional Co-based MOF 8 providing both Lewis acidic-basic (Co and -OH-) and Bronsted acidic -COOH sites. This Co-MOF was utilized as a heterogeneous catalyst for the transfer hydrogenation of assorted carbonyls compounds using isopropanol as the hydrogen source. The Co-MOF exhibited excellent catalytic performance for the transfer hydrogenation of assorted aldehydes and ketones, resulting in high yield and excellent selectivity. Chapter 5 discusses the synthesis of two lanthanide-based metallogels (9-Eu and 9-Tb) assisted by coordination-driven self-assembly mechanism. Both metallogels were utilized for the selective detection of DMMP, a nerve agent simulant. Both gels exhibited 'turn-off' fluorescence response in the presence of DMMP with impressive detection limits and Stern-Volmer constants.

Contents

1. Introduction 2. A Zn-MOF Functionalized with Alkyne Groups: Itrasensitive Detection of Cu⁺ and d₂⁺ Ions in Aqueous Medium 3. Tuning the Hydrophobicity and Hydrophilicity in Metal- Organic Frameworks for Hydrogen Bonding Phase- Transfer Catalysis 4. A Bifunctional Cobalt-based Metal-Organic Framework as a Sustainable Catalyst for the Transfer Hydrogenation of Biomass-derived Compounds 5. White Light Emitting Lanthanide-based Metallogels: Tunable Luminescence, Anticounterfeiting and Selective Detection of a Nerve Agent Simulant. Summary and List of Publications.

21. ANKUR KUMAR
Development of Morphology Controlled Alloy Nanoparticles for Electrocatalytic Water Splitting Reaction.
 Supervisor: Prof. Sasanka Deka
Th 27389

Abstract

Nanomaterials have gathered broad interest in different applied fields of science and technology. This is because nanomaterials have the unique ability at the nanoscale to engineer the structure and escort the genesis of many multifunctional composites with improved performance. This ultimately accompanies the fabrication of ample advantageous materials for fuel cells, catalysts, automobiles, telecommunications, energy production, mechanics, biology, medicine, etc. Herein, we design and develop various kinds of alloy nanomaterials and investigation of their utilization as efficient and promising electrocatalysts for water-splitting reactions. The syntheses of different types of alloy nanoparticles were performed by the development of new hydrothermal approaches which were carried out at different temperatures, varied amounts of reducing agent and various concentrations of the bases. The prepared nanomaterial's crystal structure, morphology and surface characterization were then characterized using XRD, FESEM, TEM, HRTEM, BET, FT-IR, AFM, Raman, and XPS analyses. The formed alloy nanostructures demonstrate robust and promising electrocatalysis in acidic and alkaline environments exhibiting long-term stability and durability with high turnover frequency (TOF).

Contents

1. Introduction of metallic alloy nanoparticles and nanocomposite for electrocatalytic water splitting reaction 2. Synthesis procedure, sample characterization techniques and electrochemical measurements 3. Development of PdSn hollow alloy nanoparticles by *insitu* galvanic replacement operation towards efficient electrocatalysis for hydrogen evolution reaction 4. Bifunctional FeCoPd alloy nanostructure as a robust and proficient electrocatalyst for hydrogen and oxygen evolution reactions 5. Amorphous Cu-Co-B as a promising and highly efficient non-precious electrocatalyst for water oxidation reaction 6. Designing of nanocomposite by NiCu dealloyed nanoparticles on hierarchical co nanosheets towards promising overall water splitting in an alkaline medium. Summary, Future Scope, List of Publications and List of Conferences.

22. GUNJAN
Exploration of Synthetic Strategies, Computational Modeling, and Biological Assessment: Unveiling the Potential of Some Biologically Important Heterocycles and Marine Natural Compounds.
 Supervisor: Prof. Sunita Bhagat
Th 27393

Abstract

In this research, we embark on a comprehensive investigation of the untapped potential of biologically important heterocycles and marine natural compounds through a multidisciplinary approach involving synthetic strategies, computational modeling, and biological assessment. The diverse array of heterocyclic compounds and marine-derived molecules exhibit promising biological activities, making them attractive targets for drug discovery and development. To complement the synthetic efforts, computational modeling techniques are employed to gain valuable insights into the molecular properties and interactions of these heterocycles and marine natural compounds. Molecular docking and quantum mechanical calculations are utilized to elucidate their binding interactions with specific biological targets, unraveling the molecular basis of their bioactivity. This integrated computational approach serves as a powerful tool to guide experimental design and optimize the compounds for enhanced biological efficacy. Subsequently, the biologically important heterocycles and marine natural compounds are subjected to rigorous biological assessments. In vitro experiments are conducted to evaluate their potential as therapeutic agents in various disease models like cancer cell lines. Through these biological evaluations, we aim to validate the bioactivity of the synthesized compounds and identify promising candidates for further development. The significance of this research lies in its potential to reveal new chemical entities with high biological relevance and pharmaceutical applications. This thesis presents a comprehensive exploration of the potential of biologically important heterocycles and marine natural compounds. The integration of synthetic, computational, and biological methodologies offers a systematic and innovative approach to uncovering novel drug candidates and fostering advancements in the field of medicinal chemistry and drug discovery. The findings of this research contribute to the collective efforts in addressing unmet medical needs and creating a healthier future for society.

Contents

1. Simple and Highly Efficient Synthesis of β -Carboline Derivatives via Pictet-Spengler Reactions in Water and Studies on Cytotoxic Activity of their Derivative against Various Human Tumour Cell Lines
 2. Design, Synthesis, Molecular Docking, and in vitro Biocompatibility Studies of Marine Natural Product Herdmanine Derivatives as Multitarget Inhibitor for EGFR and HER2 Breast Cancer Proteins
 3. Design and Synthesis of Biologically Important Novel Substituted 9*H*-pyrido[3,4-*b*]indole-3-carboxamide β -Carboline Derivatives via Ultrasonic Irradiation and their Molecular Docking studies against SARS-CoV-2 M^{Pro}
 4. Molecular Docking Studies for Determination of Potential Inhibitors against SARS-CoV-2 Main Protease (M^{Pro}) using Analogues of Some Novel Amino Pyrimidine Derivatives and Their ADME and DFT Studies. Summary, List of Publications and Conferences.
23. KANOJIA (Rohit)
Development of New Extraction Methodologies for Analysis of Toxins and Drugs of Abuse from Biological Samples.
 Supervisors: Prof. Sunita Bhagat and Dr. A. K. Jaiswal
Th 27397

Abstract

This Ph.D. synopsis entitled “Development of New Extraction Methodologies for Analysis of Toxins and Drugs of Abuse from Biological Samples” is being submitted to University of Delhi. The thesis deals with development of new extraction methodologies and protocols to extract, isolate and analyse toxins and drugs of

abuse like ethanol, inhalants, cigarette-tobacco, steroids (stanazolol, dexamethasone, deca-durabolin, sustanon), ganja and hashish by using various analytical techniques like GC-HS, GC-HS-MS, AAS-VGA, ICP-MS, LLE, SVLE, HPTLC and Ultrasonication. The scope of research presented in this work significantly advances the field of analytical toxicology, specifically in the extraction and analysis of drugs and toxins. These new research methods promise more precise and thorough extraction of toxins and drugs from biological samples, enabling a deeper understanding of their presence and impact on individuals. Its implications extend to both the public health domain and forensic toxicology studies, marking a significant stride in these crucial areas. In the realm of public health, these advancements are critical in identifying and mitigating the effects of toxins and drugs on human health, thereby informing interventions and preventive measures. Moreover, in forensic investigations, these advancements could accelerate case resolutions, potentially reducing the pendency of cases in legal proceedings. The devised research methods and findings within this study promise to streamline the work of doctors, researchers and forensic scientists. By providing more refined and efficient techniques for drug and toxin analysis, this research has the potential to profoundly impact the timeliness and effectiveness of critical processes. Ultimately, this work's importance lies in its potential to safeguard public health, support accurate forensic analysis, and contribute to the swift resolution of legal cases, ultimately benefiting society as a whole.

Contents

1. Extraction and Analysis of Ethanol and Methanol from Spiked Blood, Urine and Vitreous Humor using GC-HS 2. Analysis of Constituents of Inhalants of Abuse in Delhi Region using GC-HS and GC-HS-MS: An Experimental Study 3. Studies of Arsenic levels in Tobacco (Cigarettes), Human Urine and Ground Water Samples (Ayodhya region) using Various Elemental Analysis Techniques 4a. Development of New Solvent Systems and Methodologies for Extraction and Analysis of Commonly Abused Drugs by Youth in India using LLE and HPTLC 4b. Extraction and Analysis of Nicotine from Tobacco (Cigarettes) using Small Volume Liquid Extraction and Ultra-Sonication Technique 5. Development of a New Methodology for Extraction and Analysis of Pesticides, Drugs, Heavy Metals and Various Toxins from Viscera Samples Summary and List of Publications.

24. NEGI (Swati)
Synthesis of Rhodamine and Pyranopyrazole Based Scaffolds as Chemosensors and Anticancer Agents.

Supervisor: Prof. Rakesh Kumar

Th 27400

Abstract

Abstract of the thesis entitled: "Synthesis of Rhodamine and Pyranopyrazole Based Scaffolds as Chemosensors and Anticancer agents" This thesis is divided into four chapters, i.e. Chapter I, Chapter II, Chapter III and Chapter IV. Chapter I briefly describes about the synthesis of new rhodamine based fluorescent and colorimetric chemosensor S1 for selective recognition of Cr³⁺ trivalent metal ion. Furthermore, the chemosensor S1 was found to be recyclable and also colorimetric variation observed on the addition of Cr³⁺ and EDTA to S1 which mimic the "INHIBIT" molecular logic gate. The chemosensor S1 also demonstrated its practical utility through detection of Cr³⁺ in the solid state. Chapter II In this chapter, a new pyranopyrazole based colorimetric chemosensor P1 has been synthesized for the detection of biothiols and its application in real samples. Biothiols are the compounds containing sulfhydryl groups and are often known as mercaptans. Cysteine (Cys),

Homocysteine (Hcy) and glutathione (GSH) are the most important biological thiols. They have very similar structures and chemical properties but play different and irreplaceable roles in human physiology. Chapter III deals with synthesis of isatin-triazole appended pyrano [2, 3-c] pyrazolone scaffolds as potent anti-prostate cancer agents. In this chapter total fifteen compound has been synthesized via Copper-catalysed azide-alkyne 1, 3-dipolar cycloaddition reaction. The synthesized compound will be screened for their anti-prostate cancer. Chapter IV deals with synthesis and in-silico studies of triazole tethered pyranopyrazoles as promising anti-breast cancer agents. In this chapter, newer triazole tethered pyranopyrazolone scaffolds are synthesized by linking triazoles with pyranopyrazole via Copper-catalysed azide-alkyne 1, 3-dipolar cycloaddition reaction. The synthesized compounds will be screened for their anti-breast cancer activity.

Contents

1. A Rhodamine based Fluorescent and Colorimetric Chemosensor for the Detection of Cr³⁺ Ions and its Utility in a Molecular logic Gat 2. A New Pyranopyrazole based Colorimetric Chemosensor for the Detection of Biothiols and its Application in Real Samples 3. Design and Synthesis of Isatin-Triazole Appended pyrano [2,3-c] pyrazolone Scaffolds as Potent Anti-Prostate Cancer Agents 4. Synthesis and in-silico studies of triazole tethered pyranopyrazoles as promising anti-breast cancer agents. Summary and Published Papers.
25. PRAACHI KAKATI
Base-Mediated.
 Supervisor: Prof. Satish Kumar Awasthi
Th 27396

Abstract

In this work I have designed and synthesised diversified Ionic liquids and demonstrated their applicability in a number of organic transformations. Ionic liquid possesses various properties of green solvents, including negligible vapour pressure, flammability, and recyclability, among others. They readily dissolve a wide range of organic and inorganic molecules, making them an ideal solvent for organic transformation. By simply monitoring the cation and anionic pair we can synthesise different task specific ionic liquids according to reaction we pursue. Initially, I had used a simple ammonium ionic liquid and showcased its versatility in three different multicomponent reactions of Biginelli Reaction, Hantzsch Reaction and Neimantowski Reaction. Followed by this I have synthesised an ionic liquid and immobilized it on chitosan to develop a solid support ionic liquid. This was then used as a heterogeneous catalyst to synthesise esters of carboxylic acid, amino acid and carbohydrates in a solvent free protocol to give good to outstanding yields. Furthermore, I have entrapped copper in ionic liquid in its Cu(I) form and used it as a catalyst in C-C and C-N Ullmann Coupling reactions. This reaction proceeded in a ligand free manner in EtOH:H₂O media under benign conditions to produce exceptionally good yields. Finally, I have synthesized a covalent organic poly ionic liquid and used it to activate NBS in bromination and chlorination reactions, resulting in yields ranging from good to outstanding. All of these reactions were completed under sustainable conditions due to the present of ionic liquid which acted as a green catalyst in accordance with green chemistry principles.

Contents

1. Recent Advances in Ionic Liquids 2. Aiding the Versatility of Simple Ammonium Ionic Liquid by the Synthesis of Bioactive 1,2,3,4-tetrahydropyrimidine, 2-

aminothiazole and quinazolinone Derivatives 3. Chitosan Supported Ionic Liquid, a Multifaceted Catalyst for Sustainable and Efficient Synthesis of Carboxylic, Amino Acid and Carbohydrate Esters 4. Design and Synthesis of Copper Entrapped Ionic Liquid as Heterogeneous Catalyst for Chemo Selective C-C and C-N Ullmann Coupling Reactions 5. Constructing Covalent Polymer based Poly Ionic Liquid to Promote Halogenation. List of Publications and List of Conferences and Seminars.

26. SANJEEV KUMAR

Synthesis of Engineered Metal Oxide Nanomaterials for Photocatalytic Hydrogen Generation and Degradation of Organic Contaminants.

Supervisor: Prof. S. K. Awasthi And Dr. Vinod Kumar

Th 27404

Abstract

The main objective of the current thesis is to investigate and devise new strategies for generating effective, environmentally friendly, and economically feasible metal oxide catalysts. These metal oxides were synthesized in the form of nanoparticles and nanocomposite via facile and novel synthetic approaches. The pivotal target of the work is to investigate variation in properties of metal oxides upon cation doping and formation of heterojunction in the nanocomposite. These metal oxides are used to generate green fuel and detoxification of organic pollutants using renewable resources that are cost effective and easy to handle. The presented work explores and demonstrates the potential of metal oxides in the field of energy production and treatment of wastewater. These ideas open up a new path in the direction of energy generation and environmental remediation using metal oxides through various approaches.

Contents

1. Introduction and Review of the Literature 2. B-Doped SnO₂ Nanoparticles for Hydrogen Generation via Photocatalytic Water Splitting and Degradation of Toxic Organic Dyes 3. Heterostructure Cu/Cu₂O/CuO Nanocomposite Facilitating Photocatalytic Generation of Hydrogen and Detoxification of Organic Pollutants 4. Synthesis of Ti³⁺ Induced Anatase TiO₂ Nanoparticles and its Application for Photodegradation of Pharmaceuticals Summary, List of Publications and List of International / National Conferences / Workshop and Award.

27. TIWARI (Shashikant)

Metal Free Approach for the Functionalization of Alkynes via Cycloaddition and Difunctionalization Strategy.

Supervisor: Prof. Diwan S. Rawat

Th 27407

Abstract

The inherent efficiency and atom economy of the cycloaddition reactions (several bonds and stereocenters are generated in a single reaction) have established its utmost significance in contemporary organic synthesis. In chapter one and two and 3A we had studied the cycloaddition reactions of alkyne and achieved the regioselective synthesis of densely functionalized indolizines via (2 + 2 + 1) cycloaddition and fuchsones pharmacophore was obtained by Alkynes [2+2] Cycloaddition/Retro-4π Electrocyclization Reaction Of p Quinone Methides with Alkyne. On the other hand, Synthesis of 1, 3-diaryl functionalized indolizine via [3 + 2] Cycloaddition Reaction using para-Quinone Methide as Three-Atom synthon was also achieved under metal free conditions. In chapter 3B and 4 Stereo-selective

fluorine sulfur difunctionalization (fluorosulfonylation) and hydrosulfonylation of terminal alkynes was achieved under metal free conditions to get (Z)- β - fluoro vinylsulphones and (Z)-vinylsulfones respectively.

Contents

1. Regiodivergent Synthesis of Densely Functionalized Indolizines *via* (2+2+1) Cycloaddition 2. [2+2] Cycloaddition/Retro-4 π Electrocyclization Reaction of *p*-Quinone Methides with Alkyne: An Ingress of Fuchsones pharmacophore 3A. 3A: Synthesis of 1, 3-diaryl functionalized indolizine *via* [3 + 2] Cycloaddition Reaction using *para*-Quinone Methide as Three-Atom synthon 3B. 3B: Stereo-selective fluorine sulfur difunctionalization (fluorosulfonylation) of terminal alkynes: Synthesis of (Z)- β -fluoro vinylsulphones 4. Air induced Phosphoryl radical mediated stereoselective synthesis of *cis*-vinylsulfones from terminal alkynes *via* halogen atom transfer (XAT). Summary, List of Publications and Conferences.
28. UNIYAL (Shrishti)
Investigation of some superstructured mixed metal oxides.
 Supervisor: Prof. Sitharaman Uma
Th 27408

Abstract

The present thesis focuses on the investigation of selected mixed metal oxides belonging to the rocksalt superstructures and that of fluorite. A general introduction outlining the structural features of the rocksalt superstructures, the related delafossite and the fluorite based structures along with various synthetic methods to prepare them is compiled in Chapter 1. The synthesis, structure, optical and magnetic properties of Cu¹⁺ exchanged honeycomb layered oxide, Na₂Ni₂TeO₆ are detailed in chapter 2. Several ion-exchange reactions were carried out and the products were systematically analyzed by PXRD, SEM-EDS and TEM measurements. Chapter 3, consists of two subsections, section 3.1 describes the synthesis and characterization of solid solution members between the various Li based Li₃M₂SbO₆ (M(II) = Mn, Co, Ni, Cu, Zn) and Li₄MSbO₆ (M(III) = Cr, Mn, Fe, Co, Al, Ga). Here, a complete solid solution obtained by bridging the end members Li₃Mg₂SbO₆ and Li₃M₂SbO₆ (M = Zn, Ni and Cu) has been investigated to understand the structural adaptations. Section 3.2 deals with the study of Li_{4.50}Ni_{0.50}M_{0.50}SbO₆ (M = Al, Ga, Fe, Co), Li_{4.50}Fe_{0.50}M_{0.50}SbO₆ (M' = Al, Mn, Co and Ni) and Li_{4.50}Mn_{0.50}Cr_{0.50}SbO₆. In chapter 4, our attempts to stabilize a series with composition Li₃(Li_xM_(2-2x)⁽²⁺⁾ M_x⁽³⁺⁾)SbO₆ (M = Ni, Co and 0 ≤ x ≤ 0.75 for Ni and x = 0.75 for Co) by tuning the oxidation states are included. The structural, optical and magnetic properties of these members have been analyzed. Chapter 5, section 5.1 contains the microstructural changes brought about by the inclusion of aliovalent/isovalent ion doping (Ba²⁺, Pr³⁺/Pr⁴⁺) in Bi₂Ce₂O₇. The doped samples' have been employed for catalytic reduction of nitrophenols to their amine analogs. Section 5.2 involves the study of hafnium substituted indium oxide resulting in a derivative of fluorite, an anion excess bixbyite structure. Electrical resistance of In₂O₃ significantly reduced with Hf substitution.

Contents

1. Introduction 2. Cu¹⁺ ion exchange with Na₂Ni₂TeO₆ and its analogs 3. Lithium based rock salt superstructured oxides 3.1 Formation of solid solution members between Li₃Mg₂SbO₆ and Li₃M₂SbO₆ (M = Zn, Ni, Cu) 3.2 Formation of Li₄Ni_{0.50}M_{0.50}SbO₆ (M = Al, Ga, Fe, Co), Li₄Fe_{0.50}M_{0.50}SbO₆ (M' = Al, Mn, Co) and Li₄Mn_{0.50}Cr_{0.50}SbO₆ 4. Stabilization of new lithium containing rock salt

superstructured oxides, $\text{Li}_3\text{Li}_x\text{M}^{2+}_{2-2x}\text{M}^{3+x}\text{SbO}_6$ (M = Co, Ni) 5. Investigation of fluorite and its derivative oxides 5.1 Study of defect fluorite $\text{Bi}_2\text{Ce}_2\text{O}_7$ doped with Ba and Pr 5.2 Investigation of Hf substituted anion excess In_2O_3 . Overall summary and future directions, List of publications, conferences, workshops, and seminars attended.

COMMERCE

29. ASWAL (Chandni)
Green Purchase Intention and its Related Variables: A Study of Select Green Products.
 Supervisor: Sr. Prof. (Dr.) Kavita Sharma
Th 27411

Abstract

India is the world's fastest-developing country, and environmental challenges and improvements are being considered a top priority. Today's consumers are becoming more concerned with their health and well-being, leading to remarkable growth in the green product market. This growth can be attributed to changes in consumers purchasing habits and a rise in environmental consciousness. Given the rise in awareness and consumption of the green product in India, this study aims to examine the impact of the man nature orientation, innovativeness, environmental consciousness, personal norms & altruism on green purchase intention and behaviour in the Indian Context. The study also seeks to further explore the interlinkage of EC, WTP and availability of green products in determining consumer GPI. The study will also study effect of demographic variables such as age, gender, marital status, education, occupation, and income on GPI. The data of 1026 respondents were collected using a questionnaire-based survey method and analyzed with structural equation modeling (PLS-SEM) software Smart PLS 4 and SPSS 20.0 editions. The results show that EC significantly influences GPI and behavior at both aggregate and disaggregate levels, while MNO had a positive impact on GPI at an aggregate level and for Category I products. Personal norm is found to be positively related with GPI at an aggregate level and for Category II products. GPI is positively related with GPB. However, the study finds no impact of innovativeness and altruism on GPI. WTP and availability act as moderating factors on the relationship between GPI and GPB. Moreover, the study showed that EC mediates the relationship between MNO and GPI, except for Category II products. Gender, education, occupation, and income level are the only demographic variables affecting GPI. In contrast, the age and marital status do not affect GPI. This study provides valuable insight into consumer behavior regarding green products by examining the factors that influence consumer GPI and fostering a shift toward sustainable consumption.

Contents

1. Introduction 2. Review of literature 3. Research design and methodology 4. Data analysis 5. Discussions and implications of the study. References and Appendices.

30. BHUPINDER
A Study on the Impact of Leadership on Organizational Performance.
 Supervisor: Prof. R. K. Singh
Th 27412

Abstract

This doctoral thesis, "A Study on the Impact of Leadership on Organizational Performance," explores leadership styles (spiritual, authentic, ethical, empowering) and their impact on organizational performance indicators like job satisfaction, organizational commitment, personal fulfillment, turnover intention, and employee well-being. The data is collected from 733 NCC officers. The study has used workplace spirituality and mindfulness as mediators, shedding light on how these leadership styles affect performance outcomes. Structural Equation Modelling is used to churn the collected data. The findings hold valuable implications for leadership practices and policies, enriching our understanding of leadership's role in organizational excellence.

Contents

1. Introduction 2. Literature Review 3. Research Method 4. Data Analysis and Results 5. Discussion. Reference. List of Publication and Presentations. Questionnaire.

31. MAURYA (Sushma)
Impact of Firm Characteristics on Sustainability (ESG) Performance Disclosure in India- An Empirical Study of Select Listed Companies.
 Supervisor: Dr. Rajinder Singh
Th 27418

Abstract

Due to increasing awareness and global pressure from various countries to attain sustainable development goals, it has become necessary for business organisations to report on sustainability performance in terms of environmental, governance and social dimensions, popularly known as 'ESG'. The present study provided empirical evidence on the influence of firm attributes on the overall sustainability (ESG) performance disclosure and on its 3 major pillars i.e. environment, social and governance in case of Indian companies with the help of panel data regression analysis. This is a longitudinal study based on balanced panel data of ten years from 2013-2022. In addition, the study conducts a trend analysis of ESG combined scores and scores of three pillars of sustainability performance i.e. environmental, social and governance for assessing the overall sustainability performance as well as under its 3 categories (E, S and G). Furthermore, the study makes a comparison with respect to sustainability performance disclosure of companies from ESI (Environmentally sensitive industries) with NESI (Environmentally non sensitive industries) using Mann Whitney U test. Based on empirical analysis, the study concluded that firm characteristics like age, size, profitability and affiliation with ESI sector have a significant positive impact on overall sustainability performance of Indian companies. It suggests that older, bigger and highly profitable companies are likely to perform better in terms of sustainability performance disclosure. Thus, findings from the study suggested that firms with high visibility (age, size, profits, ESI) are generally prone to various pressures from the Government, regulators, NGOs and public at large. The study also documented the significant effect of certain specific industries on combined ESG performance disclosure as well as on its three pillars i.e. environmental pillar, social pillar and governance pillar. Further, companies from environmentally sensitive industries (ESI) are disclosing more on sustainability performance than NESI companies.

Contents

1. Theoretical and Regulatory Framework of Sustainability (ESG) Performance Disclosure 2. Review of Literature 3. Research Methodology 4. Firm Characteristics and Sustainability Performance: Analysis of Results and Discussion 5. Findings, Conclusion and Implications. References and Appendix.

32. MOHD SAJID

Impact of Behavioral Biases on Individual Investors' Decisions and Stock Price Movements: Evidence from India.

Supervisor: Dr. Radhey Shyam

Th 27422

Abstract

Conventional finance is based on theories like Arbitrage theory, selection of optimum portfolio, CAPM, and efficient market hypothesis. Markowitz, Modigliani, Sharpe, Lintner, and Fama played a vital role in conventional finance. However, two psychologists, Daniel Kahneman and Amos Tversky had written a series of papers supporting behavioral finance, and in 1979 they developed the prospect theory. However, from time to time, different economists, like Shiller, Thaler, Shefrin, Barbar, Odean, and Statman, challenge the assumptions, limitations, and conventional finance theories. This study is an effort to explore the existence and effects of five behavioral biases (Overconfidence, Disposition effect, Herding effect, Representativeness bias and Availability bias) in the Indian context by analyzing the individual investors using the questionnaire. The secondary data of nifty-50 stocks and market in the Indian stock market for the period 01/01/2001 to 31/12/2021 and the entire data is divided into four parts, pre-financial crisis, during financial crisis, pre-covid-19 and during covid-19. Primary data was collected from 401 individual investors through a questionnaire. The results suggest that four variables (Overconfidence, Herding, Representativeness, Availability) which are based on primary objectives, have a significant positive/negative presence on investors' performance. To measure herding behavior during market declines (5% of the worst days), market advances (5% of the best days), and during the full-time period data. The study utilizes Anova and Multiple regression techniques for primary data, and cross-section standard deviation (CSSD) and cross-section absolute deviation (CSAD) to measure the herding behavior. In order to measure the disposition effect and overconfidence biases in the Indian stock market, the study employed the vector auto-regression (VAR) model and its associated impulse response function. However, no case of the Disposition effect was seen during the pre-financial crisis period among the Nifty-50 companies, Overconfidence existed in 13 companies, but only 2 cases of the Disposition effect were seen during the financial crisis period among the Nifty-50 companies, Overconfidence has existed in 13 companies, 10 cases of the Disposition effect were seen in the pre-Covid-19 period among the Nifty-50 companies, and 2 companies are affected by both biases, Overconfidence has existed in 15 companies, 7 cases of the Disposition effect were seen during the Covid-19 period among the Nifty-50 companies, and 2 companies are affected by both biases. The result exhibit (primary data) that males are more overconfident than females, and females are prone to being more herd, availability, representativeness and exhibiting risk-tolerance than males. we find evidence of herding during periods when the market either had extreme positive or negative returns.

Contents

1. Introduction 2. Behavioral Finance: Where finance meets Psychology 3. Literature Review 4. Research design and methodology 5. Data Analysis and Interpretations 6. Conclusion. References and List of Scholar Publications.

COMPUTER SCIENCE

33. BANSAL (Megha)
Image and Video Watermarking using Particle Swarm Optimization in Compressed Domain.
 Supervisors: Prof. Arpita Sharma and Prof. Anurag Mishra
Th 27425

Abstract

The Digital Rights Management Framework (DRMF) based applications require information security measures to be applied to all kind of media- sound, image and video in compressed domain. Digital watermarking is one such mechanism to implement DRMF. The robust watermarking techniques under informed and blind schemes have gained popularity over last two decades or so as sharing of digital content over Internet has assumed an exponential growth. Watermarking of all media, particularly images, involves a mandatory trade-off between two major requirements: Visual quality of signed images and robustness of watermarking scheme. Presently, the research in the area of watermarking is focused on developments of techniques which produce optimum results by balancing these two most relevant requirements. These are used to quantify the performance of the scheme. This thesis focusses mainly on designing and analyzing the robust watermarking techniques, in transform domain, which embed the watermark in invisible manner in the host media (images and videos mainly in compressed domain) using evolutionary soft computing techniques. We have developed three novel watermarking schemes for uncompressed gray-scale and colored images, JPEG compressed images and compressed MPEG-4 encoded videos respectively. This is carried out by using methods such as Type-1 Fuzzy Inference System (FIS), evolutionary algorithm such as Particle Swarm Optimization, a Single Layer Feed-forward Neural Network, also known as Extreme Learning Machine (ELM) in non-hybrid and hybrid configurations again in hybrid DWT-SVD transform domain. The results obtained in the proposed simulations conform to the evaluation metrics being used by the watermarking community. All three schemes also conform to the DRM Framework requirements as proposed by the industry. This work will be further extended for a detailed investigation under encrypted environment. This is the second requirement of industry for the current research in watermarking and qualifies the scheme under Secure Signal Processing domain.

Contents

1. Introduction 2. Mathematical foundations 3. Hybrid frequency domain watermarking schemes for gray- scale and colored images using particle swarm optimization 4. Multiple scaling hybrid fuzzy-pso watermarking scheme for gray-scale and colored images 5. Video watermarking of live streamed mpeg-4 frames using elm-fuzzy-pso hybrid scheme 6. Conclusion and future directions. Bibliography and List of Publications.

34. TULIKA KUMARI
Explainable Reciprocal Recommender System Using Contextual Bandits.
 Supervisor: Sr. Prof. Punam Bedi
Th 27434

Abstract

Reciprocal Recommender Systems (RRS) are people-to-people recommender systems, facilitating the recommendation of users to each other. In these systems, a recommendation is considered successful only when both parties' preferences align, fostering mutual satisfaction. Making decisions in real-life situations can be arduous, especially when faced with limited information and the need to either exploit existing knowledge (exploitation) or actively seek new insights about the environment (exploration). This trade-off between exploitation and exploration requires finding a delicate balance between maximizing rewards based on existing knowledge and venturing into new actions. Likewise, when it comes to generating recommendations, RRS encounter a similar dilemma. They must navigate the decision of whether to rely on users' known preferences and exploit them or explore unexplored preferences. The first contribution of the thesis focuses on tackling this challenge by formulating RRS as a contextual bandits framework and employing Upper Confidence Bound exploratory strategy. Popularity bias poses a significant challenge in RRS, wherein certain users with high popularity are favored over others, resulting in biased behavior towards popular users. The second contribution of the thesis deals with this issue. We propose a popularity-aware reciprocal score to alleviate the impact of popularity bias while generating reciprocal recommendations. The importance of generating explainable recommendations has grown significantly in response to the increasing demand for transparency, accountability, and ethical practices in artificial intelligence applications. The third contribution of the thesis focuses on providing explanations for the generated reciprocal recommendations using argumentation. The rise in online interest group platforms and group-based online learning has generated a need for reciprocal recommender systems that function at the group level. The fourth and final contribution of the thesis is to present group reciprocal recommender system to recommend matches based on the collective preferences of a user group.

Contents

1. Introduction 2. Preliminaries and Related Work 3. Contextual-Bandits Approach for Reciprocal Recommendations 4. Generating Popularity-Aware Reciprocal Recommendations using Siamese Bi-Directional Gated Recurrent Units 5. Argumentation-based Explainable Contextual Bandits Framework for Reciprocal Recommendations 6. Explainable Contextual Bandits using Siamese architecture for Group Reciprocal Recommendations 7. Conclusion and Directions for Future Work. Bibliography.

EAST ASIAN STUDIES

35. CHANDAN (Alok)
Security Architecture of East Asia: A Nuclear Conundrum for Japan in Second Nuclear Age.
 Supervisors: Prof. (Dr.) Nabin Kumar Panda
Th27436

Abstract

Japan's nuclear policy is torn between the security considerations that arise from North Korea and China and its desire for disarmament owing to the Hiroshima

experience. This unique situation created a nuclear conundrum for Japan in the post-WWII era. In the first nuclear age (1945-90), Japan successfully overcame this conundrum by choosing the US as a security provider. Japan had no doubt about extended deterrence, corroborated by “forward-deployed US conventional and tactical nuclear forces,” on the Korean peninsula and withdrew only after the Cold War. However, in the second nuclear age (1990 - till date), the nuclearization of North Korea, the rise of China, and the relative decline of the US in East Asian theatre compelled strategists to doubt the credibility of the nuclear umbrella. Hence, Japan has started to invest in strategic non-nuclear weapons (SNNWs; SNNWs consist of ballistic missile defense, military use of space etc), although the Treaty of Mutual Cooperation & Security (1960) with the US and extended deterrence remains a lynchpin to its defense policy. This thesis has synthesized and analysed different strands of SNNWs deployed by Japan to hedge against nuclear vulnerability in the second nuclear age, as “whole is always greater than sum of parts.”

Contents

1. Introduction 2. Japan and First Nuclear Age 3. Japan and Second Nuclear Age-Ballistic Missile Defense. 4. Japan and Militarization of Space. 5. Conclusion. Bibliography.

36. MAINI (Nidhi)
Dressed up and on the Go: magazines, Consumption, and the Modern Girl in Inter-War Japan
 Supervisor: Unita Sachidanand
Th27439

Abstract

Japanese economic history has been evaluated, reevaluated, interpreted and reinterpreted several times since the conclusion of Second World War. Thanks to the scholarship of past few decades, a wide range of studies today act as a beacon for any future research in Japan’s economic experience. However, it is the trajectory of Japan’s economic development post war touted as ‘economic miracle’ that has been widely researched and emulated. The period in question here-interwar is generally shown to be mired in depression and deflation, in sync with the circumstances across the world; but the effervescent consumer culture prevalent in Japan in this period presents a contradictory picture. Existing scholarship, while concentrating on several aspects of economic development in this period, has made only passing and contradictory references to consumption. Even in this realm of consumption, Japanese women remain invisible. This research promises to throw up interesting insights on how women, otherwise subjugated to men in all domains, compensated for their subordination by living it up in the arena of consumption. Viewing economic development of Japan from the prism of consumption and ‘consumption patterns’ specifically among women of interwar Japan remains understudied in English scholarship, as evident from the dearth of available secondary resources. By examining the proliferating women magazines of this period from economic perspective, this research intends to show how these magazines acted as conduits of consumerism, driving the growth of secondary industry as well as the publishing and advertising industry in interwar Japan. The analysis of the most widely read women magazine of interwar period *Shufu no Tomo* (Housewife’s Friend) will show how it influenced the consumption patterns of bicycles, sewing machines and cosmetics in interwar Japan and became instrumental in forging the identity of *modangaru* (modern girl) diametrically opposite to the traditional ideology of *ryōsaikenbo* (good wife, wise mother).

Contents

Introduction 2. Research methodology 3. From 'hakoiri musume' to 'modangāru': the evolution of Japanese women 4. Adorning her dreams: women magazines and consumption 5. Mobility and fashion: Consumption patterns of bicycles, sewing machines and cosmetics 6. Conclusion, Reflections and Implications. Bibliography.

37. MISHRA (Abhinav)

Evolution of United States Policies Towards Japan, 1937 – 1952

Supervisors: Prof. Janardan Sahu

Th27440

Abstract

Japan's unexpected assault on Pearl Harbor during the Second World War marked the end of American non-interventionist policy in the affairs of the region and gave an open invitation to the US to join the World War. As the war continued, Japanese aggression was a matter of concern for what was going to come. In the event that Imperial Japan, the mightiest nation in Asia, was crushed, what may supplant its territorial dominance? What might happen to its settlements? What had brought about Japanese militarism, and how could its resurrection be forestalled? If America somehow happened to rise up out of the war sufficiently intense to reshape the world politically, what future for Japan would best serve American interests? The narrative of how these inquiries were addressed and why a specific arrangement of answers ended up noticeably as American strategy is the subject of this research project. This work examines the post and pre-war planning process and the deliberative period which formed American approach towards Japan after her surrender in 1945. It scrutinizes how these inquiries came to be replied. How far the policies that were created were implemented and what kind of thinking informed the creation of such policies. A plethora of scholarly opinions can be found on the impact of the American policies during the occupation of Japan, there have been numerous histories of the after-war control of Japan and post bellum US-Japan relations. Almost no consideration has been given to where the inevitable arrangement originated from. My work is a historical analysis of the period concerned by studying it from a foreign policy framework. In doing so, I have tried to establish continuity in the pre and post war US planning process for Japan thereby critically scrutinizing the reverse course hypothesis.

Contents

Introduction 1. Madness to the method: franklin delan roosevelt and planning for japan 2. Planning for japan in the bureaucratic corridors of power 3. Thinking through the war: think tanks and planning for jap 4. congress and the move towards internationalism 5. Implementing the plans. Conclusion. Bibliography.

EDUCATION

38. CHAURASIYA (Neema)
Analysing Linguistic Marginalisation in Indian Higher Education.
 Supervisor: Prof. PROF. Shobha Sinha and Prof. Sadhna Saxena (retd.)
Th27450

Abstract

The research analyses marginalisation on the basis of language of education in the context of higher education in India. The objectives of the research were to understand linguistic marginalisation, its origins and its relation with higher education, to study the problems and challenges faced by the students as a result of linguistic marginalisation in higher education and their ways of negotiating with the same, and examine the effects of linguistic marginalisation on student's educational experiences, cultural identity, self-concept and future prospects. The conceptual framework was developed guided by the research objectives, and explores various theoretical aspects of language marginalization from a political and psycho-social lens, to provide a wholistic foundation for the field study. The field study was undertaken as a phenomenological enquiry under interpretivist paradigm to delve into the experiences of the students, selected through a combination of purposive and snowball sampling, facing language marginalisation in liberal as well as professional courses in the two universities chosen for the purpose of the research. Data was collected through qualitative tools of observation, socio-demographic and language profile sheet, detailed questionnaire, semi-structured interviews and researcher's diary. The data was recorded, transcribed, analysed and coded to locate patterns and overarching themes. Individual and discipline specific issues were also given representation, along with the psycho-social variables affecting the negotiations in the field. The institutional efforts and teacher adjustment in relation to linguistic marginalisation faced by the students, and the students' own strategies of negotiation, as well as consequent impact on their future prospects emerged in the thematic discussions. The emergent themes were examined in view of the existing theories regarding linguistic marginalisation and discussed in relation to the theoretical framework of language and power, language and identity, and the coping mechanisms and strategies that are employed to deal with linguistic marginalisation.

Contents

1. Rationale, objectives, and context of the study. 2.literature review : examining relevant theoretical perspectives.3 Methodology, design, and data collection.4. analysis methods and emergent themes. 5. exploring research findings and their Interpretations.

39. मनीष
शिक्षा के सामाजिक सरोकार : ग्रामीण परिवेश के सन्दर्भ में अध्ययन ।
 निर्देशक: प्रोफेसर पंकज अरोड़ा
Th27464

सारांश

भारतीय समाज तेज़ी से परिवर्तित हो रहा है और यह परिवर्तन समाज के हर एक स्तर पर देखा जा सकता है। इस परिवर्तन ने व्यक्ति के जीवन के हर पहलू को प्रभावित किया है। इनमें व्यक्ति के निजी, सामाजिक, सांस्कृतिक, धार्मिक, आर्थिक, मनोवैज्ञानिक, शैक्षणिक आदि सभी पहलूओं को शामिल कर सकते हैं। किसी समाज की गतिशीलता उस समाज से कुछ विशेष प्रकार की अपेक्षाएं रखती है। जो समाज में परिवर्तन का

आधार बनती हैं। ये अपेक्षाएं समाज के विभिन्न आयामों से जुड़ी होती हैं। शिक्षा भी उन आयामों में से एक है। इस स्थिति में सामाजिक आयामों को एक व्यापक स्तर पर देखने की आवश्यकता पड़ती है। समाज के बदलते स्वरूप के साथ शिक्षा के लक्ष्य भी बदलते हैं जो समाज के नए स्वरूप, आवश्यकता, वातावरण और संसाधनों पर आधारित होते हैं। व्यक्तिगत स्तर पर भी इस जांच की आवश्यकता पड़ती है कि एक व्यक्ति समाज को किस तरह समझता है और उस उक्त समाज में व्यक्ति का क्या स्थान है। प्रस्तावित शोध अध्ययन सैद्धांतिक व व्यावहारिक दोनों ही दृष्टिकोणों से महत्वपूर्ण एवं प्रासंगिक है। एक विशेष सामाजिक समूह में शिक्षा की समझ, उसके उद्देश्यों, अपेक्षाओं व निहितार्थों को समझ कर शिक्षा के समाजशास्त्रीय परिपेक्ष्य को आज के समय के अनुरूप आंशिक रूप से परिभाषित करने का कार्य इस शोध के माध्यम से किया जा सकता है। गुणात्मक शोध शैक्षणिक शोध के लिए अत्यंत आवश्यक रहा है क्योंकि यह विभिन्न सवालों के जवाब ढूंढने के लिए उन बारीकियों की पड़ताल करता है जो अनुभवों, सामाजिक मुद्दों, व्यक्तिगत मुद्दों, घटनाओं, सन्दर्भों की बेहतर समझ देने में सहायक होती है। शोध के इस स्वरूप में संख्याओं पर बल ना देकर लोगों की बातों, चर्चाओं, अवलोकनों, चेहरे के भावों, शारीरिक प्रतिक्रियाओं आदि का अध्ययन किया जाता है जो विशेष संदर्भ में उत्तरदाताओं की जवाबों को पूर्ण रूप से समझने में सहायता करते हैं। प्रस्तुत शोध एक गांव की केस स्टडी है। इस शोध में शिक्षा से जुड़े विभिन्न प्रत्यक्ष व अप्रत्यक्ष सामाजिक सरोकारों की पड़ताल करने का प्रयास किया गया है। सामाजिक शोध में व्यक्ति व समाज के अंतर्संबंध को समझना एक आवश्यक व मुख्य शोध क्षेत्र बन चुका है। प्रस्तुत शोध एक गांव में रहने वाले लोगों के दृष्टिकोण व विचारों को समेटने का कार्य करेगा।

विषय सूची

1. विषय प्रवेश 2. बदलते समाज में शिक्षा 3. शोध क्रियाविधि 4. परतों की जाँच 5. निष्कर्ष

ELECTRONIC SCIENCE

40. KUSHWAH (Himanshu)

Design Optimization of Surface Plasmon Resonance based Sensors Using Instantaneous Poynting Vector Analysis.

Supervisors: Prof. JGNEET Kaur Anand

Th 27468

Abstract

Surface Plasmon Resonance (SPR) is an optical phenomenon which is widely used for studying the real time and label free monitoring of binding interaction of any kind of molecules, nucleic acid, ions, fragments, organic compounds to proteins even viruses and whole cells. SPR technology has also been used in developing excellent instrumentations for a large category of binding interactions such as protein-protein, protein-antibody etc. In nutshell SPR assists researchers in determining the molecules that interact, the reason for the occurrence of these interactions, and the strength of these interactions. This study addresses the challenges of performance enhancement by understanding the behaviour of field profile and the Instantaneous Poynting vector in various layers of an SPR based sensor which is designed in prism coupled based Kretschmann configuration. This study addresses the challenges of performance enhancement by understanding the behaviour of field profile and the Instantaneous Poynting vector in various layers of an SPR based sensor which is designed in prism coupled based Kretschmann configuration. It is relevant to study the behaviour of instantaneous Poynting vector instead of conventional average Poynting vector in the sensing region to accurately optimize the thickness of various layers so that a significant amount of field strength can reach the sensing area. In this thesis, we have proposed two novel formulae to calculate the penetration depth and the propagation length of the evanescent field which play an important role in the functioning of SPR based refractive index sensors which are based on the

phenomenon of evanescent coupling of electromagnetic power density. The basis of this study evolves from a mathematical model developed and supported by simulation results to understand the instantaneous availability of the electromagnetic power density to which these sensors devices are responding in real time. Therefore, starting from the well-known Poynting vector theorem, which explains the behaviour of electromagnetic power flow, we compare the average Poynting vector and instantaneous Poynting vector to calculate the penetration depth and propagation length of the evanescent field in the various layers of the SPR based sensors, and find that these values when calculated using instantaneous Poynting vector analysis gives outstanding results for the enhancement of the overall performance of these refractive index sensors. The work includes optimized designs for six SPR sensors configurations using gold and silver as the SP supporting metals, silicon, SnO_2 , SiO_2 , and ZrO_2 as the High index dielectric materials and water as the analyte containing unknown entities to be measured. These sensors can be readily fabricated for maximum sensitivity and/or detection accuracy as per the requirement and sensing needs. Comparison of results obtained in this research work with already published results is also done

Contents

1. Introduction 2. Understanding the electromagnetics of metal dielectric interface.3. Introduction to pointing vector. 4.Application of instantaneous pointing vector in the design optimization of SPR based sensors. 5.Design optimization of bi-metallic surface plasmon resonance based sensors using instantaneous pointing vector analysis.6. Enhancement of optical coupling efficiency of SPR base sensor. 7. Design methodology of SPR based refractive index sensors with thicker layers of high index dielectrics.8. Future directions. Bibliography.

41. SHARMA (Monika)

Modeling Simulation and Reliability Analysis of Doping less TFET for Radiation Sensitive and Low Power Circuit Applications.

Supervisors :Prof. Mridula Gupta

Th 27472

Abstract

This thesis presents the overall performance of the Dopingless Tunnel Field Effect transistor. The work is majorly focused on analytical modeling and simulation of dopingless TFET and testing its reliability for radiation-sensitive applications and further uses the optimized architecture for circuit analysis. The entire work of the thesis is divided into: 1. Modeling of Dopingless TFET is investigated and the results are compared with the simulations. Further, the Dopingless TFET is investigated for resistive load inverter and has been further investigated for realizing digital logic functions by controlling the gates of the device independently. 2. Optimizing the device architecture by applying different III-V-based material engineering and further optimization of the device architecture is done by applying different gate-engineered techniques. That is, hetero-gate, hetero-dielectric, hetero-gate hetero-dielectric are so on. 3. Different architecture engineering is done by applying a tapered angle oxide layer and by creating a linearly graded channel on InGaAs-based dopingless TFET and its reliability analysis is carried out for radiation-sensitive environments.. 3. Further, the circuit designing is carried out on silicon and InGaAs dopingless TFET architecture using the ADS tool

Contents

1. Introduction 2. Modeling and simulation-based study of symmeriv double gate silicon based dopingless tunnel field effect transistor. 3.Simulation study of si/ingan/ingaas based dl- tfet with its gate-engineered structure. 4. Influence of different gate engineering techniques on iii-v material based ingaas dl tfet 5. Investigation of digital and analog circuits using silicon and ingaas based dopingless tfet 6. Conclusion and future scope.

ENGLISH

42. DEEP CHAND

Journey and Journalism in Mohandas Naimishraya's Writings.

Supervisor: Prof. Raj Kumar

Th 27477*Abstract*

Abstract The title of my thesis traces "Journey and Journalism in Mohandas Naimishraya's Writings". Journey is related to the journey of Mohandas Naimishraya as a Dalit writer. Journalism is his journalistic writings which focus on Dalit oppression by the non-Dalits. The major questions which I am raising in my research are related to the literary contribution of Naimishraya to Hindi Dalit writings and what are his limitations, if any. I have applied historical and textual analysis as research methodology in my research. The historical, textual analysis and my own understanding help me exploring Dalit Hindi writings with some questions relating to his depiction of Dalit and non-Dalit worlds. The introduction of my thesis contextualizes the emergence of Hindi Dalit writings and its departure from Hindi writings. The success of Hindi Dalit writings is studied through Mohandas Naimishraya's writings. Chapter one focuses his life story available in three parts. This chapter deals with "Beyond Stereotypes in Dalit life-story". Chapter two is titled as "Muktiparv: A Vision of Dalit Emancipation". It discloses Dalit vision of freedom for Dalits and how to achieve it. Chapter third explores a collection of short stories Aawazein, titled as "the Village World and its Views" which strongly challenges the prevailed notion of harmony in village through the poor condition of Dalits. It is noticeable to see how Dalits generate the spirit of resistance when they have least resources such as education, money, etc. Chapter four is about "Journalistic Writings" which reveals the challenges which a Dalit journalist faces being a freelancer. Chapter five is the conclusion which deals with limitation and possibilities in Dalit writings. All the aforementioned chapters show Naimishraya's contribution in Dalit writings through Journey and Journalism.

Contents

1. Introduction 2. Beyond Stereotypes in Dalit Life Story 3. Muktiparv: A Vision of Dalit Emancipation 4. The Village World and its Views 5. Journalistic Writings 6. Conclusion. Works cited.

GENETICS

43. S. HAMSA
Exploring the Key Defense Components of Arabidopsis-Alternaria Brassicae Interaction using Genetic and Transcriptomic Studies.
Supervisor: Prof. Jagreet Kaur
Th 27488

Abstract

Alternaria leaf blight disease caused by a necrotroph, *Alternaria brassicae*, results in significant yield losses of up to 70% in oilseed Brassica juncea. The mechanisms involved in Alternaria blight resistance are poorly understood due to the unavailability of resistant sources in *B. juncea* which is a major challenge in the development of Alternaria blight disease-resistant plants. Arabidopsis, a closely related member of Brassicaceae displays extreme variation in phenotypic response to *A. brassicae*. Earlier studies in Arabidopsis-*A. brassicae* pathosystem identified both common and population-specific QTLs in various biparental mapping populations indicating that the resistant trait is quantitative in nature and accession-specific. The present study aims to explore the genetic and molecular mechanisms of defense against *A. brassicae* in Arabidopsis accessions using comparative transcriptomics and a fine-mapping approach. In the first objective, I compared the global transcriptome profiles of two resistant (CIBC-5 and Ei-2) and one susceptible accession (Zdr-1) to identify processes and pathways involved in defense against *A. brassicae*. The differential expression, functional enrichment, and co-expression analysis revealed major reprogramming of the phenylpropanoid pathway-related genes post-infection in the resistant accession. Furthermore, I elucidated the role of phytoalexin, scopoletin in defense through phenotyping of T-DNA insertion mutant, antifungal activity, and quantification of the metabolite. In the second objective, I carried out fine mapping of a 2.4Mb major resistance QTL (RtAbeCZ5-1) identified from a biparental cross of highly resistant (CIBC-5) and a highly susceptible (Zdr-1) accession. Utilizing F2, F2:3, and overlapping NIL populations, I was able to narrow down the 2.4Mb region to a 200Kb region, enriched in defense response genes. The findings in this thesis provide novel insights into the role of the phenylpropanoid pathway, scopoletin, and probable candidate genes which can be comprehensively studied for their role in resistance to *A. brassicae*.

Contents

1. Genesis of the Work 2. Experimental Design for Transcriptome Analysis 3. Background Work 4. Summary and Future Perspectives. List of Publications. Conferences and Workshops Attended.

GEOGRAPHY

44. CHAKRABORTY (Ankita)
Geographical Indications of India Impact on Places and Goods.
 Supervisor: Prof. Anu Kapur
Th 27491

Abstract

Geographical Indications of India Impact on Places and Goods Ankita Chakraborty Ph.D. Geography Department of Geography Delhi School of Economics University of Delhi- 110007 Abstract: India has always been renowned for its rich traditional manifestations, which have been portrayed in numerous ways throughout history. Whatever the field, the cultural pinnacle it possesses has allowed it to win praise from all over the world. However, the unique creations crafted by innovative minds has been prone to duplications, passing off and others. It was in 1994 that the World Trade Organisation (WTO) came forward with the Trade Related Intellectual Property Rights (TRIPS) Agreement establishing the notion of "Geographical indication" (GI). Geographical Indications (GIs) are any means of identifying a good as coming from a specific location, when the good's quality, reputation, or other qualities can largely be attributed to its place of origin. In India, GIs are classified under 5 heads- Handicrafts, Agriculture, Manufactured, Foodstuff and Natural. The first good to be registered under GI was Darjeeling tea in 2004. The registry at Chennai is responsible for registering the GIs in India. This research aims to look at 307 Indian GIs registered till May, 2018, analysing their types, characteristics, bonding and concerns that has helped in its creation, impact and sustenance. To further strengthen the objectives, case studies of Darjeeling Tea, an Agricultural GI and Dhaniakhali saree, a Handicraft GI have been considered. Darjeeling Tea GI has a worldwide reputation whereas Dhaniakhali Saree GI has its regional outreach. The nurturing of both the goods by Place and its subsequent impact has helped analyse the importance and functionality of the GI tag. This study could further help in undermining the relevance of GI tag in developing nations. Keywords: Geographical Indications, Handicraft, Agriculture, Darjeeling Tea, Dhaniakhali Saree

Contents

1. Introduction 2. Geographical Indication: World and in India 3. Classification of Geographical Indications in India 4. Darjeeling Tea GI Case Study 5. Dhaniakhali Saree GI Case Study 6. Summary and Conclusion. References.

45. RAFEEQI (Peerzada Raouf Ahmad Shah)
The Political Economy of The Spatio-Geographical Dimensions of Hydro Politics: A Case Study of Energy Paradigm In Jammu And Kashmir.
 Supervisor: Prof. Seema Mehra Parihar and Prof. B S Butola
Th 27495

Abstract

The Indus Water Treaty signed between India and Pakistan over the question of sharing of Indus waters has been hailed by diplomats and scholars alike as a model of cooperation. Deviating from this argument, this thesis claims the so-called 'model of cooperation' attained through the treaty, has been achieved through a disregard

for environmental concerns, climate change as well as water rights of the inhabitants in the wake of overall development happening in the recent years in the region of Jammu and Kashmir. Using the framework of Hydropolitics, popular among the political geographers, this thesis argues that, not only does the treaty politicize the meaning of water in the subcontinent, it also commodifies the water resources of the region. Through an analysis of the key documents such as the text of the treaty itself, the world bank papers, secondary literature and the primary ethnographic fieldwork, this thesis shows an attempt to render the region of Jammu and Kashmir invisible even as its water bodies are being utilized for resource extraction, it dovetails into the regions long history of turbulence, which has fed the process of state formation in the region. Simultaneously using a subalternist approach, prevalent in socio cultural geography, this thesis provides an analysis of the ways in which the treaty has been interpreted by different communities in the region. Using ethnographic fieldwork in Gurez, this thesis attempts to create an interdisciplinary bottom up archive of the local voices about the regional indigenous perceptions of water, which remain by and large absent in the official archives. Thus this thesis attempts to redefine the very significance of the term Hydropolitics in the region of Jammu and Kashmir.

Contents

1. Introduction 2. Hydropolitics: An Understanding through Data Representation and Visualization 3. Textuality of Indus Water Treaty and Inbuilt Issues: An Analysis through Visual Representation 4. Under the Shadow of the World Bank: Politics through the Understanding of Data and Local Materialities 5. The Dams in Gurez: Environmental Impact Assessment, Aesthetics and Materialities 6. The Materialities of the Dams: The Spectre of PowerCuts and Dispossession in Gurez 7. Conclusion. Bibliography. Annexure.

46. YADAV (Ganesh)
Geographic Variations of Health Indicators and Income Status in the Selected EAG States of India.
 Supervisor: Prof. Bindhy Wasini Pandey
 Th 27499

Abstract

Health is a basic human right which is an inseparable part of human existence. One of the key domains of public health that form majority case load and critical to social development are infant/child health, and maternal & woman health. India's performance on health and well-being underscores geographical disparity with high prevalence in four major states among EAG states i.e. Bihar, Rajasthan, Uttar Pradesh and Madhya Pradesh that make up to 80% of EAG states and nearly 40% of India's total population. Research suggest that health services and outcome are found to be disproportionately at a low level among the poor. This study aims to analyze the Impact of Income status on the Health Indicators and see income/wealth inequality induced health inequality along with status of key health indicators and composite health profile by grouping indicators at district level. This study uses the data from National Family Health Surveys (NFHS)-5 (2019-2021) collected by multi stage stratified clustering sampling design. A qualitative health survey was undertaken to understand the interplay between health indicators and income dimension and contextualizing the research. Methods such as descriptive statistics, chi² and multiple logistic regression were used to see the nature and association. Concentration curve, concentration index, and rich-poor decile ratio were used to see the indicator wise income inequality. Besides, geo-spatial techniques such as univariate LISA, bivariate LISA, Moran's I and spatial regression (Spatial Error and OLS regression) were used to see the geographical clustering and multiple spatial

association. Results show that wealth quintiles along with other social confounders were strongly associated with birth weight, birth size and nutritional indicators for child health and skilled birth attendance and institutional deliveries, ANC, PNC and women's BMI for maternal and women health. There is a visible income inequality between rural and urban areas for all indicators except immunization and women anemia. There is distinct geographical high clustering among the districts of Bihar and northern Uttar Pradesh bordering Nepal, and Bundelkhand region for most of the negative indicators and in Rajasthan, and western Uttar Pradesh for positive indicators. Clustering and outliers shape in Madhya Pradesh shows a heterogeneous pattern. The clustering for District Composite Health Profile (DCHP) shows the laggard regions of Bihar and Terai region Uttar Pradesh, and increased magnitude from NFHS-4 to NFHS-5. The findings imply there is a need to streamline the health interventions in favor of the poor at the district level, the lowest possible geographical unit, as there are pockets of heterogeneity and homogeneity within a state in these high burden states. Keywords: Geographic Variations, EAG states, Income inequality, child and maternal health, LISA, Composite index, spatial regression, Moran's I,

Contents

1. Introduction 2. The Background of Study Area 3. Assessment of Newborn and Child Health Status: Trends and Challenges. 4. Assessment of Maternal and Woman Health Status: Trends and Challenges 5. The Income/Wealth and Health Association. 6. Multiple Spatial Association and Composite Health Outline for Policy Prioritization 7. Summary and Conclusion. Selected Bibliography. Appendix.

हिंदी (HINDI)

47. अजय कुमार

पूर्वोत्तर भारत और हिंदी (विशेष सन्दर्भ : हिंदी गद्य साहित्य) ।

निर्देशक : प्रो. चन्दन कुमार

Th 27305

सारांश

भारत विविध भाषा-भाषी, समाज एवं संस्कृति वाला देश है. रहन-सहन एवं जीवन-यापन के अपने-अपने ढंग हैं. पूरब से पश्चिम, उत्तर से दक्षिण तक फैला हुआ अपना भारतवर्ष 'विविधता में एकता' को संजोए हुआ है. हम आदिम संस्कृति से वर्तमान तक एक-दूसरे से जुड़े हुए हैं. हर क्षेत्र के सूत्र एक दूसरे से मिले हुए हैं. चारों दिशाओं में आवागमन अबाध गति चलता आ रहा है. स्वाभाविक है, संवाद स्थापित करने के लिए भाषा का आदान-प्रदान हुआ होगा. परिणामस्वरूप एक-दूसरे में घुल मिल से

गए हैं. पहले जो अवागमन धीमी गति से थी वर्तमान में यातायात और संचार माध्यम से उसे गति प्रदान कर दी है. अब हम आसानी से देश के हर क्षेत्र में आ जा सकते हैं. पूरब से पश्चिम हो या उत्तर से दक्षिण किसी भी दिशा में रेल, सड़क और वायु मार्ग से आसानी से पहुंचा जा सकता है. जब पूरी दुनिया आज एक गाँव के रूप सिमट कर रह गया है तो क्यों ना भारत के ही उन प्रदेशों को जाना जाए जो हमारी तरह ही जीवन के सभी अनुराग को समेटे हुए हैं. पूर्वोत्तर भारत जिसमें वर्तमान में आठ राज्य हैं—असम, अरुणाचल, मणिपुर, त्रिपुरा, नागालैण्ड, मिज़ोरम, मेघालय और सिक्किम. सभी राज्य में संस्कृति एवं जीवन अलग-अलग है. साथ ही भाषा भी अलग-अलग है. पूर्वोत्तर में असमिया और बंगला प्रचलित भाषा है लेकिन यहाँ के लगभग सभी राज्यों में कमोवेश हिंदी उपस्थिति है. जिसमें प्राचीन समय से हिंदी प्रचारक, हिंदी लेखकों एवं हिंदी पत्र-पत्रिकाओं का महत्वपूर्ण योगदान है. पूर्वोत्तर भारत में भारतीय आर्य भाषा परिवार की असमिया, बांग्ला और हिंदी का काफी प्रचलन है. असमिया असम के साथ-साथ लगभग सभी प्रदेश(पूर्वोत्तर) की भाषा है. असमिया लम्बे समय तक शिक्षा और शासन की भाषा रही है. असमिया के श्रीमंत शंकरदेव ने असमिया संस्कृति और साहित्य को समृद्ध करने में अपना विशेष योगदान दिया, बांग्ला भी यहाँ काफी प्रचलित रही है. पूर्वोत्तर भारत में हिंदी भाषा-भाषी दूर-दराज तक बसे हुए हैं, माजुली द्वीप में उत्तर भारतीय कई पुशतों से रह रहे हैं. आज हिंदी सभी पूर्वोत्तर राज्यों की संपर्क भाषा बन चुकी है. साथ ही हिंदी साहित्य भी लिखा जा चुका है और मौलिक लेखन तेजी से हो रहा है. पूर्वोत्तर भारत लिखे उपलब्ध हिंदी साहित्य के 'गद्य-विधा' को आधार बनाकर आप सभी के बीच यह शोध-प्रबंध प्रस्तुत कर रहा हूँ ।

विषय सूची

1. असम का हिन्दी गद्य साहित्य 2. अरुणाचल प्रदेश का हिन्दी गद्य साहित्य 3. मणिपुर का हिन्दी गद्य साहित्य 4. नागालैण्ड का हिन्दी गद्य साहित्य 5. मिजोरम का हिन्दी गद्य साहित्य 6. मेघालय का हिन्दी गद्य साहित्य 7. त्रिपुरा का हिन्दी गद्य साहित्य सिक्किम का हिन्दी गद्य साहित्य। उपसंहार। संदर्भ ग्रंथ सूची।

48. केशरी (संगीता)

आचार्य किशोरीदास वाजपेयी का भाषा-चिंतन : हिंदी के स्वतंत्र स्वरूप का विश्लेषण।

निर्देशक : प्रो. कुमुद शर्मा

Th 27313

सारांश

शोध के प्रथम अध्याय 'आचार्य किशोरीदास वाजपेयी : पृष्ठभूमि' के अंतर्गत उनके लगभग 94 वर्ष के जीवन का संक्षिप्त सार तथा साहित्यिक तपस्या का मूल है। इस अध्याय को क्रमशः तीन बिन्दुओं 'जीवन यात्रा', 'साहित्यिक यात्रा' एवं 'साहित्यिक पुस्तकों की समीक्षा' में विभाजित किया गया है। शोध के द्वितीय अध्याय 'भारतीय भाषा-चिंतन की परम्परा' के अंतर्गत आर्यभाषाओं के चिंतन की ऐतिहासिक परंपरा को आधार बनाकर हिंदी भाषा-चिंतकों के क्रमिक इतिहास पर यथोचित प्रकाश डाला गया है। इस अध्याय को क्रमशः चार भागों 'भाषिक विमर्श की अवधारणा एवं उद्भव', 'भाषा-चिंतन की परंपरा का आरंभिक दौर', 'भाषा-चिंतन की परंपरा का मध्यकालीन दौर' तथा 'भाषा-चिंतन

की परंपरा का आधुनिक दौर' में बाँट कर में विस्तार से चर्चा किया गया है। शोधकार्य का यह अध्याय भाषा-चिंतकों के ऐतिहासिक योगदान का विवेचन करता है। भारतीय वैयाकरण परंपरा में आचार्य किशोरीदास वाजपेयी से पूर्ववर्ती एवं परवर्ती प्रमुख वैयाकरणों के मौलिक व्याख्याओं का विश्लेषण करता है जो उनके भाषा-चिंतन के विश्लेषण का आवश्यक आधार है। शोध के तीसरे अध्याय 'आचार्य किशोरीदास वाजपेयी का भाषा चिंतन' में आचार्य वाजपेयी के भाषा विषयक ग्रंथों का मूल्यांकन दो वर्गों में बाँट कर किया गया है। पहली वे पुस्तकें जो शुद्ध रूप से सैद्धांतिक दृष्टिकोण से अहिंदी भाषी या आरंभिक हिंदी भाषा की समझ के लिए लिखी गई हैं। दूसरी वे जो शुद्ध व्याकरण की दृष्टि से हिंदी के व्याकरण को सुदृढ़ करने के लिए प्रौढ़ पाठकों के लिए लिखी गई हैं। शोध का यह अध्याय हिंदी भाषा में अराजकता और अनुशासनहीनता के विद्रूप स्वरूप को नकारते हुए हिंदी भाषा की एकरूपता और उसके मानक स्वरूप को स्थिर रखने के लिए आवश्यक बिन्दुओं का विश्लेषण करता है। शोध के चौथे अध्याय 'हिंदी के स्वतंत्र स्वरूप का विश्लेषण' के अंतर्गत मानक हिंदी के प्रकृति एवं प्रवृत्ति को आधार बनाया गया है तथा हिंदी के सर्वांग विश्लेषण करने हेतु इस अध्याय को तीन बिन्दुओं 'ऐतिहासिक विश्लेषण', 'भाषिक विश्लेषण' तथा 'तुलनात्मक विश्लेषण' में विभाजित किया गया है। शोध के प्रथम, द्वितीय एवं तृतीय अध्याय में आचार्य किशोरीदास वाजपेयी एवं उनके भाषा-व्याकरण संबंधी योगदानों का मूल्यांकन है तथा हिंदी वैयाकरणों में उनके उचित स्थान का निर्देशन है। शोध के चौथे अध्याय के अंतर्गत हिंदी के अन्य कई व्याकरण के अनुकरणात्मक एवं अपहरणात्मक पद्धति से सर्वथा अलग हिंदी के स्वतंत्र स्वरूप का मौलिक चिंतन है।

विषय सूची

1. आचार्य किशोरीदास वाजपेयी : पृष्ठभूमि 2. आचार्य किशोरीदास वाजपेयी का भाषा - चिंतन 3. हिन्दी के स्वतंत्र स्वरूप का विश्लेषण। उपसंहार। संदर्भ ग्रंथ सूची।

49. चंदा

हिन्दी कहानी में अभिव्यक्त आदिवासी जीवन की प्रतिरोध की संस्कृति (2000-2018) ।

निर्देशक : प्रो. दिनेश राम

Th 27317

सारांश

1. आज आवश्यकता है कि सरकारी नीतियों का निर्माण आदिवासी हितों के अनुरूप, उनकी संस्कृति, भाषा के अनुरूप हो, जो नीतियाँ बनी हैं उनका क्रियान्वयन उचित रूप से हो, जो योजनाएँ पूर्व में बन चुकी हैं, वे आदिवासियों के बीच सही से लागू हों, ताकि सभी आदिवासियों तक योजनाओं की सही जानकारी व उचित लाभ पहुँच सके। 2. भ्रष्टाचार आदिवासी क्षेत्र की एक बड़ी समस्या बन गई है इसलिए भ्रष्टाचार को रोकने के लिए सख्त नियम व कड़े कानून बने, ताकि अफसरों व अधिकारियों में डर बने। 3. आदिवासियों की बेदखली व बढ़ता विस्थापन रुके, जिन आदिवासियों को विस्थापित किया जा चुका है उनको उचित मुआवजा व आवास की सुविधाएँ दी जाए, ताकि उन्हें अपने राज्यों से पलायन कर मजदूरी करने दिल्ली, पंजाब, गुजरात आदि न जाना पड़े। 4. जंगल की अंधाधुंध अवैध कटाई रुके और जहाँ से जंगल काटे गए हैं वहाँ नए जंगल लगाए जाएँ, पर्यावरण की दृष्टि से जहाँ

खाली, बंजर भूमि है वहाँ जंगल लगाए जाएँ। 5. आदिवासियों को खेती के परंपरागत तरीकों के साथ-साथ उन्हें नए उन्नत बीज, खाद, कीटनाशक, तकनीकी कृषि सुविधाएँ तथा सिंचाई की नवीन सुविधाएँ उपलब्ध कराएँ ताकि उनकी बंजर, पथरीली जमीन पर कृषि करना आसान हो जाए। 6. पीने योग्य जल आदिवासी क्षेत्र में एक बड़ी समस्या बन गया है क्योंकि इनकी नदियों व झरनों का पानी प्रतिदिन प्रदूषित हो रहा है, जिन जल स्रोतों का पीने योग्य है उन्हें कहीं बांध परियोजनाओं, कोल्डड्रिंक कंपनियों, तो कहीं राष्ट्रीय अभ्यारणों के कारण उस क्षेत्र के जल को आदिवासियों के लिए प्रतिबंधित कर दिया गया है, जिस कारण कई क्षेत्रों में उन्हें पानी के लिए कई मील दूर तक जाना पड़ता है इसलिए जल स्रोतों के प्रतिबंध आदिवासी समाज के लिए हटाना चाहिए

विषय सूची

1. आदिवासी जीवन का इतिहास, संघर्ष एवं प्रतिरोध की परंपरा 2. आदिवासी साहित्य की प्रतिरोधी चेतना का स्वरूप एवं विकास 3. आदिवासी कथा साहित्य: जल, जंगल और जमीन से जुड़े प्रश्न 4. आदिवासी जीवन की सांस्कृतिक चुनौतियाँ और हिन्दी कहानी 5. आदिवासी जीवन की राजनैतिक चुनौतियाँ और हिन्दी कहानी 6. हिन्दी की आदिवासी कहानियों का शिल्पगत विवेचन। उपसंहार। संदर्भ ग्रंथ सूची।

50. नरेन्द्र

राष्ट्रीय-सांस्कृतिक चेतना के परिप्रेक्ष्य में रामवृक्ष बेनीपुरी के साहित्य का अध्ययन।

निर्देशिका : प्रो. सुषमा चौधरी

Th 27323

सारांश

भूमिका रामवृक्ष बेनीपुरी साहित्यकार होने के साथ-साथ समाज सुधारक, स्वतंत्रता सेनानी, सामाजिक कार्यकर्ता, पत्रकार एवं किसान- मजदूरों के हमदर्द थे। यह सब बेनीपुरी जी के व्यक्तित्व में एक साथ दृष्टिगोचर होता है। आधुनिक हिंदी साहित्य के इतिहास में सामाजिक- सांस्कृतिक हित को देखते हुए बेनीपुरी का संपूर्ण साहित्य अप्रतिम कोटि का ठहरता है। जिस प्रकार उनके व्यक्तित्व में एक साथ इतनी विशेषताएं देखने को मिलती हैं, ठीक वैसे ही उनके संपूर्ण साहित्य में उनका व्यक्तित्व झलकता है। जिस प्रकार से कृष्णभक्त कवि सूरदास ने वात्सल्य का कोना-कोना झांक लिया था, ठीक उसी प्रकार रामवृक्ष बेनीपुरी जी ने साहित्य के मर्म को भांपते हुए और राष्ट्र हित को ध्यान में रखकर स्त्री-पीड़ा से लेकर आम जन-जीवन की समस्या को अपने रचनाजगत का विषय बनाया है। इनके लेखन का फलक अत्यंत व्यापक है जिसमें न केवल कहानी उपन्यास है, बल्कि नाटक, कविता, संस्मरण एवं रेखाचित्र का समावेश भी एक साथ परिलक्षित होता है। बेनीपुरी ने अपने समग्र साहित्य में बीसवीं सदी को एक नया भारतीय समाज बनाने की भरपूर कोशिश की है।

विषय सूची

1. राष्ट्रवाद और संस्कृति की अवधारणा 2. रामवृक्ष बेनीपुरी जीवन एवं कर्म 3. बेनीपुरी के साहित्य में राष्ट्रीय - सांस्कृतिक चेतना 4. रामवृक्ष बेनीपुरी के साहित्य में स्त्री की भूमिका 5. रामवृक्ष बेनीपुरी के साहित्य में सांस्कृतिक बोध के स्वर 6. बेनीपुरी के साहित्य का भाषिक विन्यास। उपसंहार। संदर्भ ग्रंथसूची।

51. पुष्पाकर (कुलदीप कुमार)

हिंदी के विकास में हिंदी सेवी संस्थाओं का योगदान ।

निर्देशक : प्रो. जसपाली चौहान

Th 27327

सारांश

हिंदी का विकास यूं तो दसवीं शताब्दी के आसपास से आरंभ होता है परंतु जो हिंदी हम वर्तमान में बोलते, लिखते और पढ़ते हैं अर्थात् जो राजभाषा हिंदी है उसका मानक रूप उन्नीसवीं शताब्दी के अंतिम दशक तथा बीसवीं शताब्दी के आरंभिक दो दशकों में सुव्यवस्थित हुआ। हिंदी भाषा का विकास मोटे तौर पर तीन आधार पर हुआ है : 1. व्यक्तिगत रूप से किया गया हिंदी भाषा का विकास 2. धार्मिक एवं सामाजिक सुधार संबंधी संस्थाओं द्वारा किया गया हिंदी का विकास 3. शैक्षिक संस्थाओं द्वारा किया गया हिंदी का विकास 4. हिंदी सेवी संस्थाओं द्वारा किया गया हिंदी भाषा का विकास मेरा शोध विषय – हिंदी के विकास में हिंदी सेवी संस्थाओं का योगदान है। यह शोध प्रबंध कुल 6 अध्यायों में विभाजित किया गया है। अध्याय हैं : • पहला, हिंदी सेवी संस्थाएं, • दूसरा, केंद्र सरकार द्वारा संचालित हिंदी सेवी संस्थाएं ; • तीसरा, राज्य सरकारों द्वारा संचालित हिंदी सेवी संस्थाएं • चौथा अध्याय, स्वैच्छिक हिंदी सेवी संस्थाएं • पांचवा, गांधी जी द्वारा स्थापित हिंदी सेवी संस्थाएं • छठवां, अन्य संस्थाएं भारत में हिंदी का विकास मूल्यतः नागरी प्रचारिणी सभा, काशी ; हिंदी साहित्य सम्मेलन, प्रयाग; दक्षिण भारत हिंदी प्रचार सभा, चेन्नई ; राष्ट्रभाषा हिंदी प्रचार समिति, वर्धा द्वारा हुआ है। ये संस्थाएं कालांतर में स्थापित संस्थाओं की मातृ संस्था की रही हैं। इन्हीं संस्थाओं से निकलकर अन्य संस्थाएं विकसित हुईं तथा यहां के पढ़े हुए प्रचारकों के द्वारा अन्य संस्थाएं स्थापित की गईं। वर्तमान में कुल 23 संस्थाओं को केंद्रीय हिंदी निदेशालय, नई दिल्ली द्वारा परीक्षाओं के लिए मान्यता प्राप्त है। आजादी के बाद जब हिंदी देश की राजभाषा बनी तब भारत सरकार ने केंद्रीय हिंदी निदेशालय, नई दिल्ली, वैज्ञानिक एवं तकनीकी शब्दावली आयोग, नई दिल्ली; केंद्रीय हिंदी संस्थान, आगरा जैसी महत्वपूर्ण संस्थाओं की स्थापना कर हिंदी के विकास में महत्वपूर्ण योगदान दिया है।

विषय सूची

1. हिन्दी सेवी संस्थाएँ : ऐतिहासिक पृष्ठभूमि 2. केन्द्र सरकार द्वारा संचालित हिन्दी सेवी संस्थाएँ 3. राज्य सरकारों द्वारा संचालित हिन्दी सेवी संस्थाएँ 4. स्वैच्छिक हिन्दी सेवी संस्थाएँ 5. गाँधी जी द्वारा स्थापित संस्थाएँ 6. अन्य हिन्दी सेवी संस्थाएँ। उपसंहार। संदर्भ ग्रंथ सूची। परिशिष्ट

52. बाजपेयी (सुधांशु)

आरंभिक हिंदी पत्रकारिता में राष्ट्रीयता की अवधारणा और गणेश शंकर विद्यार्थी ।

निर्देशक : प्रो. चंद्रप्रकाश मिश्र

Th 27328

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राष्ट्रीयता के प्रसार में विभिन्न पत्र-पत्रिकाओं की महत्वपूर्ण भूमिकारही। इन पत्र-पत्रिकाओं में एक सबसे लोकप्रिय नाम 'प्रताप' का भी रहा, जिसके संपादक गणेश शंकर विद्यार्थी जी थे। 'प्रताप' हिन्दी

क्षेत्र का ही नहीं बल्कि पूरे भारत में आजादी की सबसे मुखर आवाज था। 'प्रताप' न सिर्फ साम्राज्यवाद बल्कि मजदूरों-किसानों के शोषक देशी सामंतों के खिलाफ भी मुखर रहता। 'प्रताप' सिर्फ पत्र ही नहीं बल्कि पत्रकारिता का संस्थान भी बन गया, जिसमें तमाम युवकों ने लेखन एवं पत्रकारिता के गुण सीखे और बाद में श्रेष्ठ कवि, लेखक और पत्रकार सिद्ध हुए। यही नहीं 'प्रताप' का कार्यालय भी राष्ट्रीय नेताओं और क्रांतिकारियों के लिए हमेशा शरणस्थली की तरह रहा। विद्यार्थी जी का व्यक्तित्व पत्रकार-संपादक के रूप में जितना विराट था, उससे कम विराट राजनीतिक व्यक्तित्व नहीं था। वह कांग्रेस की अहिंसक धारा और क्रांतिकारियों की हिंसक धाराओं के बीच सेतु के समान थे। वह मजदूरों और किसानों की आवाज थे। वह संयुक्त उत्तर प्रदेश कांग्रेस के चेयरमैन भी रहे तो कानपुर से विधानसभा का प्रतिनिधित्व भी किया। वे जिन समाजवादी, लोकतांत्रिक और धर्मनिरपेक्ष मूल्यों के लिए जिए, उन्हीं मूल्यों की रक्षा हेतु उन्होंने स्वयं को न्यौछावर भी कर दिया।

विषय सूची

1. पत्रकारिता का स्वरूप एवं आरंभिक हिन्दी पत्रकारिता का विकास 2. गणेश शंकर विद्यार्थी : आरंभिक जीवन एवं व्यक्तित्व निर्माण 3. राष्ट्रीयता की अवधारणा 4. गणेश शंकर विद्यार्थी की पत्रकारिता के विभिन्न स्वर 5. गणेश शंकर विद्यार्थी का साहित्यिक अवदान। उपसंहार। संदर्भग्रंथ सूची।

53. मणि (अल्का)

पारसी रंगमंच का प्रस्तुति विधान : प्राच्य एवं पाश्चात्य का प्रभाव ।

निर्देशक : प्रो. चन्दन कुमार

Th 27331

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मानव का जीवन ईश्वर द्वारा निर्देशित एक रंगमंच ही है। रंगमंच की प्रत्येक क्रिया मनुष्य जीवन से ही अनुप्राणित लगती है। यही कारण है कि रंगमंच पर प्रस्तुत क्रिया व्यापार से मनुष्य अपना संबंध स्थापित कर लेता है। वह नाटक के किसी ना किसी पात्र में स्वयं को देखने लगता है। यही सामंजस्य उसे रंगमंच और नाटक से गहरे रूप में जोड़ती है और नाटक की जीवंतता बनी रहती है। रंगमंच की धारा बहुत प्राचीन है किन्तु यह धारा एक ही प्रवाह में नहीं बहती है। मध्यकाल में सीमित प्रवाह के साथ बहती हुए आधुनिक काल तक पहुँचती है। इसी काल में पारसी जाति के लोगों ने मनोरंजन के लिए नाटक खेलना शुरू किया। पारसी रंगमंच, रंगमंच के इतिहास का वह हिस्सा है, जो सबसे अधिक विरोध, विवाद और निषेध का विषय बना। उसे भारतीय रंगमंच के इतिहास का सबसे निकृष्ट तत्व माना गया। पारसी रंगमंच के विरोध और विवाद ने अन्य विद्वानों में भी उत्सुकता का संचार किया और उन्हें इसके निष्पक्ष पड़ताल के लिए आकर्षित किया। यह पारसी रंगमंच की प्रासंगिकता ही है कि अपने अवसान के इतने वर्षों के बाद भी, यह शोध का विषय है, प्रस्तुत शोध भी उसी परंपरा में किया गया एक प्रयास है।

विषय सूची

1. भारतीय रंगमंच की अवधारणा एवं स्वरूप 2. पारसी रंगमंच 3. पारसी रंगमंच के प्रसिद्ध नाटककार एवं उनकी नाट्य शैली 4. पारसी रंगमंच का प्रस्तुति विधान 5. पारसी रंगमंच के प्रस्तुति विधान : प्राच्य एवं पाश्चात्य का प्रभाव। उपसंहार। संदर्भ ग्रंथ सूची।

54. मेइचेन (वांग)

निर्मल वर्मा का कथा-साहित्य : संवेदना और भाषा ।

निर्देशक : प्रो. रामनारायण पटेल

Th 27336

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मेरा शोध विषय 'निर्मल वर्मा का कथा साहित्य : संवेदना और भाषा' है। मेरा यह शोध प्रबंध छह भागों में विभक्त है। प्रथम अध्याय साहित्य की संवेदना और भाषा पर आधारित है। इसमें मैंने संवेदना एवं भाषा के अर्थ-स्वरूप की चर्चा करते हुए साहित्य में संवेदना एवं भाषा की महत्ता पर प्रकाश डाला है। इस अध्याय में साहित्य में कृतियों, लेखकों और पाठकों के बीच संबंधों का विश्लेषण किया गया है। साथ ही भाषा-योजना और कृति की संवेदना का भी विवेचन-विश्लेषण किया गया है। भाषा-योजना के विश्लेषण में काव्यशास्त्र की कुछ अलंकारिक विधियों तथा नैराटोलोजी के मूल विचारों की चर्चा भी होती है, जो अन्य अध्यायों में प्रयुक्त हैं। द्वितीय अध्याय निर्मल वर्मा के व्यक्तित्व एवं कृतित्व पर आधारित है। लेखक की कृति और भाषा का विश्लेषण करने के लिए उनके व्यक्तित्व, उनके अनुभव और उनके साहित्य संसार के बारे में पता होना चाहिए। अतः शोध का द्वितीय अध्याय निर्मल वर्मा और उनकी कृतियों का विस्तृत परिचय है। इस अध्याय में, निर्मल वर्मा के जीवन के अनुभव की समीक्षा करने के अलावा उनके साहित्यिक कार्यों को भी रेखांकित किया जाता है। तृतीय एवं चतुर्थ अध्याय में निर्मल वर्मा के उपन्यासों और कहानियों की आस्वादात्मक संवेदना की चर्चा विशेष रूप से हुई है। इन दोनों अध्यायों में निर्मल वर्मा की कृतियों की आस्वादात्मक संवेदना को समझने के लिए उन्हें भारतीय एवं पश्चात परिवेश में देखने-समझने का प्रयास किया है। निर्मल वर्मा की कृतियों में अकेलापन की संवेदना अक्सर दिखाई देती है। चाहे वह उपन्यास हो या कहानी, निर्मल वर्मा के कार्यों में पात्रों का अकेलापन आधुनिक समाज में एक वास्तविक समस्या है, और यह एक आध्यात्मिक दर्द है जिसका सामना हर दिन लोग करते हैं। पंचम अध्याय निर्मल वर्मा के उपन्यासों की भाषा पर आधारित है। षष्ठ अध्याय निर्मल वर्मा की कहानियों की भाषा पर आधारित है। मैंने निर्मल वर्मा की कहानियों और उपन्यासों की भाषा को भारतीय एवं पश्चात परिवेश की स्थिति के संदर्भ में विस्तार से देखने समझने का प्रयास किया है। निस्संदेह, निर्मल वर्मा श्रेष्ठ हिंदी साहित्यकारों में से एक हैं। उनकी भाषा शैली और संवेदना दोनों ही समकालीन कथाकारों से अलग है। इन संदर्भों में मैंने निर्मल वर्मा के कथा-साहित्य की भाषा एवं संवेदना का विवेचन-विश्लेषण करने का प्रयास किया है।

विषय सूची

1. साहित्य की संवेदना और भाषा 2. निर्मल वर्मा का व्यक्तित्व और साहित्य - संसार 3. निर्मल वर्मा के उपन्यासों की संवेदना 4. निर्मल वर्मा की कहानियों की संवेदना 5. निर्मल वर्मा के उपन्यासों की भाषा 6. निर्मल वर्मा की कहानियों की भाषा। उपसंहार। संदर्भ ग्रंथ सूची।

55. यादव (प्रभात)

समानांतर हिंदी सिनेमा में अभिव्यक्त लोक जीवन और संस्कृति ।

निर्देशक : प्रो. निरंजन कुमार

Th 27338

सारांश

सिनेमा विचारों की अभिव्यक्ति का प्रभावशाली माध्यम है। सिनेमा का उद्देश्य चाहें जो भी हो व्यवसाय/मनोरंजन करना, या कोई सामाजिक सन्देश प्रदान करना लेकिन उसका अपने समय के यथार्थ से घनिष्ठ सम्बन्ध होता है। मेरा पहला अध्याय 'सिनेमा और लोक जीवन-संस्कृति' है जिसमें 'लोक जीवन और संस्कृति', 'साहित्य और सिनेमा का अंतःसम्बन्ध', 'सिनेमा और समाज' उप अध्याय है। इस अध्याय में मैंने हिंदी सिनेमा में चित्रित लोक संस्कृतियों, भाषा और लोक संवेदना को समझाने का प्रयास किया है। मेरा दूसरा अध्याय 'हिन्दी सिनेमा: एक परिदृश्य' है। इस अध्याय में मैंने 'हिन्दी सिनेमा का सामान्य परिचय', 'हिन्दी सिनेमा का आरम्भिक दौर', 'स्वातंत्र्योत्तर हिन्दी सिनेमा', 'समकालीन हिन्दी सिनेमा' जैसे उपअध्यायों में मैंने आरंभ से अब तक के हिंदी सिनेमा के इतिहास का संक्षिप्त परिचय दिया है। मेरा तीसरा अध्याय 'हिन्दी सिनेमा के रूप- मुख्यधारा व समानांतर' है। इसमें मैंने मुख्यधारा के सिनेमा और समानांतर सिनेमा के विभिन्न पक्षों पर विचार करते हुए उनके उद्भव और विकास को समझाने का प्रयास किया है। मेरा चौथा अध्याय 'समानांतर हिन्दी सिनेमा में लोक जीवन-संस्कृति एवं कला' है। इसमें 'समानांतर हिन्दी सिनेमा के दौर में लोक जीवन', 'समानांतर हिन्दी सिनेमा में कला के विविध रूप', 'समानांतर हिन्दी सिनेमा पर भूमण्डलीकरण का प्रभाव' जैसे उप-अध्यायों में मैंने समानांतर सिनेमा से लोक जीवन के जुड़ाव को समझाने का प्रयास किया है। पांचवा अध्याय 'हिन्दी सिनेमा और लोक-भाषा का प्रश्न' है। इसमें सिनेमा में हिन्दी भाषा का स्वरूप। 'समानांतर सिनेमा एवं लोक जीवन की भाषा,' 'भूमण्डलीकरण के दौर के सिनेमा में लोक भाषा का प्रश्न', 'लोक जीवन पर आधारित फिल्मों का सामाजिक-सांस्कृतिक विश्लेषण' किया है। मेरा छठा एवं अंतिम अध्याय मद्र इंडिया, दो बीघा जमीन, तीसरी कसम, गोदान, अंकुर, नदिया के पार, दामुल, सद्गति जैसी फिल्मों का अध्ययन है। इन फिल्मों में अभिव्यक्त लोकजीवन, लोकभाषा, लोकसंस्कृति और साहित्य से उनके संबंध पर बातचीत की गई है।

विषय सूची

1. हिन्दी सिनेमा और समाज 2. हिन्दी सिनेमा : एक परिदृश्य 3. हिन्दी सिनेमा के रूप : मुख्यधारा और समानान्तर रूपरेखा 4. समसनांतर हिन्दी सिनेमा में लोकजीवन - संस्कृति एवं कला 5. हिन्दी सिनेमा और लोक भाषा का प्रश्न 6. लोकजीवन पर आधारित फिल्मों का सामाजिक - सांस्कृतिक विश्लेषण। उपसंहार। संदर्भ ग्रंथ सूची।

56. सिंह (वैशाली)

हरिशंकर परसाई के व्यंग्यात्मक निबंधों की भाषिक संरचना ।

निर्देशिका : प्रो. मंजु मुकुल काम्बले

Th 27348

सारांश

हरिशंकर परसाई के व्यंग्यात्मक निबंधों की भाषिक संरचना व्यंग्य साहित्य में परसाई जी का नाम कबीर, भारतेन्दु, निराला और नागार्जुन जैसे युग पुरुषों की श्रेणी में लिया जाता है। आजादी से पहले के हिंदुस्तान को जानने के लिए जैसे सिर्फ प्रेमचंद को पढ़ना पर्याप्त है, उसी तरह आजादी के बाद के भारत का पूरा दस्तावेज़ परसाई की रचनाओं में सुरक्षित है। अपनी सहज व्यंग्यात्मक भाषा के द्वारा 'जो है' और 'जो होना चाहिए' के प्रति अत्यधिक संवेदनशीलता की प्रभावपूर्ण अभिव्यक्ति परसाई जी के व्यंग्य निबंधों की महत्वपूर्ण विशेषता है। परसाई जी के समग्र गद्य साहित्य का शोधपरक मूल्यांकन करने हेतु मैंने अपने विषय 'हरिशंकर परसाई के व्यंग्यात्मक निबंधों की भाषिक संरचना' को मुख्य रूप से पाँच अध्यायों में विभक्त किया है। इस प्रक्रिया में प्रथम अध्याय 'हरिशंकर परसाई का जीवन परिचय और रचनाधर्मिता' है। इस अध्याय में मैंने हरिशंकर परसाई के अभावग्रस्त जीवन में आई कठिनाइयों, संघर्षों और उससे निर्मित उनकी जनपक्षधर दृष्टि के बारे में वस्तुनिष्ठ ढंग से विचार करने का प्रयास किया है तथा साथ ही उनके व्यक्तित्व को जिसे शब्दों में बाँध पाना कठिन है, लेकिन उपलब्ध तथ्यों के आधार पर संक्षिप्त रूप में प्रस्तुत करने का प्रयास किया है। द्वितीय अध्याय 'व्यंग्य विधा का परिचय' है, जिसमें व्यंग्य विधा की स्थापना और स्वरूप पर बात करते हुए उसकी परिभाषा और उसके तत्वों को रेखांकित करने का प्रयास किया गया है। इसके साथ ही साथ हरिशंकर परसाई का व्यंग्य विधा के विकास में योगदान पर भी चर्चा की गयी है। तृतीय अध्याय 'भाषिक संरचना और व्यंग्य' पर है। इस अध्याय में भाषिक संरचना के स्वरूप पर बात करते हुए भाषिक संरचना के अर्थ और उसके विभिन्न रूपों को समझने का प्रयास किया है तथा व्यंग्य विधा की भाषिक संरचना का अध्ययन कैसे किया जाए इस बात को भी मैंने समझाने का प्रयास किया है। इसके साथ ही साथ मैंने हरिशंकर परसाई के व्यंग्यात्मक निबंधों में किस प्रकार की भाषिक संरचना प्रयुक्त हुयी है, इसकी विवेचना का भी प्रयत्न किया है। चतुर्थ अध्याय 'परसाई के व्यंग्य निबंधों में चयन की प्रकृति' है। किसी भी रचना की निर्मिति में चयन की महत्वपूर्ण भूमिका होती है। रचना में प्रयुक्त विविध चयनों जैसे शब्द चयन, ध्वनि चयन, वाक्य चयन आदि से रचना की प्रभावोत्पादकता प्रभावित होती है अतः इस अध्याय में चयन के अर्थ और प्रकृति को समझने का प्रयास किया गया है, साथ ही साथ चयन के विविध रूपों जैसे ध्वनि चयन, शब्द चयन, पदबंध चयन, वाक्य चयन और विचलन को भी समझने का प्रयास किया गया है। परसाई जी अपनी रचनाओं में किस प्रकार का चयन चुनते हैं तथा उनसे उत्पन्न होने वाले विशिष्ट प्रभावों को मैंने इस अध्याय में देखने का प्रयत्न किया है। पाँचवाँ अध्याय 'परसाई के व्यंग्य निबंधों का शिल्पविन्यास और शैलीगत वैशिष्ट्य' पर है। इस अध्याय में परसाई के व्यंग्य निबंधों का शिल्प विन्यास, जिसमें कथात्मक, निबंधात्मक, आलोचनात्मक, और अन्य विधाओं के शिल्प विन्यास पर बात करते हुए निबंधों के शैलीगत वैशिष्ट्य पर भी चर्चा की गयी है। जिसमें प्रतीक, मिथक, लक्षणा और व्यंजना, मुहावरे और

लोकोक्तियों के साथ-साथ अंग्रेजी कहावतों के नवीनीकरण में परसाई के योगदान की चर्चा करते हुए उनके व्यंग्य में प्रयोग हुए बिम्बों तथा उससे उत्पन्न विशिष्ट प्रभावों पर विस्तार से चर्चा की गयी है।

विषय सूची

1. हरिशंकर परसाई की रचनाधर्मिता 2. व्यंग्य विधा का परिचय 3. भाषिक संरचना और व्यंग्य 4. हरिशंकर परसाई के व्यंग्य निबंधों में चयन की प्रकृति 5. हरिशंकर परसाई के व्यंग्य निबंधों का शिल्प विन्यास और शैलीगत वैशिष्ट्य। उपसंहार। संदर्भ ग्रंथ सूची।

HOME SCIENCE

57. GUPTA (Vibha)
Hand Hygiene Knowledge, Attitude and Practice (KAP) among Rural Primary School Children - An Intervention Study.
 Supervisors: Dr. Sarita Anand
Th 27515

Abstract

Handwashing with soap (HWWS) is one the most recommended protection against diarrhea, one of the leading causes of morbidity and mortality among children. However, its adoption remains poor. Schools are the first point where children learn healthy habits from teachers and other children. The present study was designed to assess the effectiveness of a low-cost, school-based participative intervention on hand hygiene knowledge, attitude and practice (KAP) of primary school children. The study also aimed to identify socio-demographic and WASH-related factors that influenced hand hygiene KAP. Observational assessment of school WASH infrastructure was done along with understanding hygiene perceptions of class teachers. This mixed-method, pre-post-test study was conducted in three rural blocks of Palwal district in Haryana. Systematic random sampling was used to draw a population-proportionate sample. A total of 562 students and 28 class teachers from 28 school participated. While COM-B model of behavior change provided the theoretical framework, entertainment-education approach was used to design the intervention. The study reports significant improvements in mean scores for children's hand hygiene KAP after the intervention ($p < 0.05$). Significant positive gains were also observed in children's understanding of germs, associated illness threat and HWWS as prevention mechanism. The study found universal coverage of WASH facilities in sampled schools though sufficiency and usability varied. Class teacher interviews revealed a combination of external and internal factors that influenced student hand hygiene KAP. Content analysis of school curriculum through the lens of hygiene and sanitation provided a pathway for catalyzing the intervention as potential addition to hygiene subject matter in textbooks and classrooms. The present study highlights that effective hygiene promotion at school level requires adequate infrastructure, motivated teachers and engaging participative tools that consistently remind and reinforce the importance of HWWS at critical moments thus contributing to SDG Goal 3 of health and well-being for all.

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1. Introduction 2. Review of literature 3. Research Methods 4. Findings and Discussion
5. Summary, Conclusion and Recommendation. Bibliography and Annexures.

58. KHENDUJA (Preetika)
Development of an Educational Intervention for Capacity Building of Elderly in Delhi for Promotion of Healthy Lifestyle.
Supervisors: Dr. Manisha Sabharwal
Th 27517

Abstract

Ageing is a degenerative and irreversible process accompanied by numerous physiological changes. Unhealthy lifestyle practices such as improper diet, physical inactivity, tobacco, and alcohol consumption can further predispose the elderly to both chronic degenerative and infectious diseases. Awareness creation with the use of appropriate educational interventions and capacity building for self-care and management of a chronic disease can contribute towards adoption of a healthy lifestyle and consequently healthy ageing among the elderly. The present study was conducted with the aim of development of an educational intervention for elderly using behaviour change framework (Social Cognitive Theory) for capacity building to promote healthy lifestyle that includes adequate nutrition, physical activity & cessation of substance use, and coping strategies for self-care in the management of morbidities. The study was conducted in three phases. Phase-I included the situational analysis for baseline information on nutritional status, physical activity, functional ability, morbidity profile, and knowledge, attitude & practices (KAP) on healthy lifestyle among the elderly. Based on the felt needs of phase-I and gaps identified in knowledge, the phase-II was designed and implemented that included development of an educational intervention program for awareness creation and capacity building of elderly for promotion of healthy lifestyle and self-care in the management of morbidities. Due to the COVID-19 pandemic, the educational intervention was implemented using an e-platform (WhatsApp) and Google Meet for interactive sessions. In the phase-III, effectiveness of e-intervention program was assessed.

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1. Introduction 2. Review of Literature 3. Methodology 4. Results and Discussions (Phase-1) 5. Results and Discussions (Phase-2) 6. Results and Discussions (Phase-3)
7. Summary and Conclusion. References and Annexures.

59. POKHRIYAL (Shruti)
Mental Health: Perspectives and Experiences of Youth in Delhi-NCR.
Supervisors: Dr. Mani Bhasin Kalra and Dr. Vinita Bhargava
Th 27518

Abstract

Mental health is a multidimensional concept with indefinite boundaries. The present study employed a qualitative approach to explore the perspectives and experiences of youth about mental health. The study was located in Delhi NCR, and the sample comprised 61 youth between 18-29 years, selected using purposive and snowball sampling techniques. Twenty-five of these participants had been diagnosed with a mental health disorder. The study aimed to decipher the meanings that youth ascribed to the term mental health, map their stressors over time, identify coping strategies, and identify factors that contributed to their sense of well-being. The perspectives of youth who had been diagnosed were further explored to understand their lived experiences of a disorder. Semi-structured interviews and a drawing

task titled 'Flow of Life' were used to gather data, and thematic analysis was used for data analysis. The study's findings revealed that youth conceptualised mental health as complex in nature, an essential component of overall health, and stigmatized. It was seen to be inclusive of both pleasant and unpleasant feelings; however, there was an inclination to associate it with "problems" in life. The different stressful and traumatic experiences described by participants included academic and work pressures, bullying, breakups in romantic relationships, and sexual abuse. Coping was a dynamic process comprising dimensions like problem solving, seeking support, avoidance, distraction, and self-comforting. Experiencing pleasant emotions, a sense of belongingness, growth, meaning, and recognition comprised youth's idea of wellbeing. Participants with lived experiences emphasised the all-encompassing impact of symptoms, which were said to develop gradually. They underlined the non-linear journey of help-seeking and recovery as well as pointed to the mixed blessing of medications and their diagnostic labels. An intersectoral approach is needed to address mental health issues as well as promote wellbeing. Keywords: coping, lived experiences, mental health, stressors, wellbeing

Contents

1. Introduction 2. Method 3. Results and Discussion. Conclusion. References and Appendices.

60. THOUDAM (Jyomati)

Traditional Textiles and Costumes of Select Naga Tribes of Manipur.

Supervisors: Prof. Ritu Mathur

Th 27525

Abstract

The people of Manipur consist of four ethnic groups: Meities, Meiteis Pangal, Nagas, and Kukis. There are over 33 tribal communities under the Naga and Kuki groups, with 18 Naga tribes in Manipur. The Naga, Tangkhul, Maring, and Kabui (Rongmei) tribes are the largest Naga tribes in Manipur. Weaving was considered important in tribal society, with all women practicing it at home. Cotton cultivation was done by tribes for domestic purposes and selling. Women of all ages, unmarried or married, were engaged in spinning and weaving. Since early times, the tribes have been engaged in dyeing, using leaves, the bark of trees, flowers, mud roots, and creepers. The Tangkhul, Maring, and Kabui Naga tribes have their own social hierarchy, unique textiles and costumes, colours, specific designs, and motifs with significance and symbolism. These textiles and costumes played a vital role in making sense of identity and marking a mark of distinction within the community. Most authors have documented the origin, history, migration, socio-cultural aspects, religion, or village administration of the three tribes. The information on the traditional textiles and costumes of the tribes is extremely limited, and the earlier indigenous practice of dyeing with natural dyes is no longer in use. This traditional knowledge is in danger of extinction, and it is essential to document and revive these textiles and costumes. The study primarily focuses on tribe people from different age groups from diverse backgrounds in rural and urban areas, as well as tribal women weavers, handloom units, weavers employed in units, and government officials whose work is related to traditional textiles and costumes. Data was collected using semi-structured, interview schedules, photography, and observation techniques. Today, traditional textiles and costumes of the three tribes have been contemporized by replacing hand-spun cotton with acrylic and mill-made cotton yarns, polyester, silver, and golden zari threads, and reducing the intricacy of motifs. Products such as waistcoats, men's mufflers, and file covers are being produced to preserve and promote these traditional textiles and costumes.

Contents

1. Introduction 2. Review of Literature 3. Materials and Methods 4. Results and Discussions 5. Summary and Conclusion. Bibliography and Appendices.

LAW

61. MANJUAHA

Regulation of Hazardous Waste in the National Capital Territory of Delhi: A Legal Analysis of The Existing Legislations and Its Application.

Supervisor: Dr. Shabnam Mahlawat

Th 27569*Abstract*

Hazardous waste is a residue of the industrial sector in developing countries, which along with rising population, rapid industrialization, and the race for development is leading towards unprecedented disasters in waiting, to occur. In India, Central Pollution Control Board and Pollution Control Board of Delhi are responsible authorities, for dealing with the overall information related to management of the hazardous waste and the implementation of the Hazardous waste rules. It has been seen that there is a huge growth in the waste generation and there are various reasons responsible for it such as lack of organization, complexity in waste types, shortage of financial resources and lack of zeal in the system etc. The waste management are governed by different kinds of rules, which clearly define the provisions of the collection, transportation, storage and disposal of hazardous waste. These have been grossly mismanaged by the people and the authorities related to hazardous waste. There are various requirements to deal with hazardous waste and its effective management, which certainly are falling short in India for the purpose of implementation of these rules. The researcher has in present research, carried out a study of both international and domestic legal provisions related to regulation of hazardous waste. The International study is carried out by the doctrinal method and the Domestic provisions have been studied, by both doctrinal and non-doctrinal methods. An exhaustive study has been done in the area of NCT of Delhi's industrial area, to study the gap between the law and its implementations. In the Doctrinal part, the regulatory framework has been written in detail about production, manufacture, use, transportation, disposal, import and export of the hazardous and other waste. In empirical study, by visiting industrial area data has been collected and with the help of collected data findings have been drawn.

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1. Introduction 2. Evolution of Legal Framework on Hazardous Waste Laws 3. Sustainable Management of the Hazardous Waste 4. International Regulations on Hazardous Waste 5. Indian Legal Framework on Hazardous Waste 6. Empirical Study on Hazardous Waste Laws - Practices and Challenges in NCT of Delhi 7. Conclusion and Suggestions. Bibliography. Annexure.

62. MAWANDIYA (Swati Kumari)

Legal Protection Against Light Pollution in India: A Comparative Study with Special Reference to UK and USA.

Supervisors: Prof. (Dr.) Usha Tandon and Dr. Susmitha P. Mallaya

Th 27570*Abstract*

Light Pollution refers to the excessive illumination of the exterior surroundings caused due to artificial lighting at night-time. The reduced visibility of stars, the

glaring lights on road, unwanted lighting in public places are few kinds of light pollution. It impacts human beings, animals, plants, migratory birds and the ecosystem. It is a cause of annoyance and disturbance and also leads to loss of energy due to over-illumination. The urban areas in India face light pollution due to usage of inefficient lighting mechanism and inappropriate lighting installations. This work conducts a comparative study of such legal mechanism available in the developed countries with the objective of finding the most appropriate tool for legal regulation of light pollution in India. The study analyses the legal mechanism with regard to light pollution in UK, USA and Europe. America and Europe follow the models of dedicated legislations wherein there are specific legislations present for abatement of light pollution. On the other hand, United Kingdom follows the bolt-on approach wherein the environmental legislation of the country has recognised artificial light as a form of statutory nuisance. This research work analyses the mechanism of these countries along with identifying inherent limitations in their approach. The present study also analyses data collected through an empirical study conducted with the objective to determine the need for legal regulation of light pollution in India. This work locates remedy for light pollution in the Indian Constitution, Indian environmental legislations, principle of sustainable development, Tort law and criminal law. In the opinion of the researcher, there is a need to regulate light pollution in India by a legal mechanism. As such, the researcher proposes a draft rule to be prepared by the Central Government in exercise of the rule making power delegated to it through Environmental (Protection) Act, 1986.

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1. Introduction 2. Light Pollution in India: Meaning and Scope 3. Regulating Light Pollution in USA and Europe: Models of Dedicated Legislations 4. Regulating Light Pollution in UK: Model of Private Law & Environmental Statute 5. Regulating Light Pollution in India: Exploring Remedies in Indian Environmental Law 6. An Empirical Study to Assess the Need for Legal Regulation of Light Pollution in India 7. Conclusion and Suggestions. Bibliography. Annexure.

63. YADAV (Anjali)

Assessing the Impact of Legitimization on the Rights of the Street Vendors with Special Reference to Varanasi.

Supervisor: Dr. Suman

Th 27580

Abstract

Street vending is a ubiquitous, visible phenomenon still devoid of legal protection. Street vendors that provide cheap and affordable goods and services were largely ignored by the administration as part of the city and considered illegal. This doctoral thesis, based in the holy city of Varanasi, India, examines the impact of legitimisation on street vendors. It explores how and in what manner a duly enacted Act by the legislatures protects the livelihood of the street vendors and regulates them. The empirical qualitative study delves into the quality of the legal implementation, addressing the questions relating to the formation of the Town Vending Committees, the issuance of the vending certificate, and the participation of women. The study has reflected that despite many gaps that need to be addressed, the initiatives to grant legal status to the street vendors in Varanasi have been phased. As a result, many have been surveyed, and many have been issued with vending certificates with properly designated spaces. The pandemic has primarily hit street vendors and their businesses, but the redressal for the same through PMSVANidhi gave an economic boost to the street vendors. The study concludes that even though the initiatives have been taken by the State Urban Development Authorities to provide a dignified life to the street vendors, a designated vending

space and proper accommodation in an area along with the certificate of vending will ensure the proper regulation of the street vending in a legal manner.

Contents

1. Introduction and Research Design 2. Contemplating the Human Rights of The Street Vendors 3. History, Informality and Street Vending: International and National Perspective 4. Relocating the Vendors in Legal and Policy Instruments: An Analysis 5. Indian Judiciary and The Street Vendor's Jurisprudence 6. The Effect of the Pandemic on Street Vendors and the State Responses 7. Empirical Analysis and Interpretation on The Legitimization of Street Vendors in Varanasi 8. Conclusions and Suggestions. Bibliography and Annexures.

MANAGEMENT STUDIES

64. JAMKHEDKAR (Rajiv)
Technology Led Business Disruption in Retail Financial Services.
 Supervisor: Prof. M. L. Singla
Th27593

Abstract

Artificial Intelligence (AI) technologies and other 'new technologies' are breaking the barrier from theory to practice. These new technologies may drive innovation in the next twenty years. Financial services comprise Banking, Insurance and other services related to the movement and usage of capital. Retail financial services cater to individuals and small businesses. Six new technologies - Machine Learning/Deep Learning, Block-chain, Internet-of-things (IoT), Robotics, Advanced Data Analytics/Prediction Models, and Cloud Computing – are being adopted by retail financial services firms. These technologies are creating applications that have deep and disruptive impacts on the industry. Hence, it is essential for the industry that the area of technology-led innovation is better understood. The researcher studied the impact of new technology-led innovation as applied in the retail financial services industry. These firms operate in diverse areas of financial services such as Payments, Banking, Lending, Insurance, Asset management/wealth management, and Distribution(intermediaries). The authors researched key decision makers and practitioners (n=185) across the industry from firms, both Indian and global MNCs, to measure the level of adoption of the new technologies, their strategic intent, impact on their value-chain, constraints in innovation and collaboration efforts for open innovation. The study measured the impact on various functions of financial firms – across the value chain – in sales, service, operations, underwriting, fraud and risk management, HR, finance, and administration. Axes of innovation such as component versus architectural innovation and sustaining versus disruptive innovation were measured in the study to co-relate them to the firm's strategic intent. The research presents a framework and a model to analyse the impact of these new technologies on the current state of operations in financial services firms and to create a roadmap for the future.

Contents

1. Introduction 2 Conceptual background: AI & new technologies, retail financial services architecture and business innovation/business disruption 3. Literature review 4. A Model and Framework to understand impact of new technologies in retail financial services 5. Research design and methodology 6. Data analysis and hypotheses testing 7. Discussion and future road-map. Annexures and Bibliography.

65. JOSHI (Sanchita)
Gender Disparities in Time Use, Time Poverty, and Work Participation: An Indian Perspective
 Supervisor: Prof. Simrit Kaur
Th27594

Abstract

To delineate the complexities that shroud Indian women's work, gender disparities in time use, time poverty, and work participation are analysed. The analysis has primarily focused on four key objectives and utilizes data from Indian Time Use Survey (2019) and India Human Development Survey (2012). The first objective examines the nature of women's work and estimates and analyses gender disparities in work participation. Unambiguous feminisation of unpaid activities and extended system of national account (SNA) activities is found. Thereafter, the second objective estimates and analyses the time poverty head count index. Estimates suggest that barring a few exceptions, time poverty incidence among females is higher vis-à-vis males. Further, the third objective, examines time use patterns and estimates the correlates of time spent in paid and unpaid work, and time poverty. Time use estimations suggest an unambiguous feminisation of unpaid work and extended SNA activities. Findings from multinomial logistic regression indicate that being a female increases the probability (significant) of being time poor (irrespective of time spent in paid and unpaid work); and reduces the probability (significant) of being non-time poor with time spent in paid work being greater than or equal to unpaid work across full, employed, rural, and urban sample. Finally, the fourth objective, analyses married women's work participation based on their spouses' migrant status using binary logistic regressions. Women with a migrant spouse have a lower significant probability of wage work participation. Findings from the thesis suggest that policy makers need to 'recognise' the wide spectrum of women's work and put in place targeted interventions - short term to 'reduce' and long-term to 're-distribute' their unpaid work burden. These measures will help free women's time, reduce time poverty incidence, and increase remunerative work participation. Keywords: Unpaid Work, Paid Work, Time Use, Time Poverty, Gender, India

Contents

1. It's a Man's World: The Many Faces of Female Disempowerment 2. Women's Work: Conceptual Underpinnings, and Estimation and Analysis of Work Participation Rates in India 3. Estimation and Analysis of Head Count Index of Time Poverty in India: A Gender Perspective 4. Correlates of Time Spent in Paid and Unpaid Work, and Time Poverty in India: A Gender Perspective 5. Migrating Husbands and Work Participation of Wives Left-Behind: An Econometric Analysis 6. Summary, Conclusion and Policy Implications. References.

66. PURI (Vaibhav)
Transport and Economic Development: An Impact Assessment of Railroads in India Using Input-Output and Spatial Techniques.
 Supervisor: Prof. Simrit Kaur
Th27597

Abstract

In view of the strong linkages between transport and economic development, in the present study, an impact assessment of railroads in India using Input-output and spatial techniques has been undertaken. Primarily, four objectives have been delineated. First, to assess and evaluate the performance of Indian Railways through inter-sectoral linkages using Input-Output based methodology; second, to measure the impact of sequential opening of stations under Mass Rapid Transit System (MRTS) on Urban Built-up Area in National Capital Region (NCR); third, to evaluate the demand for Railway as Mode of Travel using Correlates of Domestic Tourism in India with focus on Rural-Urban variations; and fourth, to find patterns in Relative Rail Expenditure on Domestic Tourism across Rural-Urban sectors using Spatial Cluster Analysis. Methodology adopted is rigorous and empirically rich. An Input-Output based framework is used to measure changes in sectoral dependencies. Further, we combine novel dataset derived using remote sensing and difference-in-difference model to measure the impact of Rail network on urban sprawl. Robustness of the modelling exercise is evaluated by thresholding the data set through Terrain Ruggedness and Normalized Difference Vegetation indices. Demand for Rail mode and spatial distribution of Rail expenditure is analyzed through Multinomial logistic regression and Spatial Autocorrelation using all-India household survey (NSSO 72nd Round) based data on domestic tourism. Moran's I computes the extent of spatial association across districts exhibiting common patterns. Important findings include: first, strong forward-backward dependencies of Railroads with Manufacturing and Electricity sectors; second, network effects on urbanization are significant across proximate units than distant ones; third, Rail becomes a mode-choice for 'outside state' destinations with greater preference of Rural sector for Health & Medical trips versus that of Urban sector for Holiday, Leisure & Recreational trips; and fourth, significant clustering of expenses at district level. The thesis concludes from a broad policy perspective.

Contents

1. Introduction 2. Gauging Effects of Input-Output Based Hypothetical Extraction Method on Transport Linkages in India 3. Effects of Mass Rapid Transit System (MRTS) on Changing Urban Landscape: A Remote Sensing and Difference-In-Difference Based Study of Delhi Metro 4. Demand for Railway as Mode of Travel Using Correlates of Domestic Tourism In India With Focus On Rural-Urban Variations 5. Pattern in Relative Rail Expenditure on Domestic Tourism Across Rural-Urban Sectors Using Spatial Cluster Analysis 6. Summary, Conclusions and Policy Implications. References.

67.

Rahul Kumar

Distribution Network Design in Public Health for Essential Medicines: Lessons from the Select Indian States.

Supervisors: Prof. Debadyuti Das

Th27598*Abstract*

the world health organization (who) emphasizes the crucial need for uninterrupted access to essential medicines for all. high-income nations like the usa and the uk achieve impressive availability rates of 95% and 85%, while low-middle income countries (lmics) typically attain 68% access. unfortunately, india falls below even the lmic average, with a mere 62% availability of essential medicines. compounding

this issue, india allocates only 2.1% of its gdp to healthcare, in stark contrast to the usa (17%) and the uk (11.3%). furthermore, india's supply chain costs are 15% higher than those of other nations. this disparity is attributed to the complex and varying distribution networks operating across different indian states, leading to inefficiencies in the supply chain. in our research, we have identified six major types of public health distribution networks (phdns) utilized across 28 indian states. we assessed their performance based on cost and service criteria using the analytic hierarchical process (ahp), which helped us develop a performance evaluation framework. additionally, we employed mixed integer goal programming (migp) to evaluate phdns in odisha, madhya pradesh, and uttarakhand, considering objectives such as maximizing service, minimizing cost, and reducing carbon emissions. we evaluated the costs and carbon emissions associated with providing different levels of service to meet the demand for essential medicines. we also investigated the impact of supply disruption on the cost of mitigating supply disruption and the impact of rush demand emanating from downstream nodes on the cost of responsiveness for different types of phdns. finally, we considered qualitative factors in selecting suitable phdns for specific regions for which we implemented a unique mixed approach that combines ahp with a rank-order questionnaire. this integrated methodology, incorporating quantitative models with qualitative considerations, equips public health policymakers with invaluable insights into the performance of various phdns in different regions.

Contents

1. Introduction 2. Public health distribution network: an overview. 3. Review of literature. 4. Methodology. 5. Performance evaluation of public health distribution networks (PHDNs) through analytic hierarchical process. 6. Performance evaluation of PHDNs through mixed integer goal programming (MIGP) models. 7. Qualitative factors influencing the design of PHDNs & synthesis of qualitative factors and quantitative models. 8. Conclusion.

68. SINGHARIA (Komal)

Music Streaming Services: A Study of Concept and Dimensions of Mobile App-Based Service Quality (MASG).

Supervisors: Prof. Garima Gupta

Th27600

Abstract

The music industry has undergone a seismic transformation in recent years, largely due to the emergence of music streaming platforms which can undeniably be hailed as the savior of the music industry which was grappling with huge losses due to piracy. Mobile apps have proven to be the most dominant platform for accessing music streaming services so much so that it becomes imperative for these service providers to focus on enhancing their app-based service quality. Moreover, the music streaming industry remains largely unexplored from a research perspective. The present study fills this research void and contributes to the existing literature by developing a scale to measure the service quality of music streaming apps, i.e., the MSASQ scale. Following the rigorous process of scale development, and mixed-method approach that involved qualitative as well as quantitative techniques of data collection and analysis, the study yields 9 dimensions captured through 36 items representing the MSASQ scale. The identified dimensions were confirmed through confirmatory factor analysis (CFA) and have been subsequently named as 'hedonic quality', 'efficiency', 'user interface', 'content', 'customer service', 'personalization', 'ease of use', 'privacy/security', and 'quality of ad exposure'. The results of an additional examination of the impact of each of these dimensions on users' satisfaction and continuance intention reveal a positive and significant impact of

most of the dimensions and further establish the nomological validity of the developed scale. The study not only presents a scale that can be used in contemporary times to assess and evaluate app-based services but also garners interesting insights and suggestions that can be used by service providers to improve their service quality. In the end, the study outlines directions for undertaking future research in this evolving domain.

Contents

1. Introduction 2. Literature review: Quality and dimensionality 3. Research methodology. 4. Scale development 5. Scale refinement and validation 6. Impact assessment and importance-performance map analysis of MSASQ dimensions.7. Implications and future directions. Bibliography.

69. VISHNOI (Prerna)
A Study of Bottom of the Pyramid (BOP) Consumers' Mobile Social Network Behavior.
 Supervisor: Anupama Vohra
Th27602

Contents

1. Introduction 2. Literature review 3. Research methodology 4. Results and discussions. 5. Conclusions and implications. Bibliography.

MATHEMATICS

70. ADIBA NAZ
Exponential Starlikeness and Convexity of Hypergeometric and Certain Analytic Functions.
 Supervisor: Dr. Sumit Nagpal
Th 27612

Abstract

In this thesis, the starlikeness and convexity of special functions and certain subclasses of normalized analytic functions associated with an exponential function have been studied. Special functions play a significant role in geometric function theory by providing tools and techniques to describe various geometric properties of functions. Moreover, many special functions can be expressed in terms of hypergeometric functions. Using the methodology of admissible function associated with the exponential function, sufficient conditions on the parameters of generalized and normalized Bessel function, confluent hypergeometric, Lommel function of the first kind and generalized Struve function of the first kind are determined so that they belong to the classes associated with the exponential function. Interesting examples involving trigonometric and hyperbolic functions are provided to illustrate the obtained results. We also studied the integral representations and Alexander and Libera transforms of some of these special functions. The techniques of differential subordination and convolution have been utilized to study these functions. Using the monotonic behaviour of zeros of the special functions and their interlacing property with the zeros of their derivatives, we have investigated various radii problems concerning the special functions, namely, Wright function, Lommel function, Struve

function, Ramanujan type entire function, cross-product of Bessel functions. We have also obtained sharp bounds on the first five coefficients of an inverse of a function lying in the class associated with exponential mapping. The sharp first Hankel determinant, second Hankel determinant and third Hankel determinant are obtained for the same inverse function. Lastly, we also determined some radius estimates for the functions in the subclasses of univalent functions to be in the class associated with the exponential function.

Contents

1. Introduction 2. Geometric properties of generalized Bessel function 3. Starlikeness and convexity of generalized hypergeometric functions 4. Radius properties of certain special functions 5. Coefficient and Radius estimates of starlike functions 6. References. Index.

71. ANJU KUMARI
Free Actions of Sphere Groups on Some Finitistic Spaces.
 Supervisor: Dr. Hemant Kumar Singh
Th 27605

Abstract

In the thesis, we have defined a notion of index for free S^1 and S^3 -spaces. Also, we have discussed the possible cohomology algebra of the orbit space of free action of $G=S^d$, $d = 1$ and 3 , on the product of two spheres. Moreover, we have given the cohomology classification of total space for free actions of sphere groups with orbit space a projective space, a product of projective space and sphere, or some product of projective spaces.

Contents

1. Introduction 2. Orbit spaces of free actions of S^1 and S^3 on product of two spheres 3. Index of finitistic spaces 4. Free actions of S^1 and S^3 with orbit space a projective space 5. Free actions of Z_2 , S^1 and S^3 with orbit space a product of projective space and sphere 6. Free actions of Z_q , q a prime, with orbit space a product of projective spaces 7. Bibliography.

MEDICAL SCIENCES
 BIOMEDICAL RESEARCH

72. GUSAIN (Siddharth)
Development of Small Molecules for the Amelioration of Neurodegenerative Disorders, Namely Alzheimer's Disease and Amyotrophic Lateral Sclerosis.
 Supervisor: Prof. Manisha Tiwari
Th 27625

Abstract

Neurodegenerative diseases (NDD) are diverse conditions characterized by selective dysfunction and ongoing loss of neurons, glial cells and the neural networks in the brain and spinal cord. In chapter 1, Carbazole-based, novel multifunctional agents

have been synthesized as potential anti-Alzheimer agents. These derivatives displayed potent AChE inhibition, A β aggregation inhibition, anti-oxidant and neuroprotective properties. Among the entire series, MT-1 and MT-6 were the most potent multifunctional agents. The neuroprotective activity of MT-6 has been examined against H₂O₂-induced toxicity in SHSY- 5Y cells and they have shown effective neuroprotection. Molecular docking and MD simulation studies have also been performed to explore interaction with AChE and A β . Finally, MT-6 was evaluated against scopolamine-induced dementia model of mice and this compound actively improved memory deficit and cognition impairment. Thus, novel carbazole derivative MT-6 has been explored as an effective and safe multifunctional agent against AD. This molecule may be used as a suitable lead for developing effective anti-Alzheimer agents in the future. In chapter 2, a novel series of carbazole derivatives were synthesized as potent hSOD1 aggregation inhibitors for the amelioration of Amyotrophic Lateral Sclerosis. The derivatives were tested for their ability to prevent the aggregation of Ni-NTA purified hSOD1 mutant proteins where SG-9 and SG-10 proved to be the most efficacious. SG-9 and SG-10 were tested by various assays such as Thioflavin T, Dynamic Light Scattering, and Transmission electron microscopy. They were also able to prevent the aggregation in Neuro-2a cells overexpressing hSOD1 G85R mutant protein. SG-9 and SG-10 were also able to prevent the cells from apoptosis and oxidative stress. They were also able to improve the mitochondrial membrane potential. Therefore, the compounds were able to prevent mutant SOD1 aggregation and aid in the amelioration of Amyotrophic Lateral Sclerosis.

Contents

1. Introduction 2. review of literature. Development of novel Carbazole derivatives with effective multifunctional action against Alzheimer's disease: Design, synthesis, in silico, in vitro and in vivo investigation 3. Development of Carbazole derivatives as inhibitors of hSOD1 mutant protein aggregation for the treatment of Amyotrophic Lateral Sclerosis 4. Result Discussion

73. KONWAR(Chandrika)
SIN-3 and its Multifunctional Nature: Understanding the Role of SIN-3 in Cell Death, Aging, and Tumor Development in *C. elegans*.
 Supervisor: Prof. Daman Saluja
Th 27627

Abstract

SIN-3 is a transcription regulation protein with activating and repressive properties. Even though it lacks DNA binding activity, it plays a vital role in a spectrum of biological processes via protein-protein interactions. However, the exact mechanism of action is unknown. Using *C. elegans*, we tried to decipher the mechanism of action of SIN-3 in cell death and aging. A comparative analysis of the SIN-3 protein and its interactome from model organisms indicated that *C. elegans* SIN-3 is homologous to Sin3 isoforms in humans, yeast, *Drosophila*, and other model organisms. Further, the SIN-3 interactome consists of well-known autophagy, apoptosis, and longevity regulation proteins, such as DAF-16, SIR-2.1, SGK-1, and AKT-1/2. Therefore, we delved further into the interaction between SIN-3 and pro-longevity factor DAF-16 and found that they have a cumulative genetic effect on aging. Phenotypic profiling of *sin-3* and *daf-16* mutants shows a functional accord concerning development and stress resistance functions. However, there are no significant physical interactions between SIN-3 and DAF-16. *C. elegans* genomics and transcriptomics data also indicated the possibilities of concerted gene regulation. This genetic regulation is more likely related to SIN-3 influence on DAF-16 function. Since *sin-3* deletion leads to cell death, we also wanted to check if *sin-3*

deletion suppresses tumor/multi-vulva development in worms. Even though genetic suppression of *sin-3* leads to suppression of multi-vulva phenotype in worms, it does not impact the Ras MAPK pathway in worms. Furthermore, *sin-3* deletion in multi-vulva worms leads to a shorter lifespan, smaller brood size, loss of overall movement and cuticle integrity, and decreased stress resistance compared to multi-vulva worms. Due to the health and life implications of *sin-3* inhibition in multi-vulva worms, it is not a promising therapeutic target for cancer/tumors. However, our study suggests that SIN3 can potentially act as a biomarker for aging or age-related diseases.

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1. Introduction 2. Review of literature 2. objectives 3. Materials and Methods 4. Results 5. Discussion Conclusion and Summary.

74. MEETALI

Mechanistic Insights into the Role of PPAR- β/δ in Pathogenesis of Experimental Cerebral Malaria: A Cue to Adjunct Anti-Malarial Therapy.

Supervisor: Prof. Anju Katyal

Th 27629

Abstract

Plasmodium falciparum infection culminates in cerebral malaria (CM) not only due to parasite virulence factors but also due to trigger of inflammatory responses resulting in “leaky and cloggy” brain capillaries and ensuing neuropathogenesis. The CM disease mainly affects children below the age of five. The disease spectrum depends on a plethora of parasite and host dependent factors making it difficult to understand the mechanisms of pathogenesis or devise suitable treatment regimens targeting towards complete remission. Moreover, the currently available antimalarial therapeutic strategies fail to combat the disease due to increasing drug resistance and adverse effects. Hence, there is a pressing requirement for new and innovative therapeutic interventions and adjunct therapies. In this aspect, we explored peroxisome proliferator-activated receptor β/δ (PPAR- β/δ), a class of nuclear receptors that regulate the blood-brain barrier integrity (BBB) and inflammatory responses, in CM pathogenesis. PPAR- β/δ receptors have recently emerged as an attractive target for the treatment of several neurodegenerative diseases, however, their role in CM pathogenesis remains unexplored. Our study for the first time demonstrated the downregulation of PPAR- β/δ expression with the progression of Plasmodium berghei ANKA (PbA) infection in Balb/c mice, substantiating its involvement in CM pathogenesis. GW501516, a PPAR- β/δ agonist was administered alone or with artemisinin to PbA-infected mice, alleviated parasite infiltration in the brain, and maintained the BBB integrity, resulting in improved survivability and neurocognition. Additionally, GW501516 administration restored PPAR- β/δ expression in astrocytes, microglia, and neurons. Parallely, the tight junction proteins (ZO-1, claudin-3) and VEGF-A expression also increased, substantiating the importance of PPAR- β/δ in BBB maintenance. Additionally, GW501516 administration markedly decreased cytokine (TNF- α , IFN- γ , IL-10, and IL-4) and chemokine expression (CCL-3, CCL-21, CCL-5, CXCL-7, CXCL-10, CXCL-9, CCR5, CCR2), except TGF- β . Increased TGF- β and decreased inflammatory responses might be responsible for the downregulation of CD8+ T-cell infiltration in the brains of PbA-infected mice. Our findings establish PPAR- β/δ as a lucrative target since it regulates multiple key events associated with CM pathogenesis.

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1. Introduction 2. Review of literature 3. Aims and Objectives 4. Materials and Method 5. Results 6. Discussion Summary and Conclusions.

MODERN INDIAN LANGUAGE & LITERARY STUDIES

75. SARKAR (Dhiraj)
Women's Language of Dakshin Dinajpur.
 Supervisor: DR. Antara Chaudhuri
Th 27641

Abstract

'WOMEN'S LANGUAGE OF DAKSHIN DINAJPUR' Dhiraj Sarkar Though languages vary depending upon the geographic location, class, caste, gender etc., the largest corpus of studies on Bengali language has focused on geographic variations of the language. Studies on variations based on class and caste are negligible and there are only a few studies based on gender. In this context, our research aimed at understanding one particular variation of Bengali, that of the women's language of Dakshin Dinajpur, one of the 23 districts of West Bengal. In the context of scholarly works published on the geographical dialects of Bengali[Grierson (1998-1928), Chatterjee (1926), Sen (1939) etc.], on the dialect of Dakshin Dinajpur [Roy(1993), Sarkar (2017), Pal(2019), etc.],and, Bengali women's language[Sen (1926), Nath (99), Basu (2000), Chakraborty (2006), Bilkis (2014) etc.],this thesis undertakes a study of the women's language of Dakshin Dinajpur. The study is based on a questionnaire-based collection of data with a limited supplementary collection of data through audio recording, and qualitative-quantitative analysis of the data. The survey was carried out in twenty-two places of Dakshin Dinajpur, both Urban and Rural. From each location, respondents were chosen through Simple Random Sampling method. Larger section of the thesis represents the qualitative analysis of data, in comparison to existing qualitative data, while one chapter offers quantitative analysis of data. Apart from the Introduction and Conclusion, the findings have been presented in five chapters, titled Our Dakshin Dinajpur is full of historical, cultural and geographical heritage, Linguistic analysis of women's language in Dakshin Dinajpur, The niceties of the proverb and the women of Dakshin Dinajpur, The Riddles of Dakshin Dinajpur in the women's language, Slangs abuse and language: Women's language of Dakshin Dinajpur

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1. Introduction 2. South Dinajpur: historical cultural and Bengali Tradition 3. Linguistic analysis of women's language in Dakshin Dinajpur 4. The detail of proverbs and women of South Dinajpur 5. In the language of women Southern Dinajpur used to cry 6. Slang or Itar words and language South Dianjpur Women 7. Conclusion

76. SINGH (Shankar)
Redefining Dalit Aesthetics Through Socio-Cultural Epiphany in Select Dalit Writings.
 Supervisor: Prof. D. Uma Devi
Th 27640

Abstract

so, whenever we hear the word 'aesthetics' the image that is invoked within our minds is something related to the concept of beauty and its attendant variations. according to the concise routledge encyclopedia of philosophy, the word 'aesthetics' has been derived from the greek word, 'aisthanomai' and it means perception by the 'means of the senses'. the word 'senses' here is of particular importance as it is related to human sensibility. this research work will look into the category of 'sense' through the ideas of aesthetics and create an alternative space of engagement. being inspired from the world of aesthetics, it would delve into the idea of dalit aesthetics and it would be further consolidated with textual analysis of the selected novels of p.

shivkami's the taming of women, urmila panwar's the wave of my life, kaushalya baisantri's dohara abhisaap, k.a.gunasekaran's novel the scar.siddalingaiah's oorukeri and joseph macwan's the step child these writers stand for a long time for raising the authentic voices of dalit subjectivity and their piece of art would help this research engaging with the dynamics of experience and the idea of sensibility. before entering the realm of dalit aesthetics and its different levels of significance in the experience of dalit life which exposed that the subjectivity of the dalits and their 'experince' can only be focused upon when we can create an alternative set of aesthetical approach, which would both be new and unique in its nature. epiphany as a literary device has been used in canonized literature by james joyce in his ' a portrait of an artist as a young man'. epiphany is the moment when a character has sudden realization of reality. this research work attempt to search those epiphanic moments when a character has sudden realization of dalit consciousness.

Contents

1. Introduction 2. Theorizing the dalit aesthetics 3. Dalit women consciousness and aesthetics 4. Construction of dalit aesthetics through social epiphanies of select works 5. A critical reception on dalit writing: A comparative analysis 6. conclusion

77. VIJAYAKRISHNAVELAN K

Kula Puranams (Clan Myths) of Kongu Vellalars – An Analytical Study

Supervisor: Prof. D. Uma Devi

Th 27642

Abstract

Kongu Vellalars are a predominant caste of Tamil Nadu. The Kongu Vellala Gounders are living in the North Western part of Tamil Nadu with agriculture as their primary occupation. They have a distinct social system which is typically absent from any of the south Indian caste systems in a large scale. They follow a unique classification in to social groups known as the kootams (clans). The community has many sub-divisions called `Kulam` `Kootam` or `Kudi`.In actuality there are about 72 kootams (clans) which exist today.Each kulam or clan has a story (kula puranam) that forms the clan myths of kongu vellalrs.The Kongu culture and world view is reflected in its kula puranams. 'Kula Puranams' are the chief folkloric expressions found in many communities in South India. A scientific study of society,patterns of social relationships, social interaction, and culture Since rituals are important part of ceremonies and are accompanied by folk songs, studying them as well in sociological perspective will yield deep insights into the various aspects of the society and can unwrap the world they live in.To unravel the totemism present in the Clan Myths of Kongu Vellalars and by comparing it with the totemic concepts, it will be possible to establish the thought patterns as reflected in human minds are same universally. Many of the rituals practiced are in direct relation with the myths of the clans. Those who died protecting the clan are worshipped irrespective of their social background. kula dievam worship or the clan deity worship forms the basis of the religion of Kongu Vellalars. Though the Brahmanical ideals have crept into the community the community still gives primacy to its native traditions. The communities position as one of the oldest native communities of the country is apparent after the analytical study of the clan myths

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1. Introduction 2. Records of konguvelalar in Tamil literature 3. Konguvelalar groups and clans 4. The life of konguvelalar groups 5. Konguvelalar's clan legends in the perspective of clanmarking 6. Conclusion.

MUSIC

78. सिंह (नेहा)
उत्तर भारतीय संगीत में महाराज स्वाति तिरुनाल का योगदान
 निर्देशक : प्रो. टी.वी. मणिकंदन
 Th27656

सारांश

प्रस्तुत शोध प्रबंध को चार अध्यायों में विभाजित किया गया है। प्रथम अध्याय -इसमें भारतीय संगीत के इतिहास, व्युत्पत्ति, विकास के साथ उत्तर तथा दक्षिण भारतीय संगीत पद्धति के विकास तथा दोनों पद्धतियों के तुलनात्मक अध्ययन पर चर्चा की गई है। द्वितीय अध्याय- इसमें स्वाति तिरुनाल महाराज का पूर्ण जीवन परिचय दिया गया है। जिसमें व्यक्तित्व एवं कृतित्व, कुछ समकालीन संगीत शासक, हिंदुस्तानी दरबारी संगीतकार तथा अन्य योगदानों पर चर्चा की गई है। तृतीय अध्याय- इस अध्याय में महाराज स्वाति तिरुनाल की हिंदुस्तानी रचनाओं का विस्तारपूर्वक साहित्यिक अध्ययन किया गया है। चतुर्थ अध्याय- इस अध्याय में स्वाति तिरुनाल द्वारा उत्तर भारतीय संगीत की शास्त्रीय तथा उपशास्त्रीय जैसे ख्याल, ध्रुपद, भजन इत्यादि रचनाओं तथा बंदिशों का अध्ययन किया गया है। अतः यह कहा जा सकता है की उत्तर भारतीय संगीत में महाराज स्वाति तिरुनाल का योगदान महत्वपूर्ण एवं अतुल्यनीय है। इस शोध कार्य को प्राथमिक तथा द्वितीयक स्रोत से पूर्ण किया गया है। प्राथमिक स्रोत में विभिन्न कलाकारों के व्यक्तिगत व दूरभाष साक्षात्कार लिए गए हैं तथा द्वितीय स्रोत में पुस्तकों, पत्रिकाओं, इंटरनेट आदि के माध्यम से सामग्री एकत्रित की गई है इस कार्य में ऐतिहासिक, व्याख्यात्मक, वर्णनात्मक, विवेचनात्मक इत्यादि प्रविधियों के प्रयोग से कार्य संपन्न किया गया है अतः प्रस्तुत शोध कार्य हिन्दी भाषी भावी शोधार्थियों तथा संगीत प्रेमियों के लिए बहुत ही उपयोगी सिद्ध होगा।

विषय सूची

1. भारतीय संगीत का इतिहास 2. महाराज स्वाति तिरुनाल का जीवन परिचय 3. महाराज स्वाति तिरुनाल द्वारा उत्तर भारतीय संगीत में स्वयं रचित रचनाओं का साहित्यिक विश्लेषण 4. महाराज स्वाति तिरुनाल द्वारा सचित उत्तर भारतीय संगीत की शास्त्रीय तथा उपशास्त्रीय तथा बंदिशों का अध्ययन। उपसंहार। संदर्भग्रंथ सूची। परिशिष्ट।

79. SOWMYA (G.)
An Analytical Study of Few Ragas Created by Select Prominent Posttrinity Composers (Vageyakaras)of the 19th and 20th Century.
 Supervisor: Prof. (Dr.) P.B. Kanna Kumar
 Th 27646

Abstract

The concept of understanding the fine line between Lakshana and Lakshaya i.e. practice and its practise, has always been a place of intrigue and interest to the seekers. Many comprehensive interpretations to varied terminologies (in specific to, the Carnatic music) have been gleaned from magnum works of great seers of the past and also from the works of acclaimed musicologists and scholars, yet `Raga` as an entity, is the one that remains to be the constituent of eternal adulation and wonderment to the artists and the scientific community uniformly. This research work aims towards ideation of raga and proffering an explorative analysis on few ragas created by select prominent post-trinity composers of the 19th and 20th century.

Contents

1. Nada – The Primal Energy 2. Bhakti and Rasa Siddhanta 3. The Various Perspectives on Evolution of Raga 4. 'Vaggeyakara' - A Comprehension 5. Raga Lakshana – Statements from the Texts 6. Analysis and Interpretation. Epilogue, Annexure and Reference.

80. वर्मा (श्वेता)
ब्रज क्षेत्र की कीर्तन मंडलियों का भारतीय संगीत में योगदान
निर्देशक : प्रो.पी.वी. कन्ना कुमार
Th27653

सारांश

ब्रज क्षेत्र उत्तर प्रदेश की एक प्रख्यात नगरी है जो श्री कृष्ण की जन्मभूमि के रूप में भी जानी जाती है। ब्रज में प्रख्यात लोग संगीत एवं कीर्तन ब्रज की प्रमुख विशेषता है ब्रज मंडल की प्राचीन गाथाये भारतीयों के साथ साथ विद्शियों को भी आकर्षित करती रही हैं। ब्रज एक ऐसी भाव भूमि है जहाँ मानव अहंकार, दंभ का परित्याग कर परम स्नेही एवं वात्सल्य हो उठता है। ब्रज की प्रेम गलियों में आज भी लीलाधारी श्री कृष्ण का कीर्तन गुंजायमान रहता है। ब्रज भूमि श्री कृष्ण मयी थी ही लेकिन कीर्तन युक्त वातावरण उसे और भी मधुरिमता एवं प्रेम से भर देता है। आज का भौतिकवादी वातावरण भी उसकी मधुरिमा को कम नहीं कर पाया है। ब्रज भूमि का संगीत भारत भूमि का एक प्रधान व महत्वपूर्ण अंग है। प्रत्येक पुराण व विविध प्राचीन ग्रंथों में ब्रज के संगीत की अद्वितीय महिमा का गुणगान किया गया है। ब्रज क्षेत्र वह क्षेत्र है जहाँ शास्त्रीय संगीत का पोषण लोक संगीत की भांति ही हुआ है। ध्रुपद धमार के साथ साथ कीर्तन भी ब्रज की एक विशिष्ट देन है कीर्तन का जो रूप ब्रज क्षेत्र में प्रवाहित हुआ है वह अत्यंत भावमयी व दुर्लभ है बी। ब्रज के जन जन व कण कण में आज कीर्तन का प्रभाव दिखाई देता है जहाँ लोग अपने इस्ट की आराधना का मध्यम कीर्तन को बनाते हैं। कीर्तन कोई संगीत बद्ध कोई गेट नहीं है यह भगवान् का संगीत बद्ध लीला व गुणों का भावमयी गान है जिसे अपने इस्ट की मूरत के सम्मुख बैठ कर किया जाता है। कीर्तन का उद्देश्य लोक संगीत व शास्त्रीय संगीत पक्ष को प्रदर्शित करना नहीं है अपितु शास्त्र बद्ध संगीत व लोक संगीत से युक्त अपने प्रभु का भावमयी गान है।

विषय सूची

1. ब्रज की महिमा 2. संगीत का ऐतिहासिक विवरण 3. दक्षिण भारतीय संगीतज्ञों का व्यक्तित्व एवं कृतित्व - कीर्तन के परिपेक्ष्य में 4. ब्रज में विभिन्न सांस्कृतिक संप्रदायों की उत्पत्ति 5. ब्रज क्षेत्र की कीर्तन मंडलियों का विस्तृत विवरण। उपसंहार। परिशिष्ट। संदर्भ-ग्रंथ सूची।

OPERATIONAL RESEARCH

81. GUPTA(Priyanka)
Managing Design, Testing and Maintenance Phase of Software Development Through Mathematical Modeling
Supervisor: Prof. Dr. Adarsh Anand
Th27659

Abstract

With the advancements of software-based systems and their increasing involvement in human's day-to-day life, the need of developing qualitative software products is increasing. The necessity to optimize software's productivity issues throughout their

development life cycle has been a challenging task for everyone. Let be its their designing phase, testing phase, or even its maintenance phase, software requires constant efforts to deal with the existing anomalies in the form of design related flaws or faults. These anomalies were seen impacting several quality indices in one or the other manner. Further, once it is released into the market, proper attention must be given to its optimal testing stop time evaluation and its multi- release version strategy. Although there are numerous algorithms via which this can be studied, but the need to utilize Machine Learning Technique entitled as Artificial Neural Network is something which needs exploration. All of the above stated concepts have been addressed throughout the thesis in detailed manner. The developed models have been validated on the real- life data sets in such a manner that the obtained results can be utilized by any software development organization so as to develop a highly qualitative product, which is the eventual requirement of the customers.

Contents

1. Introduction 2 Resource Allocation to Refactor Design Related Software Flaws. 3.Application of Multi-Criteria Decision-Making Techniques to Study Software Systems 4. Reliability Growth Modeling to Study Software Defined Network 5. Modelling Multiple Versions of the Software System 6. Monitoring Multi-Release of the Software System Using Artificial Neural Network. Conclusion, Limitations and Future Scope and References, Appendices.

PHYSICS AND ASTROPHYSICS

82. ANJANA
Study of EMR Shield Materials
 Supervisor: Prof. Amita Chandra
Th 27694

Abstract

The extensive development and the usage of electronic equipments in the micro-wave region (GHz frequency range) have increased tremendously in the last few decades. Recently, the use of advanced communication technology alongwith the various kinds of electronic gadgets working in the micro-wave region (GHz range) have made efficient and comfortable lifestyle. However, this advancement of technology has led to unwanted noise in the surroundings due to electromagnetic interference (EMI) of the microwave signals. And hence the excessive presence of electromagnetic radiation (EM) in the environment can have not only the adverse effects on the performance and accuracy of electronic devices but also hazardous effects to both living and non-living beings. Therefore, shielding against EMI signals is mandated. Although, from last two decades, polymer composite based materials for EMI shielding have been extensively studied and the search is still on for an ideal EMI shield. Shielding effectiveness (SE) of any material depends on its dielectric, magnetic and conducting properties. In view of above, the work presented in this thesis is primarily focused on besides the conductivity enhancement of the polymer composites and their dielectric and magnetic properties by simultaneous optimization to obtain effective EMI shield materials. In the present thesis work, the synthesis and optimization of mixed (ion + electron)

conducting polymer electrolyte/composite films for electromagnetic shielding application. Hence, a multicomponent polymer composite has to be synthesized for the said purpose by using different chosen materials such as Li-salt (LiTFSI), ionic liquids (HMIMTFSI, BMIMFeCl₄ and EMIMTFSI), host polymer matrix (PEO and P(VDF-TrFE)) and three types of fillers conducting filler (MWCNTs, RGO and activated carbon), magnetic filler (CoFe₂O₄) and MCM 41 (for obtaining large surface area). Effect of these particles on the EM shielding properties of the composites have been studied and the entire work has been discussed in detail into the following eight chapters.

Contents

1. Introduction 2. Materials and characterization techniques 3. EMI shielding effectiveness of polymer composites using MWCNTs and CoFe₂O₄ in the X-band 4. EMI shielding effectiveness of polymer composites using [BMIM][FeCl₄] and f-MWCNTs in the X-band) 5. EMI shielding effectiveness of polymer composites using RGO/CoFe₂O₄@MCM 41 in the X-band 6. Facile synthesis and characterization of cobalt ferrite and bio-waste activated carbon based polymer composites for microwave absorption in the X-band 7. RGO-cobalt ferrite nanoparticles incorporated polymer composites for microwave absorption in the X-band 8. Summary and future work.

83. BANGRUWA (NEERAJ)
Spin-controlled Electrochemical Devices for Sequence-specific DNA-sensing Applications.
 Supervisor: Prof. Debabrata Mishra
Th 27698

Abstract

This thesis accomplishes its main objectives by presenting research that can be utilized for the development of spin-based electrochemical devices for sequence-specific DNA sensing applications. The work makes use of electron spin as a powerful tool in label-free spin-based electrochemical DNA hybridization sensing, with a limit of detection of 0.12 pM. This sensor has high efficacy in detecting the dengue virus, using spin-dependent differential pulse voltammetry for the first time. Moreover, the investigation of the utility of electron spin extends to the detection of DNA damage caused by ionizing radiation such as ultraviolet-C and gamma radiation. Electrochemical measurements are employed to quantitatively evaluate structural damage in DNA, and it is strongly associated with a decrease in the spin polarization value from 10% to $0.91 \pm 0.8\%$ and from 3.5% to 0.8% for UVC gamma-induced DNA damage radiation, respectively. The thesis delves deeper into the investigation of sequence-specific spin-selective electron transport through ds-DNA utilizing time-correlated single photon counting and electrochemical impedance spectroscopy methods. The experimental findings, which demonstrate a noticeable change in the average decay lifetime of optically excited states in the quantum dot-dsDNA system and a maximum decrease of 35% in the spin polarization value after a point mutation in dsDNA, are supported by theoretical calculations using an effective tight-binding model. It confirms that the transfer of spin-dependent electrons across ds-DNA is contingent on its sequence. The spin-controlled time-correlated single photon counting (TCSPC) measurements are successful in detecting DNA hybridization and are supported by the photoluminescence spectra. The TCSPC results revealed a perceptible difference in the average decay lifetime of the optically excited state, approximately 2.21 ns, for both directions of the applied magnetic field in the case of hybridized dsDNA. Additionally, magnetic field-dependent Fourier-transform infrared spectroscopy can be utilized to determine the double-stranded character of DNA. The findings provide significant knowledge for the advancement of spin-based DNA sensing devices.

Contents

1. Introduction 2. Experimental and Characterization Method 3. A Novel Spin-based Label-Free Electrochemical DNA Hybridization Biosensor and its Applications for Dengue Virus Detection 4. CISS-based Label-free Novel Electrochemical Impedimetric Detection of Radiation-induced DNA Damage 5. Sequence-controlled Chiral Induced Spin Selectivity Effect in dsDNA 6. Chiral-induced Spin Selectivity Modulated Time correlated Single Photon Counting for DNA Hybridization Detection 7. Summary and Conclusion. List of Publications and Conference Presentations.

84. SHADMA PARVEEN

Studies on Quasi-Solid-State Gel Polymer Electrolytes for Sodium Ion Batteries.

Supervisor: Prof. S.A. Hashmi

Th 27710

Abstract

The present thesis work is focused on the quasi-solid-state gel polymer electrolytes (GPEs) for sodium-ion batteries (NIBs). Electrolytes play a vital role whose characteristics have a direct impact on the electrochemical performance of the devices like rechargeable batteries, supercapacitors, etc. From the past few years, GPEs have drawn a lot of interest due to various advantageous properties i.e. high ionic conductivity, being leakage proof, and reliable thermal and mechanical properties. The sodium-ion conducting GPEs, prepared in this work, are mechanically, thermally and electrochemically stable, used as separators/electrolytes in the sodium-ion batteries (NIBs). The chapter-wise description is given below. A brief introduction about subject area of the research work is given in Chapter-1. Chapter-2 provides the preparation of the solvate-ionic liquids (SILs)-based gel polymer electrolytes (SIL-GPEs) and dinitriles based GPEs. Details about different characterization techniques used to characterize electrolyte and electrodes materials are also presented in this chapter. The fabrication of sodium-ion batteries (half and full cells) and their electrochemical characterization techniques are also provided in this chapter. Physical and electrochemical characterization of SIL-GPE (PVdF-HFP/G2/NaTFSI) and the electrochemical performance of the NIBs comprising a Na_{0.7}CoO₂ as cathode and SIL-GPE as flexible electrolyte film are presented in Chapter-3. The GPE-film (PVdF-HFP/G3/NaClO₄) and its impact on the performance of the NIBs is presented in Chapter-4. In Chapter-5, studies on a green glyme di(propylene glycol) dimethyl ether (DPGDME) incorporated SIL-GPE film for its application as electrolyte in NIBs, fabricated using Na_{0.44}MnO₂, has been presented. A detailed study of a NIBs with a GPE-film comprising a liquid electrolyte containing a Na-salt (NaTf) in a high flash point binary mixture of ADN:EC (1:1 v/v), Na_{0.44}MnO₂ (NMO) as cathode and bismuth (Bi) as anode is presented in Chapter-6. Finally, the summary and conclusions of the thesis work is given in Chapter-7.

Contents

1. Introduction 2. Experimental techniques 3. Gel polymer electrolyte incorporated with equimolar diglyme-NaTFSI solvate ionic liquid for sodium ion batteries 4. Optimization of triglyme-NaClO₄ based gel polymer electrolytes for sodium-ion batteries 5. DPGDME-based green solvate ionic liquids: a novel gel electrolyte for sodium-ion batteries 6. A gel polymer electrolyte comprising a high flash point solvent adiponitrile with ethylene carbonate as co-solvent for sodium-ion batteries 7. Summary and Conclusions.

POLITICAL SCIENCE

85. अजय कुमार
भारत में जाति और विकास के मध्य अंतः संबंध- उत्तर प्रदेश के औरैया और मथुरा जिले का अध्ययन।
 निर्देशक : प्रो. प्रकाश सिंह
 Th 27745

सारांश

प्रस्तुत शोध, 'भारत में जाति और विकास के मध्य अंतः संबंध- उत्तर प्रदेश के औरैया और मथुरा जिले का अध्ययन', शोध भारतीय तथाकथित जातिगत व्यवस्था और उससे प्रभावित विकास के अध्ययन पर केन्द्रित है, जिसमें क्षेत्रक अध्ययन में दो जिले 'औरैया(बल्लापुर और लालपुर)' और 'मथुरा(बिर्जपुर और महोली)' लिए गए हैं, जो कि सात अध्यायों में विभाजित हैं। शोध दृष्टि से यदि अध्ययन देखा जाए तो- शोध में विद्वत् आरोपित वर्ण व्यवस्था, और वैदेशिक "जाति" व्यवस्था की अवधारणा पर चर्चा की गई है, जहां वर्तमान चतुर्वर्ण व्यवस्था को मूल भारतीय नहीं बताया गया है(काणे, 1992)। जाति को भी बाहर से आरोपित धारणा के रूप में जाना गया है(Ketkar, 1992), जिसका इस्तेमाल भारत को बांटने में किया गया(राजीव मल्होत्रा और अरविंद नीलकंदन, 2014). शोध में विकास की बहुआयामी अवधारणाओं, इसके साथ की 'विकास का विकल्प', 'वैकल्पिक विकास(Jan Pieterse Nederveen, 2000)' जैसी धारणाओं पर चर्चा कर वर्तमान विकास चलन और भारतीय विकास प्रवृत्ति पर दृष्टिपात किया गया है। जाति और विकास में संबंध भाग में पुरातन श्रेणीबद्धता के खत्म होने के साथ-साथ लोगों में परंपरागत और गैर-परंपरागत व्यवसायों के आधार पर उनके विकास पर चर्चा मिलती है, जहां कभी-कभी विकास में बाधक खुद तथाकथित 'दलित' समाज भी दिखता है(बद्री नारायण, 2013)। विकास मिलता है- भिन्न सरकारी नीतियों से, पंचवर्षीय योजनाओं से, अनुसूचित जाति के लिए भिन्न छात्रवृत्ति योजनाओं से, भिन्न संवैधानिक प्रावधानों से, शिक्षा, रोजगार और राजनीतिक नेतृत्वकारी पदों पर आरक्षण से(अनु. 330, 332, 334)। शोध में क्षेत्रक अध्ययन से यह जानकारी मिलती है कि लोगों को जमीन पर भिन्न छुआछूत जैसे समस्याओं से दो-चार नहीं होना पड़ता है, लोगों को भिन्न रोजगार चुनने की स्वतन्त्रता है, वह विकास में सहभागी स्वीकार्य करते हैं, रोजगार बढ़ा है और साथ ही लोग योगेन्द्र यादव के 'दूसरी लहर' और कंचन चंद्रा के विचार 'सजातीयकरण' से आगे निकाल चुके हैं, धर्म और जाति से परे हटकर अब वह विकास और सुरक्षा के मुद्दे पर वोट देते हैं।

विषय सूची

1. परिचय 2. भारत में जाति 3. भारत में विकास 4. जाति और विकास के मध्य अंतः संबंध-परंपरागत श्रेणीबद्धता एक अध्ययन 5. जाति और विकास के मध्य अंतः संबंध औरैया जिले के संदर्भ में 6. जाति और विकास के मध्य अंतः संबंध - मथुरा जिले के संदर्भ में 7. निष्कर्ष ।

86. पूजा
पाकिस्तान में नृजातीय राष्ट्रवाद : बलूचिस्तान पर एक अध्ययन
 निर्देशक : प्रो. बिपिन कुमार तिवारी
 Th 27748

सारांश

प्रस्तुत शोध प्रबंध का शीर्षक 'पाकिस्तान में नृजातीय राष्ट्रवाद: बलूचिस्तान पर एक अध्ययन' है। आज विश्व के अधिकतर देशों में सामाजिक, राजनैतिक तथा जातीय असमानता की झलक दिखाई देती है, जिसके कारण लोगों ने धर्म, भाषा, तथा जाति से संबंधित अनेक विवादों को जन्म दिया है। नृजातीय की अवधारणा का संबंध एक सामान्य पहचान की अवधारणा से है, जिसमें नृजातीय समूह अपने धर्म, भाषा, जाति या क्षेत्रीयता पर आधारित पहचान को आधार बनाकर एकजुट होते हैं तथा अपने राजनैतिक आर्थिक तथा सांस्कृतिक हितों के बचाव हेतु राष्ट्रवादी आंदोलनों

को जन्म देते हैं। नृजातीय राष्ट्रवादी आन्दोलन भी इसी संघर्ष का रूप है। पिछले कुछ दशकों में विश्व के अधिकतर देशों में नृजातीय राष्ट्रवादी आन्दोलन उभरा है। जिसके कारण नृजातीय गतिशीलता ने दक्षिण एशियाई क्षेत्र, जो कि बहुसंजातीय समाजों का गढ़ है, में उपनिवेशवाद की समाप्ति के बाद से ही नृजातीय राष्ट्रवाद एक चुनौती के रूप में उभरकर सामने आया है। बलूचिस्तान क्षेत्रफल की दृष्टि से पाकिस्तान का सबसे बड़ा प्रांत है। जो की देश का 40 प्रतिशत हिस्सा है, लेकिन रणनीतिक (Strategically) रूप से यह बलूचिस्तान देश की जनसंख्या का केवल 5 प्रतिशत का प्रतिनिधित्व करता है। 1951 की जनगणना के अनुसार यहाँ 34 प्रतिशत बलूची, 23 प्रतिशत पश्तो, 16 प्रतिशत सिंधी, 7 प्रतिशत पंजाबी, 1 प्रतिशत उर्दू भाषी तथा 18 प्रतिशत अन्य भाषाओं के लोग रहते हैं। खनिज स्रोतों से भरे पूरे भंडार होते हुए भी यहाँ सर्वाधिक पिछड़ापन है। प्रांत के अपार प्राकृतिक स्रोतों तथा संसाधन भी प्रांत के पिछड़ेपन को दूर नहीं कर पाए। यहाँ सुई गैस, खनिज, कोयला इत्यादि के अपार भंडार हैं। बलूच लोगों की हमेशा विभिन्न सरकारों से यह शिकायत रही है कि इन्हें अपने प्राकृतिक संसाधनों के लाभ का जायज हिस्सा नहीं मिल रहा। अपने शोध कार्य को पूरा करने के पश्चात् मैं इस निष्कर्ष पर पहुंची हूँ कि, नृजातीयता को जीवन जीने का एक तरीका (way of life) माना गया है किंतु पाकिस्तान में ऐसा नहीं हो पाया।

विषय सूची

1. भूमिका 2. नृजातीयता की अवधारणा : एक सैद्धांतिक विश्लेषण 3. पाकिस्तान में नृजातीय राष्ट्रवाद की ऐतिहासिक पृष्ठभूमि 4. बलूचिस्तान में नृजातीय राष्ट्रवाद का उदय एवं पृष्ठभूमि 5. बलूचिस्तान में विद्रोह के विभिन्न चरण तथा उस पर पाकिस्तान सरकार की प्रतिक्रिया 6. सार एवं निष्कर्ष। सन्दर्भ ग्रंथ सूची। परिशिष्ट।

87. SHAIKH (Ekta)

The Ethics And Politics Of Deliberative Process In Democratic Practice.

Supervisor: Prof. Ashok Acharya

Th 27735

Abstract

I aim to provide a procedural justification for deliberative model of democracy rather than an epistemic one because they focus on fulfilment of democratic values. The normative arguments amply highlight the importance deliberative democracy over other forms of democracy. Nonetheless, the entire discourse of domain descends into paralysis over 'correctness' or 'desirableness' of the procedural it may follow that might resolve feasibility issues. I simply attempt to provide a strong impetus over the possibility of refining a way out. Deliberative process in itself is the solution to the problem it faces theoretically as well as empirically. So it is not entirely possible to divorce epistemic value of deliberation from the procedural ones, however, procedural justification provides a stronger claim for installing deliberative processes in democracy such inclusiveness, equality or collective decision-making rather than epistemic one. Deliberative democracy is the term used popularly to emphasise upon an ideal where citizens of any democracy are able to communicate on important matters and reach to an agreement through discussion and debate. However, replacement of one form of democracy is not the only way for cultivating deliberative process because such transformation will cause chaotic form of affairs due to lack of precise clarity. Hence, I will refrain from using the term 'deliberative democracy' due to its ability to mislead the argument that I intend to make. I argue in support of installation of deliberative process for citizens in existing procedural democracy. The critics and supporters of deliberative democracy do converge on the normative merits of deliberative forums, deliberative institutions or some form of political structure that facilitates deliberations among citizens, across diverse communities and discourses. In absence of discussions and deliberation, citizens are susceptible to various influences regarding any political matter because they are still responsible for the democratic nature of the polity.

Contents

1. Introduction 2. Exploring Historical Roots 3. Exploring the Deliberative Ideal through the lens of Gandhian Thought 4. Preserving democracy: Creating a justification for Deliberation in procedural democracy 5. A Deliberative ideal within a Democracy 6. Identifying the Deliberative Potential 7. Ethics for Deliberation 8. Notion of Dependence and Relevance of an Idea of Deliberative Process. Conclusion. Bibliography.

88. SINGH (Parmeet)
Role of Class In Communal Conflicts In India.
 Supervisor: Dr. Indrajeet Singh
Th 27739

Abstract

This research seeks to examine communal conflicts in India through the lens of `class`, a relatively understudied dimension in this context. Communal conflict in India has been a prevalent issue despite numerous social and economic advancements and has been frequently examined through factors such as material conditions, political dynamics, cultural differences, and psychological aspects. This study, however, posits `class` as a significant variable affecting these conflicts. Using broad consciousness categories to define class (elite, middle, and critical), the study hypothesizes that individuals belonging to some specific socioeconomic classes are more likely to participate in communal conflicts. Moreover, the role of class in civil associations and the influence of class-leveling in promoting secularism are examined. The research also includes a review of government policies for minorities, scrutinizing their impact on the socioeconomic status of backward classes. The overall goal of this study is to fill the gap in literature concerning the relationship between class and communal conflict in India, aiming to provide fresh insights into conflict prevention and resolution strategies.

Contents

1. Introduction 2. Communal Conflicts: A Conceptual Understanding 3. Understanding Class and Communal Violence 4. Locating Class in the Communal Violence 5. Challenges and Future Prospects 6. Conclusion: Exploring Possibilities. Bibliography.

PUNJABI

89. KAUR (Amandeep)
Construction of Female Image in Punjabi Films (With Special Reference to 2000-2015).
 Supervisor: Dr. Jaspal Kaur
Th 27769

Abstract

The subject of my dissertation is the construction of female image in punjabi cinema (with special reference to 2000 to 2015). in this research, while reading the history of punjabi cinema films, the status of women in punjabi cinema films has been explored because one strand of understanding the representation of the female

image in the film is related to cultural discourses and the other is related to the gender representation of the film. therefore, having a woman in the film and presenting her character is an important part. this research has been divided into six chapters. chapter one: criticism received on punjabi movies: survey and evaluation in this chapter, research papers, books, title-relative research and title-absolute research related to the punjabi cinema field have been identified. chapter two: history of punjabi cinema in this chapter, the historical development of punjabi cinema is discussed. this chapter is further divided into two parts. in the first section, films from before 2000, in the second part, the films after 2000 chapter three: feminism: theoretical perspective in this chapter, the definitions given by various dictionaries and scholars regarding feminism as a theory have been read and in it the history of feminism theory has been discussed under eastern and western perspectives. under the next three chapters, the films of the beginning of 15 years of the new punjabi cinema of the 21st century have been divided into five-year categories and within each chapter, punjabi films have been discussed from a feminist perspective. in these three chapters of the same series, it is shown how cinema portrays the social status of women in a different way. he has always been considered as a hero by wearing the idealistic values prevalent in the society. chapter four: study of films from 2000 to 2005 chapter five: study of films from 2006 to 2010 chapter six: study of movies from 2011 to 2015 at the end of the research arrangement, under the title, the summary of the research work and the findings to be obtained are briefly described. systematic references and bibliography are also presented at the end. under the title of research management, the presentation of female image in punjabi cinema films, the presentation of women in different types of films from 2000 to 2015, when we read from a feminist perspective, we find the position of women to be remarkable. whether he is in the country or abroad, the feudal mentality marginalizes him and pushes him within the confines of the patriarchal system. on these bases alone, the construction of the image of women in films can also be said to support his thinking. the basic shape of the migrant woman in migration is that of migration within the boundary line, but later some changes can be seen in it. where the woman draws the image of her independent being. but to be associated with high values also becomes his, to be free from which proves to be his greatest virtue.

Contents

1. Introduction 2. Criticism received on Punjabi Cinema: A Survey and Evaluation 3. Feminism: Theoretical Perspectives 4. A Study of films from 2000 to 2005 5. A Study of films from 2006 to 2010 6. A Study of films from 2011 to 2015 Bibliography.

90. RAJEEV KUMAR
Punjabi Diasporic Cinema Ate Latini Amreekan Diasporic Cinema da Tulnatmak Dhiyan (A Comparative Study of Punjabi and Latin American Diasporic Cinema).
 Supervisor: Dr. Nachhattar Singh
Th 27761

Abstract

Diaspora is a state of being wherein an individual or a community settled abroad are constantly dealing and commuting the question of identity. As a concept, the term 'diaspora' is associated with two distinct regions. A region which is referred to as the homeland of the individual and the other being the land of foreign shores to which the individual migrates and settles down. In this research dissertation, a comparative analysis between Punjabi and Latin American diasporic cinema has been attempted. Films which are typically representative of diasporic cinema have been chosen which include films like 'Bend it Like Beckham', 'Beeba Boys', 'Provoked', 'Mitti Vaajan maardi' and 'Speedy Singhs', are all films which have been

chosen from Punjabi Diasporic Cinema. The basis for taking these films is that their plot revolves around the families of Punjabi Diaspora and their protagonists are also unique although these films have been made in English and Punjabi. Similarly, films like 'Babel', 'Maria Full of Grace', 'Machete', 'Here and There', 'New Muslim Cool' etc are Films which typically represent Latin American Diasporic Cinema and they use both Spanish and English as their linguistic mediums. All of these films bring to light the socio-cultural structures in different regional temporal contexts. Therefore, along with the comparative analysis of these two different streams of cinema, one also gets to analyze two different cinematic traditions, two different socio cultural, political, economic, historical and economic conditions which are presented on screen. This research dissertation also reflects upon the subtle representation of the life processes of diaspora which are portrayed through art cinema. Through the present research, we may arrive at new possibilities by informing ourselves about the structures, presentation and forms of Diasporic cinema.

Contents

1. Introduction 2. Available Research on The Topic-Survey and Evolution 2. Disapora Studies: Theoretical Perspectives 4. History and Major Trends of Punjabi Diasporic Cinema 5. History and Major Trends of Latina American Diasporic Cinema 6. A Comparative Study of Punjabi Diasporic Cinema and Latin America Diasporic Cinema 7. Appendix Bibliography.

91. SACHDEVA (Navneet Kaur)

Tradition of Gurbani and Poetic Discourse of Literary Writings of Bhai Gurdas.

Supervisor: Prof. Ravinder Singh

Th 27762

Abstract

The subject of the present research paper is 'Gurbani tradition and poetic discourse of Bhai Gurdas' literature. Under this research work, Bhai Gurdas' literature has been studied through poetic discourse of Indian literature. Bhai Gurdas is called the expounder of Gurmat principles and his work is considered the key to Gurbani. Gurbani composition and Bhai Gurdas' literary work share a large time span. Apart from this, Bhai Gurdas's life was spent with four Gurus. Bhai Gurdas himself was a practitioner of a Sikh life according to Gurmat. While gaining life experience in these situations, he also carried out the work of preaching Gurmat. Bhai Gurdas, a connoisseur of Gurmat principles and many Indian languages, was fully aware of all the philosophical, social and historical aspects of Gurbani. He was an inquisitive scholar who embraced the words and sentiments of the Gurus and propagated Gurmat for the practice of Sikh life. The subject and purpose of his literary work emerges in this context. That is why the poetic discourse of Bhai Gurdas's literature is purpose-oriented and the direction of this purpose is the interpretation of religion-centered Gurmat principles. To establish the above topic of his research work, the research paper has been divided into four chapters. Chapter One: Indian and Western Theoretical Perspective of Poetic Discourse, Chapter Two: Survey of the criticism received regarding the literature composed by Bhai Gurdas, Chapter Three: Philosophical and Socio-Historical Perspective of the Gurbani Tradition and Chapter Four: Poetic Discourse-Explanatory Purpose of the Literature composed by Bhai Gurdas.

Contents

1. Introduction 2. Indian and western theoretical perspectives on poetic discourse 3. Survey of criticism received on the literature composed 4. Physical and social-Historical perspective of Gurbabs 5. Bhai Gurdas: Biography.

SANSKRIT

92. आर्य (रमाकान्त)

काव्यप्रकाश की 'लीला' टीका का सम्पादन एवं समीक्षण (सप्तम एवं अष्टम उल्लास से सम्बद्ध)।

निर्देशक : प्रो. भारतेन्दु पाण्डेय

Th 27526

सारांश

प्रथम अध्याय- 'लीला टीका, टीकाकार तथा पाण्डुलिपियों का पाठालोचन' है। इस अध्याय में टीकाकार भवदेव का परिचय तत्पश्चात् लीला टीका की पाण्डुलिपियों की विभिन्न प्रतियों का विवरण प्रस्तुत किया गया है जो कि इस प्रकार है- भवदेवकृत लीला टीका की उपलब्धता का परिचय 'कैटेलोगस कैटेलोगरम्' में प्राप्त है। इसमें वी. राघवन जहां अनेक पाण्डुलिपियों की सूचना दी है वहीं इस लीला टीका का भी संकेत किया है। जिसमें गवर्नमेन्ट ओरियन्टल ला द्वितीय अध्याय- काव्यप्रकाश के सप्तम-उल्लास की लीला टीका का निर्धारित पाठ (दोष सामान्य से वाक्यमात्रगत दोषों पर्यन्त) है जिसमें प्रारम्भ-"ॐ तस्मै नमः । इह खलु काव्यस्य दोषाभावगुणालंकारयुक्त शब्दार्थत्वं लक्षणमुक्तं। तत्र च शब्दार्थौ विशेष्यतया शरीरत्वेन स्वरूपं दोषाभाव गुणालंकाराश्च विशेषणतया" । इस दोष सामान्य के टीका अंश से हुआ है। काव्यप्रकाश के सप्तम-उल्लास की लीला टीका का निर्धारित पाठ (अर्थ दोषों से समाप्ति पर्यन्त) इस तृतीय अध्याय के अन्तर्गत अर्थ दोषों से प्रारम्भ करके रस दोषों के अपवाद पर्यन्त टीका के सम्पादित मूलभाग को रखा गया है। चतुर्थ अध्याय (काव्यप्रकाश के अष्टम-उल्लास की लीला टीका का निर्धारित पाठ) के अन्तर्गत अष्टम उल्लास से सम्बन्धित लीला टीका के निर्धारित पाठ को रखा है। अन्तिम पञ्चम व षष्ठ अध्यायों को लीला टीका के आधार पर समीक्षा से समन्वित किया है । "काव्यप्रकाश दोष व लीला टीका" इस पंचम अध्याय में दोषों की समीक्षा- जैसे-समासासमासगत पद-दोष:- काव्यप्रकाश में पद-दोष विधायक सूत्र में पहले परिगणित श्रुतिकटुत्वादि तेहर दोषों की सत्ता के लिए अन्य शब्द की अनिवार्यता नहीं होती इस कारण वे समास के साथ-साथ समासाभाव में भी संभव हो सकते हैं।

विषय सूची

1. भवदेवमिश्रकृत लीला, उपलब्ध पाण्डुलिपियां एवं पाठालोचन 2. काव्यप्रकाश के सप्तम-उल्लास की लीला टीका का निर्धारित पाठ (दोष सामान्य से वाक्यमात्रगत दोषों पर्यन्त) 3. काव्यप्रकाश के सप्तम-उल्लास की लीला टीका का निर्धारित पाठ (अर्थ दोषों से समाप्ति पर्यन्त) 4. काव्यप्रकाश के अष्टम-उल्लास की लीला टीका का निर्धारित पाठ 5. काव्यदोष-सामान्य एवं विशेष (पारम्परिक दोष) 6. काव्यदोष-विशेष (साक्षात् दोष) एवं काव्यदोषों के नित्यानित्यत्व की अवधारणा 7. गुणालंकार प्रविभाग:-गुणों के भेद एवं उदनके अभिव्यंजक। उपसंहार। सन्दर्भ ग्रंथ सूची। परिशिष्ट।

93. कुन्तल (अर्चना)

हैमशब्दानुशासन की बृहद्वृत्ति का समीक्षात्मक अध्ययन: कारक एवं विभक्ति प्रकरण के विशेष सन्दर्भ में।

निर्देशिका : डॉ. रेखा अरोड़ा

Th 27528

सारांश

भारत वर्ष में सभी सम्प्रदायों ने व्याकरण शास्त्र के संवर्धन में महत्वपूर्ण भूमिका निभाई है। इस धारा में पाणिनियेतर सम्प्रदायों में कातन्त्र, जैनेन्द्र, शाकटायन प्रभृति अनेक जैन वैयाकरण हुए, जिनमें आचार्य हेमचन्द्र का नाम विशेष उल्लेखनीय है। आचार्य हेमचन्द्र कृत 'सिद्धहैमशब्दानुशासन' बारहवीं शताब्दी में लिखा गया। इस शब्दानुशासन पर अनेक वृत्तियों की रचना की गई। स्वयं आचार्य हेमचन्द्र ने अपने इस व्याकरण ग्रन्थ शब्दानुशासन पर 'बृहद्वृत्ति' नामक ग्रन्थ की रचना की। आचार्य हेमचन्द्र विरचित 'बृहद्वृत्ति' – यह जैन संस्कृत व्याकरण विषयक एक विशालकाय ग्रंथ रत्न है। इसका परिमाण 18000 श्लोक प्रमाण माना जाता है। यह बृहद्वृत्ति आज भी सम्पूर्ण उपलब्ध है। अध्ययन-अध्यापन में सुविधा की दृष्टि से इस महाकाय ग्रंथ को तीन भागों में विभक्त है - प्रथम भाग में 1 से 10 पाद, द्वितीय भाग में 11 से 20 पाद एवं तृतीय भाग में 21 से 28 पाद हैं। आचार्य हेमचन्द्रकृत बृहद्वृत्ति पाणिनीय परम्परा के काशिका ग्रन्थ के समकक्ष प्रतीत होती है। इसमें द्वितीया वृत्ति के सम्पूर्ण लक्षण विद्यमान होने से इसे द्वितीया वृत्ति कहा जा सकता है। प्रस्तुत शोधप्रबंध में इसी बृहद्वृत्ति के कारक- विभक्ति प्रकरण का समीक्षात्मक अध्ययन किया गया है, जो कि आठ अध्यायों में विभक्त है - 1. जिसके प्रथम अध्याय में व्याकरण संप्रदायों की परंपरा एवं आचार्य हेमचंद्र का जीवन परिचय, तदुपरांत शोध प्रबन्ध का मुख्य विषय कारक के संबंध में विविध आचार्यों के मत एवं कारक की परिभाषा के विषय में विशद विवेचन किया गया है। कारक एवं विभक्ति के स्वरूप को स्पष्ट करते हुए विभक्ति विधान की विवेचना की गई है। 2. द्वितीय अध्याय में कर्त्री कारक के विषय में विविध वैयाकरणों के मतों की चर्चा करते हुये बृहद्वृत्ति एवं न्याससमुद्धारकार के मतों का उल्लेख भी है। 3. तृतीय अध्याय में कर्म कारक के संबंध में आचार्य हेमचंद्र कृत व्याप्य शब्द, एवं कर्म के भेदों के संबंध में विचार प्रतिपादित किए गए हैं। 4. चतुर्थ अध्याय में पाणिन्यादि आचार्यों का मत देते हुये, बृहद्वृत्ति में प्रतिपादित करण कारक समीक्षात्मक अध्ययन किया गया है। 5. पंचम अध्याय में संप्रदान कारक विधायक सूत्रों की समीक्षा है। 6. षष्ठ अध्याय में अपादान कारक संज्ञा विधायक एक सूत्र का विवेचन करते हुए, बृहद्वृत्ति में वर्णित अपादान के भेदों की विस्तृत व्याख्या प्रस्तुत की गई है। 7. सप्तम अध्याय में षष्ठी के कारकत्व अकारकत्व पर चर्चा करते हुए, बृहद्वृत्तिकार का मत प्रस्तुत किया गया है। 8. अष्टम अध्याय में बृहद्वृत्ति में प्रतिपादित अधिकरण कारक के सात भेदों का वर्णन किया गया है। जिसमें पाणिनीय परम्परा के आचार्यों का मत एवं सूत्रोदाहरण भी प्रस्तुत किये गये हैं। इसके पश्चात् शोध का सार उपसंहार के रूप में सर्वान्त में दिया गया है। तत्पश्चात् सन्दर्भ ग्रन्थ सूची, परिशिष्ट एवं शोध पत्रादि की सूची को भी सम्मिलित किया गया है।

विषय सूची

1. कारकत्व व कर्तृकारक का विवेचन तथा प्रथमा विभक्ति का समीक्षात्मक अध्ययन 2. कर्म कारक एवं द्वितीया विभक्ति का समीक्षात्मक अध्ययन 3. करण कारक एवं तृतीया विभक्ति का समीक्षात्मक अध्ययन 4. संप्रदान कारक एवं चतुर्थी विभक्ति का समीक्षात्मक अध्ययन 5. अपादान कारक एवं पंचमी विभक्ति का समीक्षात्मक अध्ययन 6. षष्ठी विभक्ति का समीक्षात्मक अध्ययन 7. अधिकरीण कारक एवं सप्तमी विभक्ति का समीक्षात्मक अध्ययन उपसंहार। सन्दर्भ ग्रंथ सूची। परिशिष्ट।

94. तिवारी (गायत्री)

ऋग्वैदिक दार्शनिक सूक्तों के सायणकृत भाष्य का समीक्षात्मक अध्ययन।

निर्देशक: प्रो. विजय शंकर द्विवेदी

Th 27531

सारांश

वैदिक साहित्य न केवल भारतीय, अपितु सम्पूर्ण विश्व-साहित्य के अद्भुत आश्रय कोश है। वैदिक साहित्य को सुविधा के लिए चार भागों में वेदव्यास जी द्वारा विभक्त किया गया। उनसे वेद प्रथम भाग है। वेद का वेदत्व इसी में है कि जो ज्ञान हम प्रत्यक्ष अथवा अनुमान आदि प्रमाणों के द्वारा भी नहीं प्राप्त कर सकते हैं, उसे वेद द्वारा प्राप्त किया जा सकता है। वेद साक्षात्कार ज्ञान स्वरूप है। गीता के अनुसार वेदों का प्रतिपाद्य परमात्मतत्त्व ही है आपस्तम्ब ने वेद के अन्तर्गत मन्त्र तथा ब्राह्मण का ग्रहण किया है। भारतीय चिन्तनधारा में ऋग्वेद का आधारभूत महत्त्व है तथा इसके अध्ययन से मात्र वैदिक ऋषियों की दृष्टि का ही ज्ञान हमें नहीं प्राप्त होता बल्कि परवर्ती संहिताओं तथा उपनिषदों के तथ्यों का भी ज्ञान प्राप्त होता है। ऋग्वैदिक दार्शनिक सूक्तों के सायण भाष्य का समीक्षात्मक अध्ययन मेरे शोध प्रबन्ध का विषय है। अध्ययन के लिए दार्शनिक सूक्तों का चयन करते समय ऋग्वेद का अवलोकन करते समय मुझे यह ज्ञात हुआ कि ऋग्वेद का प्रत्येक सूक्त कोई न कोई रहस्य अवश्य उद्घाटित करता है। अतः सम्पूर्ण ऋग्वेद ही दार्शनिक है। ऋग्वेद के दार्शनिक सूक्तों पर सायण का भाष्य बहुत ही महत्त्वपूर्ण है। दार्शनिक रहस्यों को जानने और समझने एक अद्भुत साधन है। ऋग्वेद की दार्शनिकता तथा दार्शनिक सूक्तों पर विचार करने के पूर्व श्रन की सामान्य अवधारण तथा इसके अन्तर्गत विवेचित किये जाने वाले विषयों का ज्ञान होगा अति आवश्यक है।

विषय सूची

1. ऋग्वेद भाष्य परम्परा और आचार्य सायण 2. ऋग्वेदीय दार्शनिक सूक्तों में प्रमुख दर्शनों के बीज 3. विष्णु, अस्ववामीय एवं पुरुष सूक्तों के सायण भाष्य की समीक्षा 4. हिरण्यगर्भ, वाक् एवं नासदीय सूक्तों के सायण भाष्य की समीक्षा 5. श्रद्धा, भाववृत्त एवं संज्ञान सूक्तों के सायण भाष्य की समीक्षा। उपसंहार। सन्दर्भ ग्रंथ सूची।

95. नैनवाल (दिवाकर)

संस्कृत व्याकरण में भूतकालिक प्रत्यय : एक अध्ययन।

निर्देशिका : डॉ. मोहिनी आर्या

Th 27534

सारांश

प्रस्तुत शोध प्रबन्ध में सर्वप्रथम भूमिका के रूप में वेदांगों का परिचय संक्षिप्त रूप में देकर व्याकरण वेदांग का मुख्यतया परिचय दिया गया है। भूमिका के अनन्तर प्रथम अध्याय में 'व्याकरण की पद्धति' शीर्षक से शब्दों को व्याकृत करने की प्रक्रिया का विवेचन किया गया है। शोधप्रबन्ध के द्वितीय अध्याय में 'पाणिनि प्रोक्त काल व्यवस्था' शीर्षक में कालिक व्यवस्था का विषद विवेचन किया गया है। प्रस्तुत प्रबन्ध के तृतीय अध्याय में 'भूतकालिक प्रत्यय एवं उनका कार्यविधान' इस मुख्य शीर्षक के अन्तर्गत सर्वप्रथम लड़, लिट् तथा लुङ् लकारों की शब्दसिद्धि व्यवस्था का विस्तृत अध्ययन किया गया है। प्रबन्ध के चतुर्थ अध्याय में आचार्य पाणिनि से इतर वैयाकरणों और उनके द्वारा विहित भूतकालिक प्रत्ययों का अनुशीलन किया गया है, यद्यपि महर्षि पाणिनि ने अन्य वैयाकरणों के सिद्धान्तों को अपने में समाहित किया है तथापि अन्य वैयाकरणों ने कतिपय वैषम्य के साथ भी सिद्धान्तों का प्रतिपादन किया है अतः उनका तुलनात्मक अध्ययन अवश्य ही व्याकरणगत कतिपय नूतन तथ्यों को प्रकाशित कर सकता है। इस भाव के साथ अन्य वैयाकरणों के भूतकालिकप्रत्ययविधान व्यवस्था को विविक्त किया गया है। इस प्रसंग में कातन्त्रव्याकरण चान्द्र व्याकरण, जैनेन्द्रव्याकरण, शाकटायनव्याकरण, सिद्धहैमशब्दानुशासन, मलयगिरिव्याकरण, मुग्धबोधव्याकरण, सारस्वतव्याकरण, सुपद्मव्याकरण, पञ्चग्रन्थीव्याकरण, हरिनामामृतव्याकरण, संक्षिप्तसारव्याकरण और सरस्वतीकण्ठाभरणम् व्याकरणों का तुलनात्मक अध्ययन प्रस्तुत किया गया है। प्रबन्ध के पञ्चम अध्याय में 'वैदिक भूतकालिक प्रत्ययों के प्रयोग' इस विषय का अनुशीलन किया गया है।

विषय सूची

1. व्याकरण की पद्धति
2. पाणिनि प्रोक्त काल व्यवस्था
3. भूतकालिक प्रत्यय एवं उनका कार्यविधान
4. पाणिनीयेतर वैयाकरण एवं उनके द्वारा कार्यविधान
5. वैदिक भूतकालिक प्रत्ययों के प्रयोग। उपसंहार। सन्दर्भ ग्रंथ सूची।

96. पंथ (रवीन्द्र कुमार)
अभिनवगुप्त और कबीर के दर्शन में परमतत्त्व का तुलनात्मक अनुशीलन ।
निर्देशिका : डॉ. श्रुति राय
Th 27535

सारांश

अभिनवगुप्त के चिन्तन का साम्प्रदायिक विरुद्ध काश्मीर शैवदर्शन है और कबीर अपने सहज भक्ति दर्शन के लिए प्रासंगिक हैं। काश्मीर शैवदर्शन में विद्वानों की रुचि के अनेक कारण हैं। भारतीय संस्कृति की वैदिक धारा की समानान्तर तांत्रिक धारा, साधना की विशिष्ट परम्परा, आनन्दयोग की नितान्त नयी अवधारणा, जीवनाभ्युपगमपूर्वक अद्वय-दर्शन का एक नया चिन्तन-शास्त्र, भाषा दर्शन के क्षेत्र में मौलिक प्रस्थापनाएं और फिर इस समग्र साहित्य और सर्जनात्मक कलाओं के सैद्धान्तिक पृष्ठाधार के रूप में विनियोग तथा इनके साथ ही हमारी धर्मनिरपेक्ष राजनीतिक अस्मिता की कसौटी बनी काश्मीर की भूमि में उसका उदय अथवा विकास।

यह सब अभिनवगुप्त और काश्मीर शैवदर्शन की बढ़ती प्रासंगिकता के कारण हैं। कबीर दर्शन आधुनिक काल के छोटे से छोटे गांव में भी लोकप्रिय है। इसकी सहज भाषा और कठिन से कठिन दार्शनिक प्रक्रियाओं को बहुत ही सरल भाव में प्रदर्शित करने के कारण जन-जन तक इस दर्शन की पहुंच है किन्तु इस दर्शन का व्यवस्थित रूप हमें प्राप्त नहीं होता है। कबीर का दार्शनिक स्वरूप उनकी कविता, उनकी वाणी, उनके उपदेश तथा उनकी कृतियों में ओत-प्रोत है। साहित्य और दर्शन-शास्त्र को गौरान्वित करने वाले कबीर दार्शनिक स्वरूप का दार्शनिक मान्यताओं, मर्यादाओं तथा परम्पराओं के विस्तृत फलक पर प्रस्तुत करने की परमावश्यकता है, इसलिए इस शोध के माध्यम से इस आवश्यकता को पूर्ण करने का लघु प्रयास किया गया है। इस शोध ग्रंथ का प्रमुख विषय अभिनवगुप्त के शैवदर्शन और कबीर दर्शन के विविध दार्शनिक पहलुओं पर अध्ययन करना है। इन दोनों दर्शन की पृष्ठभूमि से आरम्भ कर इनके गहन चिंतन को यहां प्रस्तुत किया जा रहा है। प्रथम अध्याय भारतीय ज्ञान परंपरा में परमतत्त्व के स्वरूप विषयक चिंतन को प्रस्तुत करते हुए, उसके महत्त्व और उपादेयता पर विचार किया गया है और विविध दर्शनों के चिंतन की आलोचनात्मक व्याख्या की गयी है। द्वितीय अध्याय में परमसत्ता के स्वरूप विषयक चिंतन को स्पष्ट किया गया है तथा अभिनवगुप्त और कबीर के विचारों को प्रस्तुत किया गया है। तृतीय अध्याय में सृष्टि-उत्पत्ति में परमतत्त्व के योगदान और महत्त्व पर प्रकाश डाला गया है। चतुर्थ अध्याय भक्ति पर केन्द्रित है तथा इसमें भक्ति के स्वरूप तथा परमतत्त्व का सम्बन्ध भक्ति से कैसे है? इस विषय पर विवेचन किया गया है। पंचम अध्याय मोक्ष व मुक्ति की प्रक्रिया तथा इस प्रक्रिया में परमसत्ता के योगदान पर केन्द्रित है। बन्धन का स्वरूप, बन्धन के कारण, मोक्ष के उपाय आदि विषयों की इस अध्याय में विवेचना की गयी है। छठवां अध्याय में योग व साधना के विषय में बताया गया है। मोक्ष के साधन रूप योग व साधना पद्धति का विवेचन इस अध्यायमें किया गया है और साधना पद्धतियों में परमसत्ता के महत्त्व का भी प्रतिपादन किया गया है। सभी अध्यायों में अभिनवगुप्त और कबीर की तुलनात्मक दार्शनिक दृष्टि का प्रतिपादन किया गया है। उपसंहार में इन सभी अध्यायों का निष्कर्ष प्रतिपादित किया है तथा अभिनवगुप्त और कबीर के दर्शन की समानताओं व विषमताओं को दृष्टिगत कर पारस्परिक सम्बन्ध को उजागर किया गया है और दार्शनिक समस्याओं का निराकरण किया गया है और प्रत्येक दृष्टि से इस ग्रन्थ को आद्योपान्त एक मौलिक कृति बनाने की चेष्टा की गयी है।

विषय सूची

1. भारतीय दर्शन में परमतत्त्व का स्वरूप
2. परमतत्त्व का स्वरूप एवं व्यापकता
3. सृष्टि और परमतत्त्व
4. भक्ति और परमतत्त्व
5. मोक्ष की अवधारणा में परमतत्त्व का अवलोकन
6. योग तथा साधना में परमतत्त्व । उपसंहार। सन्दर्भ ग्रंथ सूची।

97. प्रज्ञा

वी. सुब्रह्मण्यशास्त्रिकृत शब्दतरङ्गिणी का समीक्षात्मक अध्ययन ।

निर्देशक : प्रो. ओमनाथ विमली

Th 27536

सारांश

प्रथम अध्याय में जीवातु और नारायणी टीकाओं में निर्दिष्ट सुबन्तप्रत्ययान्त पदों की समीक्षा की गई है। सुबन्त शब्दों में सुप् ये २१ प्रत्यय है जो इस प्रकार से है। जैसे- सु, औ, जस्, अम्, औट्, शस्, टा, भ्याम्, भिस्, ड, भ्याम्, भ्यस् डसि, भ्याम्, भ्यस्, डस्, ओस्, आम्, डि, ओस्, सुप् । इस अध्याय के अन्तर्गत सुबन्त प्रत्ययान्त पदों के रूपों को समाहित करते हुए सभी सुबन्त पदों का उभय व्याख्याकारों की विमति और सम्मति के परिप्रेक्ष्य में परिशीलन किया गया है। द्वितीय अध्याय में नैषधीयचरितम् की जीवाद और नारायणी टीकाओं में श्रीहर्ष- प्रयुक्त तिङन्त पदों पर की गई व्याकरणिक टिप्पणियों का अध्ययन किया गया है। उभय व्याख्याकारों ने जिन-जिन तिङन्त पदों पर टिप्पणियों की हैं, उन पदों का संचयन करके सिद्धान्तकौमुदी, काशिका, महाभारत आदि ग्रन्थों के आलोक में तत् तत् टिप्पणियों की व्याख्या तथा औचित्य का परीक्षण किया गया है। तृतीय अध्याय में नैषधीयचरितम् की दोनों टीकाओं अर्थात् नारायणीटीका और जीवातुटीका में व्याकरणात्मक टिप्पणियों द्वारा निर्दिष्ट कृदन्त शब्दों की समीक्षा की गयी है। नैषध में श्लोक में रखे गये कृदन्त शब्दों को दोनों टीकाओं में स्पष्ट रूप से प्रतिपादित किया गया है। चतुर्थ अध्याय में नैषधीयचरितम् की दोनों टीकाओं अर्थात् नारायणीटीका और जीवातुटीका में व्याकरणात्मक टिप्पणियों द्वारा निर्दिष्ट तद्धितप्रत्ययान्त शब्दों की समीक्षा की गयी है। नैषध में श्लोक में रखे गये तद्धित शब्दों को दोनों टीकाओं में स्पष्ट रूप से प्रतिपादित किया गया है। पंचम अध्याय में नैषधीयचरितम् की दोनों टीकाओं अर्थात् नारायणीटीका और जीवातुटीका में व्याकरणात्मक टिप्पणियों द्वारा निर्दिष्ट समासान्त शब्दों की समीक्षा की गयी है। षष्ठ अध्याय में नैषधीयचरितम् की जीवातु और नारायणी टीकाओं में श्रीहर्षप्रयुक्त स्त्री प्रत्ययान्त, विभक्तयर्थ (कारक) शब्दों का विश्लेषण किया गया है। संस्कृत व्याकरण में पुल्लिङ्ग शब्दों में जिन प्रत्ययों को लगाकर स्त्रीवाचक शब्द बनाये जाते हैं उन्हें स्त्री प्रत्यय कहते हैं। टीकाओं में प्रयुक्त स्त्रीशब्द – नर्तकी, उत्तुंगा।

विषय सूची

1. शाब्दबोध में कारण विमर्श 2. वृत्तिनिरूपण 3. अभिधा : पदमावृत्ति 4. लक्षणानिरूपण 5. व्यंजनावृत्ति 6. वाक्यार्थबोध । उपसंहार । परिशिष्ट । सन्दर्भ ग्रंथ सूची ।

98. मनोहन लाल

चीरहरणम् महाकाव्य का राजनीतिक एवं सांस्कृतिक अध्ययन ।

निर्देशक : डॉ. प्रमोद कुमार सिंह

Th 27540

सारांश

चीरहरणम् महाकाव्य का राजनीतिक एवं सांस्कृतिक अध्ययन' शीर्षक से प्रस्तुत शोध प्रबन्ध को चार अध्यायों में विभक्त कर सर्वांगीण अध्ययन करने का प्रयत्न किया गया है - भूमिका भाग में 'कवि-परिचय' का अध्ययन है, जिसके अन्तर्गत डॉ. परमानन्द शास्त्री का व्यक्तित्व, जन्म-समय,

कुटुम्ब-परिचय, अध्ययन, अध्यापन, लोक प्रतिष्ठा, कर्तृत्व-आलोचनात्मक रचनाएँ, मौलिक रचनाओं का उल्लेख वर्णित है। प्रथम अध्याय का शीर्षक है “चीरहरणम् महाकाव्य का प्रतिपाद्य” इसके अन्तर्गत नायकादि, रसादि-व्यंजना, अलंकार सम्पदा, छन्दोवैचित्र्य, काव्य का स्वरूप, चीरहरणम् महाकाव्य की महाकाव्यता तथा महाकाव्य की कथावस्तु का विशद विवेचन किया गया है। द्वितीय अध्याय का शीर्षक है - “चीरहरणम् महाकाव्य में वर्णित राजधर्म” इसमें राजधर्म का स्वरूप, राजधर्म की प्रकृति, प्रयोजन तथा अवधारणा, संस्कृत वाङ्मय में वर्णित राजधर्म, वैदिक वाङ्मय में वर्णित राजधर्म, रामायण काल में वर्णित राजधर्म, पुराणों-महाकाव्यों में राजधर्म, चीरहरणम् महाकाव्य में राजधर्म, चीरहरणम् महाकाव्य में राजा का महत्त्व, गुण-कर्तव्य-राष्ट्रीय-कर्तव्यों का उल्लेख किया गया है। तृतीय अध्याय का शीर्षक है “चीरहरणम् महाकाव्य में प्रतिबिम्बित राजनीतिक तत्त्व” इसमें राजनीति का अर्थ, राज्य, सप्तांग, चीरहरणम् महाकाव्य में राजनीति के विविध अङ्ग-शासनव्यवस्था, सैन्य-व्यवस्था, मन्त्रीमण्डल के अन्तर्गत पदलोलुपता, चाटुकारिता, अनुशासनहीनता, भ्रष्टाचार, चारित्रिक पतन, दलबदल तथा विपक्ष पर दोषारोपण का विशद वर्णन प्रतिपादित किया गया है। चतुर्थ अध्याय का शीर्षक है “चीरहरणम् महाकाव्य में प्रतिबिम्बित सांस्कृतिक तत्त्व” इसके अन्तर्गत वर्ण-व्यवस्था, वर्णन-कौशल, नगर वर्णन, कृषि व पशुपालन, यातायात, खानपान, कला, संगीत, चीरहरणम् महाकाव्य में नारी का विस्तृत विवेचन किया गया है। अध्याय वर्गीकरण के पश्चात् पूर्ववर्ती अध्यायों के अध्ययन का सारांश उपस्थापित किया गया है।

विषय सूची

1. ‘चीरहरणम्’ महाकाव्य का प्रतिपाद्य 2. ‘चीरहरणम्’ महाकाव्य में वर्णित राजधर्म 3. ‘चीरहरणम्’ महाकाव्य में प्रतिबिम्बित राजनैतिक तत्त्व 4. ‘चीरहरणम्’ महाकाव्य में वर्णित सांस्कृतिक तत्त्व। उपसंहार। सन्दर्भ ग्रंथ सूची।

99. राकेश कुमार

व्याप्तिपञ्चकरहस्य में प्रयुक्त नव्यन्यायशब्दावली का समीक्षात्मक अध्ययन (पाणिनीयव्याकरणशास्त्रानुसार)।

निर्देशक : प्रो. ओमनाथ बिमली

Th 27543

सारांश

आचार्य गंगेशोपाध्याय ने तत्त्वचिन्तामणि ग्रन्थ में पूर्वपक्ष की पांच व्याप्ति को प्रतिपादित किया है। उन पांच व्याप्तियों पर आचार्य मथुरानाथ तर्कवाचस्पति ने “व्याप्तिपञ्चकरहस्य” नामक टीकाव्याख्या लिखी। इस टीका में मथुरानाथ ने तत्त्वचिन्तामणि के पांचों लक्षणों की नव्यन्यायशब्दावली के साथ प्रौढव्याख्या प्रस्तुत की है। टीका में आचार्य ने नव्यन्याय के प्रायः सभी शब्दों का समावेश किया है। टीका में मथुरानाथ ने १. साध्याभाववदवृत्तित्वम्, २. साध्यवद्भिन्नसाध्याभाववदवृत्तित्वम्, ३. साध्यवत्प्रतियोगिकान्योन्याभावासामानाधिकरण्यम्, ४. सकलसाध्याभाववन्निष्ठाभावप्रतियोगित्वम्, ५. साध्यवदन्यावृत्तित्वम् आचार्य मथुरानाथ ने

प्रथम लक्षण का परिष्कार इस प्रकार किया है-
 “साध्यतावच्छेदकसम्बन्धावच्छिन्नप्रतियोगिताकसाध्याभाववृत्तिसाध्यसामान्यीयप्रतियोगित्व-
 तदवच्छेदकत्वान्यतरावच्छेदकसम्बन्धावच्छिन्न-साध्यतावच्छेदकसम्बन्धावच्छिन्नसाध्यता-
 वच्छेदकावच्छिन्नसाध्यनिष्ठप्रतियोगिताकाभावनिष्ठ-आधेतानिरूपिताधिकरणतावन्निरूपित-
 हेतुतावच्छेदकसम्बन्धावच्छिन्नवृत्तितात्वावच्छिन्नवृत्तित्वनिष्ठप्रतियोगिताकाभावो व्याप्तिः”।
 मथुरानाथ ने प्रथमलक्षण के समास पर विचार प्रस्तुत करते हुए प्राचीन मत का खण्डन किया है
 और ‘साध्याभाववतः न वृत्तिर्यत्र’ ऐसा व्यधिकरण बहुव्रीहिसमास किया है जो कि अनन्यगत्या
 आवश्यक है। इस शब्दावली का पाणिनीयव्याकरण के अनुसार बोध होना अति आवश्यक है। इसका
 कारण इस भाषा की समस्तप्रयोगावली है। अतिजटिल समासों से घटित होने के कारण केवल रटने
 से नव्यन्याय की भाषा को समझा नहीं जा सकता, अतः व्याकरण की सहायता से ही इस शब्दावली
 को हृदयंगम करना चाहिए। शोधार्थी ने प्रस्तुत शोधप्रबन्ध में व्याप्तिपञ्चकरहस्य में प्रयुक्त
 शब्दावली का समीक्षात्मक अध्ययन पाणिनीयव्याकरण के साथ किया है। इस शोध में नव्यन्याय के
 प्रायः सभी शब्द की अत्यन्त सूक्ष्मतया समीक्षा प्रस्तुत की गई है, जो विद्यार्थी एवं विद्वद्गण के
 लिए अत्यन्त ही उपादेय होगी।

विषय सूची

1. साध्याभाववृत्तित्वम् 2. साध्वद्वित्रसाध्याभाववृत्तित्वम् 3. साध्यवत्प्रतियोगिकान्योन्याभावसामानाधिकरण्यम्
4. सकलसाध्याभाववन्निष्ठाभावप्रतियोगित्वम् 5. साध्यवदइत्यावृत्तित्वम्। नव्यन्याय शब्दसूची वर्णानुक्रमणिका।
 उपसंहार। सन्दर्भ ग्रंथ सूची। प्रकाशित शोधपत्र।

100. रेखा कुमारी

पं. मधुसूदन ओझा कृत ‘छन्दोभ्यस्ता’ का समीक्षात्मक अध्ययन।

निर्देशक : प्रो. रणजित् बेहरा

Th 27545

सारांश

‘पं. मधुसूदन ओझा कृत ‘छन्दोभ्यस्ता’ का समीक्षात्मक अध्ययन द्वारा रचित “छन्दोभ्यस्ता”
 ग्रन्थ के आधार पर वैदिक यज्ञों का सामान्य परिचय प्रस्तुत किया जा रहा है। ओझा जी द्वारा
 रचित ग्रन्थों में वैदिक ज्ञान से सम्बन्धित अत्यन्त गूढ़ रहस्यों का प्रतिपादन किया गया है।
 वेदरहस्योद्धारक समीक्षाचक्रवर्ती स्वर्गीय पण्डित श्री मधुसूदन ओझा जी ने सहस्राब्दियों से
 विलुप्त वैदिक विज्ञान को प्रस्तुत करने के लिए वेदों में आए हुए ब्रह्म, यज्ञ, धर्म, इतिहास, वेदाङ्ग
 आदि सभी विषयों पर उनके रहस्यों को प्रकाशित करने वाले ग्रन्थों का निर्माण किया। इन ग्रन्थों
 को उन्होंने 1-यज्ञ, 2-विज्ञान, 3-इतिहास और 4-प्रकीर्ण इन चार भागों में विभक्त किया।
 आधुनिक वेद व्याख्याकारों में पण्डित मधुसूदन ओझा जी का अत्यन्त महत्वपूर्ण स्थान है। ओझा
 जी का जन्म मिथिला के मुजफ्फरपुर जिले में गाढ़ा नामक ग्राम में सन् 1866 में हुआ। इनके
 पिता का नाम वैद्यनाथ ओझा था। इनकी रचनाओं में प्रमुख है- जगद्गुरुवैभवम, इन्द्रविजय,
 व्योमवाद, अपरवाद, आवरणवाद, अम्भोवाद, अत्रिख्याति, दशवादरहस्य, अहोरात्रवाद,

गीतविज्ञानभाष्य, शारिरकविज्ञानभाष्य, ब्रह्मविज्ञान प्रवेशिका, ब्रह्मविज्ञान, देवतानिवित, वैदिक कोष, कादम्बिनी, छन्दोभ्यस्ता तथा यज्ञसरस्वती आदि। पण्डित मधुसूदन ओझा द्वारा रचित "छन्दोभ्यस्ता" ग्रन्थ वैदिक यज्ञपद्धति का ग्रन्थ है। छन्दोभ्यस्ता शब्द का विग्रह रूप छन्दस्+अभ्यस्त है। वेद के पर्यायवाची शब्द श्रुति, निगम औ आमनाय आदि में छन्द भी एक पर्याय शब्द है जिसका अर्थ वेद माना जाता है। अभ्यस्त(अभि उपसर्ग+अस् धातु+क्त प्रत्यय) से अभिप्राय है बार-बार दोहराना तथा व्यवहार में लाना इत्यादि। अर्थात् प्रस्तुत ग्रन्थ में छन्दस् शब्द वेद के लिये तथा अभ्यस्त शब्द दोहराने के लिये आया है। हविर्यज्ञ नामक प्रकरण में अग्न्याधेय, अग्निहोत्र, दर्शपूर्णमास, पिण्डपितृयज्ञ, चातुर्मास्य, साकमेध तथा आग्रयणेष्टि इत्यादि महत्वपूर्ण यज्ञों से सम्बन्धित वर्णन है। महायज्ञ नामक प्रकरण में सोमयज्ञ के अन्तर्गत आने वाले अग्निष्टोम आदि यज्ञों का वर्णन है। अतियज्ञ नामक प्रकरण में अश्वमेध, पुरुषमेध, सर्वमेध, राजसूय, वाजपेय जैसे याज्ञिक रहस्यों पर प्रकाश डाला गया है। शिरोयज्ञ नामक प्रकरण यज्ञशिरः प्रतिधानम् से प्रारम्भ है। यज्ञपरिशिष्ट नामक प्रकरण में पशुबन्ध, तापश्चित तथा सौत्रामणी इत्यादि यज्ञ सम्बन्धी विवरण है।

विषय सूची

1. पण्डित मधुसूदन ओझा एवं छन्दोभ्यस्ता 2. छन्दोभ्यस्ता में प्रतिपादित हविर्यज्ञ 3. छन्दोभ्यस्ता में प्रतिपादित महायज्ञ 4. छन्दोभ्यस्ता में प्रतिपादित अतियज्ञ एवं शिरोयज्ञ 5. छन्दोभ्यस्ता में प्रतिपादित यज्ञपरिशिष्ट मीमांसा। उपसंहार। सन्दर्भ ग्रंथ सूची। पारिभाषिक शब्दावली। यज्ञिय पात्र शब्दावली।

101. वरूण

नैषधीयचरित की जीवातु और नारायणी टीकाओं में व्याकरणशास्त्र का अनुप्रयोग: एक विश्लेषणात्मक अध्ययन (नवम सर्ग-पञ्चदश सर्ग पर्यन्त)।

निर्देशक : डॉ. ब्रह्मप्रकाश

Th 27345

सारांश

प्रथम अध्याय में जीवातु और नारायणी टीकाओं में निर्दिष्ट सुबन्तप्रत्ययान्त पदों की समीक्षा की गई है। सुबन्त शब्दों में सुप् ये २१ प्रत्यय है जो इस प्रकार से है। जैसे- सु, औ, जस्, अम्, औट्, शस्, टा, भ्याम्, भिस्, ड, भ्याम्, भ्यस् डसि, भ्याम्, भ्यस्, डस्, ओस्, आम्, डि, ओस्, सुप्। इस अध्याय के अन्तर्गत सुबन्त प्रत्ययान्त पदों के रूपों को समाहित करते हुए सभी सुबन्त पदों का उभय व्याख्याकारों की विमति और सम्मति के परिप्रेक्ष्य में परिशीलन किया गया है। द्वितीय अध्याय में नैषधीयचरितम् की जीवातु और नारायणी टीकाओं में श्रीहर्ष- प्रयुक्त तिङन्त पदों पर की गई व्याकरणिक टिप्पणियों का अध्ययन किया गया है। उभय व्याख्याकारों ने जिन-जिन तिङन्त पदों पर टिप्पणियों की हैं, उन पदों का संचयन करके सिद्धान्तकौमुदी, काशिका, महाभारत आदि ग्रन्थों के आलोक में तत् तत् टिप्पणियों की व्याख्या तथा औचित्य का परीक्षण किया गया है। तृतीय अध्याय में नैषधीयचरितम् की दोनों टीकाओं अर्थात् नारायणीटीका और जीवातुटीका में व्याकरणात्मक टिप्पणियों द्वारा निर्दिष्ट कृदन्त शब्दों की समीक्षा की गयी है। नैषध में श्लोक में

रखे गये कृदन्त शब्दों को दोनों टीकाओं में स्पष्ट रूप से प्रतिपादित किया गया है। चतुर्थ अध्याय में नैषधीयचरितम् की दोनों टीकाओं अर्थात् नारायणीटीका और जीवातुटीका में व्याकरणात्मक टिप्पणियों द्वारा निर्दिष्ट तद्धितप्रत्ययान्त शब्दों की समीक्षा की गयी है। नैषध में श्लोक में रखे गये तद्धित शब्दों को दोनों टीकाओं में स्पष्ट रूप से प्रतिपादित किया गया है। पंचम अध्याय में नैषधीयचरितम् की दोनों टीकाओं अर्थात् नारायणीटीका और जीवातुटीका में व्याकरणात्मक टिप्पणियों द्वारा निर्दिष्ट समासान्त शब्दों की समीक्षा की गयी है। षष्ठ अध्याय में नैषधीयचरितम् की जीवातु और नारायणी टीकाओं में श्रीहर्षप्रयुक्त स्त्री प्रत्ययान्त, विभक्त्यर्थ (कारक) शब्दों का विश्लेषण किया गया है। संस्कृत व्याकरण में पुल्लिंग शब्दों में जिन प्रत्ययों को लगाकर स्त्रीवाचक शब्द बनाये जाते हैं उन्हें स्त्री प्रत्यय कहते हैं। टीकाओं में प्रयुक्त स्त्रीशब्द – नर्तकी, उत्तुंगा।

विषय सूची

1. नैषधीयचरित की जीवातु और नारायणी टीकाओं में सुबन्त अनुप्रयोग 2. नैषधीयचरित की जीवातु और नारायणी टीकाओं में तिङन्त अनुप्रयोग 3. नैषधीयचरित की जीवातु और नारायणी टीकाओं में कृदन्त अनुप्रयोग 4. नैषधीयचरित की जीवातु और नारायणी टीकाओं में समास अनुप्रयोग 5. नैषधीयचरित की जीवातु और नारायणी टीकाओं में समास अनुप्रयोग 6. नैषधीयचरित की जीवातु और नारायणी टीकाओं में प्रत्ययान्त व विभक्त्यर्थ अनुप्रयोग । उपसंहार । सन्दर्भ ग्रंथ सूची ।

102. शर्मा (राकेश)

मूल-भारोपीय भाषा: एक समीक्षा ।

निर्देशक : डॉ. उमाशंकर

Th 27551

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सारांश

शोधसार जब सर विलियम जोन्स ने संस्कृत, ग्रीक और लैटिन के अन्तः सम्बन्ध को लेकर जब रॉयल एशियाटिक सोसाइटी बंगाल के समक्ष प्रस्तुत किया तो उन्होंने बताया कि इन भाषाओं में जो समानता मिल रही है उनका कोई 'अविद्यमान मूल स्रोत' रहा है जो अब विद्यमान नहीं रहा। विलियम जोन्स ने जिस अविद्यमान मूल स्रोत की बात की थी उस पर पाश्चात्य भाषा वैज्ञानिकों ने मूल भारोपीय भाषा (PIE) की कल्पना कर डाली। प्रस्तुत शोध प्रबंध में स्पष्ट रूप से यह सिद्ध होता है कि संस्कृत ही भारोपीय भाषाओं की मूलाधार है । यूरोप और एशिया की भाषाओं में जो सामान्य तत्त्व दिखाई देते हैं वे मुख्यतः संस्कृत भाषाभाषीजनों के आवागन के कारण दिखाई देता है। यूरोप और एशिया सभी भाषाएं स्वतंत्र कुलों की भाषाएं हैं न कि किसी अन्य भाषा विकसित हुईं। दिल्ली विश्वविद्यालय में पीएच. डी. (संस्कृत) की उपाधि हेतु स्वीकृत शोधप्रबन्ध के प्रथम अध्याय का शीर्षक "मूल-भारोपीय भाषा" में मूल भारोपीय भाषा की कल्पना, मूल भारो. की मूल स्वर एवं व्यंजन ध्वनियों, मूल भारो. के पुनर्गठन में संस्कृत का योगदान, मूल भारो. की रूप संरचना, क्रिया रूप, वाक्य विन्यास, मूल शब्द भंडार और सामान्य विशेषताओं के बारे में बताया गया है। द्वितीय अध्याय का शीर्षक "भारोपीय भाषा परिवार" है। इस अध्याय में भारत से लेकर यूरोप तक फैली हुई भाषाओं के बारे

में बताया गया है। इस अध्याय में भारत-ईरानी, बाल्टो-स्लाविक, आर्मिनी, अल्बानी, ग्रीक, केल्टिक, जर्मनिक, इटालिक, हिती तथा तोखारी भाषा के विषय में बताया गया है। तृतीय अध्याय का शीर्षक “भारोपीय भाषा परिवार के साथ संस्कृत का अंतः संबंध है” । इस अध्याय में संस्कृत का अन्य भारोपीय भाषाओं के साथ अंतः संबंधों को दिखाया गया है। विश्व के भाषा-परिवारों में भारोपीय भाषा परिवार सबसे बड़ा परिवार है जिसकी भाषाएँ पूर्व में बांग्लादेश से लेकर यूरोप के आयरलैंड तक फैली हैं। चतुर्थ अध्याय का शीर्षक “संस्कृत तथा अवेस्ता” है प्रस्तुत अध्याय में भारोपीय भाषा परिवार की भारत-ईरानी शाखा का विश्लेषण किया गया है। भारत की संस्कृत भाषा तथा ईरान की प्राचीन भाषा अवेस्ता के मध्य अन्तः सम्बंधों का विश्लेषण किया गया है जिस प्रकार विश्व की समस्त भाषापरिवारों में भारोपीय परिवार को सबसे अधिक महत्वपूर्ण समझा जाता है उसी प्रकार भारोपीय परिवार में इसकी आर्य शाखा को, जिसे भारत-ईरानी शाखा भी कहा जाता है। पंचम अध्याय का शीर्षक “भारोपीय भाषाओं का मूल : वैदिक संस्कृत” है। प्रस्तुत अध्याय में वैदिक संस्कृत को ही मूल भारोपीय भाषा के रूप में प्रस्तुत किया गया है। पहले यूरोपीय विद्वानों का विचार था कि भारोपीय भाषाओं की उत्पत्ति ‘हिब्रू’ से हुई थी, लेकिन संस्कृत के परिचय ने उनकी धारणा को दूर करके उन्हें एक नई दिशा दी व एक नया प्रकाश दिया। संस्कृत ही भारोपीय भाषाओं की मूलाधार है।

विषय सूची

1. मूल - भारोपीय भाषा 2. भारोपीय भाषा परिवार 3. भारोपीय भाषा परिवार के साथ संस्कृत का अन्तः सम्बंध 4. संस्कृत तथा अवेस्ता 5. भारोपीय भाषाओं का मूल : वैदिक संस्कृत। उपसंहार। सन्दर्भ ग्रंथ सूची।

103. शुक्ला (रागिनी)

संस्कृत कथा- साहित्य के विकास में प्रयागराज का योगदान: एक अनुशीलन।

निर्देशक : प्रो. रंजन कुमार त्रिपाठी

Th 27549

सारांश

संस्कृत कथा- साहित्य के विकास में प्रयागराज का योगदान: एक अनुशीलन नामक इस शोध प्रबन्ध को 5 अध्यायों में विभाजित किया गया है सर्वप्रथम भूमिका के अन्तर्गत प्रयागराज का भौगोलिक, सांस्कृतिक, पौराणिक, ऐतिहासिक महत्व दर्शाया गया है। प्रथम अध्याय के अन्तर्गत रचनाकारों का व्यक्तित्व एवं कृतित्व का वर्णन किया गया। द्वितीय अध्याय में प्रयागराज में विरचित एवं प्रयाग को कर्मभूमि बनाकर अन्यत्र प्रणीत किये साहित्य का वर्णन किया गया है। तृतीय अध्याय में कथाओं के पात्रों के प्रधान एवं गौण चरित्रों पर प्रकाश डाला गया है। चतुर्थ अध्याय में कथा साहित्य का वर्गीकरण सामाजिक, मनोवैज्ञानिक, पौराणिक एवं ऐतिहासिक कथाओं के आधार पर किया गया। पंचम अध्याय में कथाओं में प्राप्त गद्य एवं उसकी शैली एवं कथाओं की भाव सम्पदा का वर्णन किया गया, इसके अन्तर्गत कथाओं में प्राप्त चार प्रकार के गद्य मुक्तक, वृत्तगन्धि, उत्कलिकाप्राय, चूर्णक एवं द्विधा शैली पारम्परिक एवं आधुनिक और कथाओं में प्राप्त रस भावादि का वर्णन किया गया।

विषय सूची

1. रचनाकारों का व्यक्तित्व एवं कृतित्व 2. प्रयागराज एवं संस्कृति कथा साहित्य 3. चरित्र परिचय 4. कथा साहित्य का वर्गीकरण 5. कथाओं में प्राप्त गद्य एवं उसकी शैली एवं कथाओं की भाव सम्पदा । उपसंहार । सन्दर्भ ग्रंथ सूची ।

SLAVONIC & FINNO-UGRIAN STUDIES

104. CHESHTA

An Analysis of Selected Works of the Russian First Wave Émigré Writer Gaito Gazdanov a Movement from Nostalgia to Adaptation.

Supervisor: Prof. Anjana Sharma

Th 27772

Abstract

This research studied evolution of the Russian émigré writer Gaito Gazdanov who belongs to the first wave of the Russian diaspora writing. Through a close study of his selected works investigated the psychological stages and emotions of a writer in emigration and how they are manifested in his writings. The dissertation consists of an introduction, four chapters, a conclusion and a bibliography. The first chapter "Diaspora literature as a theoretical problem in literary studies" reveals the concepts of such terms as "emigration", "emigrant", "diaspora" and "diaspora literature". In the second chapter, "The Existentialism of Gazdanov's early prose," we are talking about existentialism as such, its influence on the work of Gaito Gazdanov. The third chapter studies the "Images of the main characters in Gazdanov's novels "The History of a Journey" and "Night roads": (the process of adaptation)". In the fourth chapter: "The main motives of Gazdanov's works ", the motives of Gazdanov in his works are revealed, based on the works that were analyzed in previous chapters.

Contents

1. Introduction 2. Diaspora Literature as A Theoretical Problem in Literary Criticism 3. Existentialism of Gaito Gazdanov's Early 4. Image of the characters in Gazdanov's Novels the story of one journey night roads adaptation process 5. the main motives of gazandov's works 6. Conclusion Bibliography.

105. NAAZ (Fahmina)

A Study of Family And Mother-Daughter Relation in Contemporary Russian Women'S Writing: an Analysis of Selected Works At The Turn of Xx-Xxi Century.

Supervisor: Prof. D. Uma Devi

Th 27773

Abstract

Topic of the given thesis is "A Study of family and mother-daughter relation in contemporary Russian women's writing- An analysis of selected works at the turn of

XX- XXI century”. The subject of research of this thesis is study of the relationship between mother and daughter in the family system. We chose the topic of mother-daughter relationships in the family system because these relationships between women are a central line in family that has been ignored for years by sociologists and literary scholars. First of all, this topic was highlighted by Western feminist critics. Women writers tried to address these topics only after the flowering of women`s writing in Russian literature. At the end of the twentieth century in the works of modern “women`s prose.” Analysis of selected works of writers will help us better understand the specifics of Soviet and post-Soviet society, the traditions of representing the figures of mother and daughter.

Contents

1. Introduction 2. Relation of the mother and daughter and the category of motherhood 3. Family motherhood and soviet policy category 3. Russian female prose mother-dancing relations and category of motherhood 4. Analysis of selected literary works 5. Conclusion Bibliography.

SOCIAL WORK

106. POOJA
Study of Romantic Relationships during Emerging Adulthood in an Urban Set-Up.
 Supervisor: Prof. Archana Kaushik
Th 27784

Abstract

Human growth and development is a subject of never-ending inquiry. When socio-economic churning interacts with psychological and biological aspects of human development, one of its manifestations is observed in youth worldwide. Socio-economic changes around the globe have massively influenced the identities of young people. The alternatives and choices a market-driven society offers demand time and attention from them. Scholars have started believing that young people are taking considerable time to become adults or assume responsibilities associated with adulthood, commonly known as working and marrying. Thus, they are termed as emerging adults. This study is a mixed-methods approach to address questions related to delayed assumption of adult roles. Emerging adults are known to experiment and experience romantic relationships because they wait for marriage and enter parenthood. This phenomenon is experienced in urban India to a great extent. Thus, the study finds essential factors in their romantic relationships and trajectories. It contributes to the field of Social Work with Families with critical workable inputs considering interpersonal relationships.

Contents

1. An Introduction to Emerging Adulthood and Romantic Relationships 2. Overview of Previous Research Studies 3. Research Blueprint, Strategy, and Methodology 4. Socio-demographic and Familial Profile 5. Nature, Types, and Patterns of Romantic Relationships during Emerging Adulthood in Urban India 6. Role of Agents of

Socialization 7. Behavioral Manifestations and Coping Mechanisms during the Three Phases of a Romantic Relationship 8. A Social Work Researcher's Suggestive Inputs 9. Discussion and Conclusion. References and Annexures.

107. POONIA (Amit Kumar)

Integrated Water Resource Management Practices in Shekhawati Region.

Supervisor: Prof. Beena Antony Reji

Th 27785

Abstract

Water is a vital resource crucial for life and socio-economic development. However, the Shekhawati region in Rajasthan, India, faces water scarcity challenges due to arid conditions and limited resources. This study delves into traditional and contemporary water resource management practices in the region. It examines the sustainable practices like johads, stepwells, and ponds that have sustained communities for generations. The study highlights the interconnectedness of gender and caste dynamics in water access and governance. Rainwater harvesting, a traditional practice in the region, plays a pivotal role in addressing water scarcity. The study reveals that 71% of households rely on rainwater for drinking and cooking, emphasizing its importance in water conservation. It also explores modern innovations like motorized systems in pond areas. Gender roles are significant in water management, with women often excluded from decision-making due to entrenched societal norms. Caste-based discrimination further exacerbates water disparities within communities. Despite historical inequalities, the region has managed to avoid major water disputes through effective community participation and informal committees comprising respected elders and community leaders. The study advocates for inclusive water management policies that consider caste and gender dynamics to ensure equitable access to resources. It also underscores the importance of water literacy in the region, promoting a comprehensive understanding of water and its sustainable utilization. Rainwater harvesting, guided by principles of inclusivity and participatory development, represents a crucial aspect of sustainable water resource management. Integrated water resource management principles are essential in preserving the delicate balance between the environment and human needs. As we confront the challenges of limited water resources, adopting sustainable practices ensures a legacy of abundant water for future generations.

Contents

1. Introduction 2. Review of literature 3. Research methodology 4. Socio-demographic profile and structures of water resource management 5. Water resource management practices at community level 6. Traditional and contemporary practices at household level 7. Role of gender and caste in water management 8. Community-based water resource management intervention model 9. Conclusion and recommendations. Bibliography and annexures.

108. SHUBHAM KUMAR

Study on Restorative Justice to the Survivors of Child Sexual Abuse in Delhi.

Supervisor: Prof. Neena Pandey

Th 27788

Abstract

The issue of child sexual abuse is complicated, as secrecy and fear of being stigmatized often hinder the process. The complex legal system can deter survivors from seeking justice. However, restorative justice presents an alternative approach of

equal justice that focuses on rehabilitating offenders by working together to repair the harm caused. This study delves into the possibility of utilizing restorative justice to achieve justice in cases of child sexual abuse. The study used qualitative methodology with a descriptive research design. Primary data was collected through semi-structured interviews with child sexual abuse survivors, as well as government and non-government officials. Autoethnography and narrative were used to gather data. The study aimed to achieve the following objectives: (i) comprehend the concept and causes of child sexual abuse, (ii) gain a comprehensive understanding of restorative justice and its procedures, (iii) examine the impact of sexual abuse on survivors and their families, (iv) investigate the service delivery mechanism of criminal justice professionals involved in restorative justice, (v) analyze the role of government and non-government institutions in providing restorative justice to survivors of child sexual abuse, and (vi) understand the role of social workers in assisting survivors of child sexual abuse. The analysis of the data was done thematically. Survivor narratives provided multi-dimensional aspects of research phenomena. It explored society, stakeholders, institutions related to survivors, emotional responses of individuals associated with children, and children's perspectives on their past experiences and future outlook. Based on the study's key findings, child sexual abuse is considered a severe crime that carries a negative stigma in society. The traditional criminal justice system has had difficulty handling such cases, which has further worsened the psychological, social, and economic impact on survivors. The study suggests that legal professionals can help fill the gaps in the system by implementing restorative justice.

Contents

1. Introduction 2. Review of literature 3. Research Methodology 4. The Research Participants - Profile of the Survivors of Child Sexual Abuse 5. Survivor's Experiences, Stakeholders' Perspectives and Data Analysis 6. Research Findings and the Role of Social Worker 7. Conclusion and Recommendations. References and Annexures.

109. VARGHESE (Anna Taney)

A Study on Adolescent's Exposure to Sexually Explicit Material in Urban Setting: Its Antecedents and Interpretations.

Supervisor: Prof. Archana Kaushik

Th 27792

Abstract

As a former school counselor, the growing incidents of sexual misconduct among children and adolescents in schools and the media are deeply concerning. The prevalent lack of proper sex education leads them to explore sexually explicit materials (SEMs). This industry thrives, due to internet. The myths and misconception they spread may impact healthy sexual development of children and their sexual beliefs. Given the importance of their sexual well-being, this study aimed to explore SEMs prevalence among adolescents. This study utilized a sequential exploratory mixed methodology to thoroughly examine different facets concerning adolescents' exposure to sexually explicit material (SEM) and its various sources and also interpretations. Data for this study were collected through qualitative analysis involving 8 groups of adolescents, each consisting of 9-10 participants. Additionally, for the quantitative investigation, a survey questionnaire was administered in which 929 adolescents ranging 13-18 years of age participated. The qualitative phase provided the groundwork for the subsequent quantitative analysis, delving into the intricate themes of sex, sexuality, and SEM consumption. Focus Group Discussions (FGD) allowed participants to express their emotions and viewpoints. This phase covered SEM prevalence, introduction sources, content

sources, and predictors. Insights from this discussion, coupled with existing literature, informed the development of a comprehensive survey questionnaire for the quantitative investigation. In the quantitative analysis, 72.98% encountered SEMs, 31.86% consumed regularly, and 21.98% faced abstaining difficulties. Websites (70.06%) were the primary source, often discovered accidentally or via friends. Regression analysis revealed associations between SEM consumption, gender, and age. These findings highlighted the evolution from accidental exposure or peer influence to intentional SEM-seeking. The study findings guided the development of an intervention plan that aims to prevent, protect, and rehabilitate adolescents in the context of SEMs.

Contents

1. Introduction 2. Review of literature 3. Navigating the theoretical framework 4. Research methodology 5. A baseline study: qualitative investigation 6. Socio demographic details of the adolescent participants 7. Perception about consumption of sexually explicit materials among adolescents 8. Prevalence of exposure and consumption of sexually explicit materials among adolescents 9. Differential exposure and consumption of sexually Explicit materials 10. Utility of sexually explicit materials by adolescents & perception of various interpretations of content 11. suggestive social work intervention and recommendations 12. Conclusion. References and Annexure.

SOCIOLOGY

110. HUSSAIN (Mohammad Sajjad)
Platform Economy and Labour: A Sociological Study with Reference to Delivery Workers.
 Supervisor: Prof. Nandini Sundar
Th 27794

Abstract

This thesis is an ethnographic study of food delivery workers in India. Since the 2010s, in urban India, some interactive service work such as food delivery has moved to digital platforms. The platformization of work has revolutionized the way work is managed and executed. In this thesis, I show how food delivery platforms use algorithmic management to manage delivery workers. I further show how these changes in management have altered the relationship between capital and labour, reintroduced piece-work, and increased surveillance in a de-spatial work setting. This study is based on 25 months of ethnographic fieldwork conducted in Hyderabad from November 2018 to November 2020. The thesis includes an introduction, conclusion, and six ethnographic chapters, each focusing on a specific aspect of the platform. I highlight how platform labour has brought together various long-term labour trends such as de-spatialization of work, surveillance and at the same time how they perpetuate and intensify, trends such as precarity, flexibility, which had been developing over several decades. This thesis discusses the impact of the platform on the nature of work. It also analyzes the efforts made by the platform to maintain their intermediary position and avoid legal responsibility. I argue that despite the claims of the platform to be dealing with entrepreneurial 'partners', platform workers are still

workers. Additionally, I examine how the platforms exercise intense control over labour, despite presenting themselves as liberators of workers from managerial control. By providing a socio-economic overview of the delivery workers and their life stories, I bring out the heterogeneity of the workforce. This also makes it harder for them to unionise. Additionally, I highlight the impact of other structural factors which render workers' bargaining power weaker, through an analysis of two strikes. This research contributes to the emerging interdisciplinary literature on the platform from a sociological perspective and has the potential to shed light on the working conditions of food delivery workers globally. Keywords: Platform economy, labour, food delivery, workers.

Contents

1. Introduction 2. Food delivery platform: An overview 3. Programming labour process: algorithmic management in food delivery platforms 4. Being delivery worker and doing unpaid work 5. Delivery: worker, user, entrepreneur or partner 6. Lives of delivery workers 7. Collective action and unions 8. Conclusion. Bibliography and appendices.

111. PRITI CHANDRA

Understanding Dalit Women's Reproductive Health in Uttar Pradesh.

Supervisor: Prof. Janaki Abraham

Th 27792

Abstract

The choice of this research topic was to some extent personal, that is, my own position as a Dalit woman produced a subjective experience of my identity i.e. of being a 'Dalit woman' from the same state where this study is located. Since I am a native of Uttar Pradesh and spent a good amount of my life in the said state. Although, I do not have childbirth experience. But my own subjective experience of caste and gender as an adult Dalit woman gives me an opportunity to understand their life cycle in general, and their reproductive health experiences in particular. The idea to work on Dalit women's 'reproductive agency' was going through the works of Patricia Jeffrey, Roger Jeffrey, & Andrew Lyon's (1989) in Western Uttar Pradesh, Tulsi Patel's (1994) work in Western Rajasthan, Unnithan-Kumar's (2002, 2004, 2019) work in Rajasthan, Cecilia Van Hollen's (2003) work in Tamil Nadu, and Sarah Pinto's (2008) work in Central Uttar Pradesh. As these texts provide useful literature in the context of emergence and development of the reproductive health debate in India from various approaches, methods, and themes such as medicalisation of childbirth, persistence of social inequality in childbirth practices and enforced family planning. However, these studies also highlighted that there is women's agency against the state (through medical intervention on their bodies) power. For instance, Ram's (1998) study among Mukkuvars, Maya Unnithan's (2004) study in Rajasthan, Madhok's (2004) study in Rajasthan, about women's 'autonomy' in reproductive health services- e.g. modern medicine, state policy, and patriarchy brings out the exercise of women's agency in relation to medical interventions on their body. I would not hesitate to highlight that there is dearth of ethnographic work on the reproductive agency of Dalit women in Uttar Pradesh directly. However, intertwined with poverty/class inequality and women's subordination. This study is to understand the relationship between caste, class, and gender in the village setting. Second, to understand the nature of discrimination happens in the government healthcare setting. Third, how do Dalit pregnant woman negotiate reproductive agency in public reproductive health setting at government hospital.

Contents

1. Introduction 2. Caste, gender and inequality: An introduction to the social setting 3. Caste, gender and dalit women's life cycle 4. Reproduction and dalit women's agency 5. Dalit women and access to reproductive health care 6. Conclusion. Bibliography and Appendices.

STATISTICS

112. DIPENDRA BAHADUR CHAND

Bayesian Regression Study on Some Economic Indicators in Selected Asian Countries.

Supervisor: Prof. Ranjita Pandey

Th 27799

Abstract

The present work aims to synthesize methodological and computational aspects of Bayesian and frequentist methods for describing economic indicators of some selected Asian economies. Framework for the present study implicitly assumes that the data are generated according to some 'true' distribution while posterior summaries arrived at, in the present thesis, are expected to recover the data-generating mechanism for the process under study. In chapter 2 we propose Bayesian regression using INLA for Gross Domestic Product(GDP). GDP known as the pulse of economy for any country depends on multiple factors like export-import, inflation rate and unemployment rate etc. Statistical assessment of GDP demands fresh concepts to explain GDP through its covariates in order to improve and strengthen the estimation process. In chapter 3 we demonstrated a ARIMA technique for modelling and forecasting of the GDP. Augmented Dick Fuller test is used to assess stationarity of the data. In the present empirical study, stationarity at the second order differencing with ARIMA (0, 2, 2) model is identified to predict GDP of India and China, ARIMA (2, 2, 1) model is identified to predict GDP of Pakistan and Nepal, ARIMA (0, 2, 1) model is identified to predict GDP of Bangladesh and Bhutan. Chapter 4 is devoted to the Bayesian Modelling for Unemployment. Unemployment rate and GDP are the heart and brain of the economy of any country respectively. We study variation in unemployment rate through some selected demographic and economic influencers to identify its significant causative forces. Chapter 5 explores influence of macro-economic variables on the overall well-being of Nepalese citizens measured through Human Development Index(HDI). HDI serves as criterion for measuring inequality and deprivation among district regions. Quantile Regression on HDI with normally distributed errors is affected with mean years of schooling, life expectancy at birth, and purchasing power parity.

Contents

1. Preliminaries 2. Bayesian regression for gross domestic product 3. ARIMA and bayesian prediction for gross domestic product 4. Bayesian regression for unemployment 5. Bayesian quantile regression for human development index. References. Appendices. List of publications. List of conference presentations.

113. NILESH KUMAR

Orthogonal and Nearly Orthogonal Latin Hypercube Designs for Computer Experiments.

Supervisor: Prof. Poonam Singh

Th 27800*Abstract*

Experiments are conducted to explore the relationship between a set of input variables to a physical system/process and the resulting output variable(s). These are performed either physically or numerically using computer programs. The former kind is a physical experiment whereas the latter a computer experiment. In contrast to physical experiments the response/output from a computer experiment is deterministic which calls for a different approach for design and analysis of these experiments. One of the important steps in implementing these experiments is choosing a suitable experimental plan/design. Orthogonality and space-filling are two important criteria which are widely used to select a design for computer experiments. Among the commonly used space-filling designs, Latin hypercube designs (LHDs) are most popular due to its ease of construction and one-dimensional uniformity property. Ye (1998) introduced orthogonal Latin hypercube designs (OLHDs). From existing literature on OLHDs, it is observed that the construction methods based on permutation matrices have an advantage that by applying different permutations of $e = [1, 2, \dots, 2^m]^T$, one can construct orthogonal or nearly orthogonal Latin hypercube designs with optimized space-filling properties. Compared to other methods, this method is relatively unexplored. This research work is focused on the construction of orthogonal and nearly orthogonal Latin hypercube designs. The existence and construction problem of OLHDs with eight and nine columns have been investigated that resulted in construction of several new families OLHDs. A mathematical framework has been developed to construct OLHDs using binary codes. This research work also enriches the methods based on permutation groups by accommodating maximum possible columns/factors for a given run size. A sequential technique for constructing orthogonal and nearly orthogonal Latin hypercube designs have been developed. The designs constructed in this thesis can be used in screening experiments, non-parametric fitting procedures, building an efficient meta-model of the simulator and sensitivity analysis.

Contents

1. Introduction 2. Orthogonal latin hypercube designs for eight factors 3. Some new families of orthogonal latin hypercube designs with nine columns 4. Orthogonal latin hypercube designs using binary codes 5. Orthogonal latin hypercube designs using permutation groups 6. Sequential construction of orthogonal and nearly orthogonal latin hypercube designs 7. Conclusion and future directions. List of papers out of the thesis. List of conference presentations. References.

INSTRUMENTATION & CONTROL ENGINEERING

114. GOSWAMI (Yagyadatta)

Some Investigations on Modelling and Control of Non-Linear Systems.

Supervisors: Prof. K.P.S. Rana and Prof. Vineet Kumar

Th 27804

Abstract

To carry out precise performance investigations and control studies an accurate mathematical model of the photovoltaic (PV) system is desired. This thesis presents a new and powerful meta-heuristic optimization technique known as Hybridized Interior Search Algorithm (HISA) which has been explored for effective estimation of PV cell/module parameters. It has been explored for effective parameters estimation of PV cell/module. Single and double diode-based models of PV cell/module have been estimated from their respective single I-V nonlinear characteristic using experimental data from five case studies comprising of two cells and three modules using mono-crystalline, multi-crystalline and thin film-based PV technology. The modelling performance of HISA has been assessed using root mean square error (RMSE), weighted RMSE and mean absolute error, between computed and experimental data. Therefore, based on the presented detailed investigation, it is concluded that the proposed HISA is a promising optimization technique for PV cell/module estimation. SPV system is highly non-linear due to its dependency upon various environmental factors like temperature, irradiation, etc. To extract maximum power from the system, the operating point must be maintained at the Maximum Power Point (MPP). The process of getting MPP of SPV is carried out by a Maximum Power Point Tracking (MPPT) controller. In this thesis, a novel Fuzzy Logic-Discrete Proportional Integral-Derivative with Derivative Filter (Fuzzy-PIDF) controller is employed to efficiently achieve MPPT in SPV. The basic design of the Fuzzy-PID controller has been utilised as the foundation for the proposed controller; however, a derivative filter has been included into the PID controller component. A novel Fuzzy-PIDF controller's performance is tested in terms of undershoot, ripple, offset, efficiency and average power under varied irradiation and temperature profiles. A novel GWO-tuned Fuzzy-PIDF controller outperforms the GWO-tuned PID controller. Moreover, GWO tuned Fuzzy-PIDF controller also gives promising results in comparison to classical MPPT techniques such as Perturb & Observe (P&O) and Incremental Conductance (INC) considering all the environmental profiles. As a result of the extensive experiments provided, it has been observed that the proposed a novel Fuzzy-PIDF controller is an effective method for MPPT that is also able to accommodate the nonlinearity of SPV. In this thesis, also two different MPPT algorithms have been proposed. The effectiveness of the proposed algorithm has been demonstrated with several simulation results and compare with conventional methods. The extensive simulations and subsequent investigations demonstrate that the various performance indexes offered by proposed algorithms are better than conventional MPPT techniques which establishes the superiority of the proposed techniques.

Contents

1. Introduction 2. Literature review 3. Parameter estimation of photovoltaic systems using hybridized optimizer 4. GWO tuned fuzzy-pidf controller for enhanced mppt of a solar photovoltaic system 5. Improved variable step-size ic mppt technique for spv system 6. A PID-AW based mppt technique for spv system 7. Conclusion and future scope. References.

URDU

115. ALAM (Mohd. Zahur)
Mithlanchal ki Adabi Khidmat: aik Tanqeedi mutalia.
 Supervisor: Dr. Imteyaz Ahmad
 Th 27814

Abstract

مٹھلانچل شمالی بہار کا وہ زرخیز علاقہ ہے جو ہمیشہ سے علم و ادب کے لئے سر شہز و شاداب رہا ہے اسلئے میں نے اپنے تحقیقی مقالے کے لئے اس علاقے کا انتخاب کیا اور میرے مقالے کا موضوع، مٹھلانچل کی ادبی خدمات ایک تنقیدی مطالعہ، منتخب ہوا میں نے اپنے اس تحقیقی مقالے کو پانچ ابواب میں منقسم کیا ہے باب اول: مٹھلانچل میں اردو شاعری۔ اس میں مختلف اصناف سخن پر روشنی ڈالی گئی ہے جس قصیدہ، مثنوی، مرثیہ، غزل، نظم، قطعہ، رباعی وغیرہ شامل ہیں باب دوم: مٹھلانچل میں افسانوی نثر۔ اس باب میں مٹھلانچل میں نثر کے حوالے سے بات کی گئی ہے جس میں مختلف اصناف نثر مثلاً ناول، افسانہ اور افسانچے کا ادبی جائزہ پیش کیا گیا ہے باب سوم: مٹھلانچل میں غیر افسانوی نثر۔ اس باب میں غیر افسانوی نثر کو موضوع بنایا گیا ہے جس میں مکتوبات، سفر نامے اور خودنوشت کو پیش کیا گیا ہے باب چہام: مٹھلانچل میں تحقیق و تنقید ہے اس باب میں مٹھلانچل میں تحقیق و تنقید کی روایت پر روشنی ڈالی گئی ہے باب پنجم: مٹھلانچل میں اردو صحافت۔ اس باب میں مٹھلانچل میں اردو صحافت کے حوالے سے بحث کی گئی ہے۔ اس میں ادبی رسائل و جرائد اور اخبارات کی تاریخی پس منظر کو پیش کیا گیا ہے۔ مقالے کے اخیر میں ماحصل درج ہے اور ماحصل کے بعد کتابیات ہے

Contents

1. Mithlanchal mein Urdu shairi 2. Mithlanchal mein Afsanvi nasr 3. Mithlanchal mein ghair afsanvi nasr 4. Mithlanchal mein tehqeeq-o-tanqeed 5. Mithlanchal mein Urdu sahafat. Hasil-e-Mutala. Kitabiyat. Rasail Jarail.

116. ARSHAD IKRAM
Khaleeji Mumalik mein Urdu Zuban-o-Adab Aghaz-o-Irtaqa.
 Supervisor: Prof. Irteza Karim
 Th 27817

Abstract

Deegar zubanon ki tarah Urdu ke aghaz-o-itreqa ko haqeeqi mein aur is ki rooh tak phunchne ke liye zaruri hai ke log az hood daur-e- hazir ki qadron ke sath ham ahanga hon, aaj Urdu ke bolne aur samajhne wale duniya bhar mein pehle hote hai phir bhi Urdu zuban jaded talim se jude hote hai, deegar samail mein Urdu ko ek khas mazhab aur maksoos logon se jod diya jata hai jo ke sirf aur sirf ek maqrozah hai, kyunki Urdu ki alamgiraet musaima hai, aaine-band ke 8vin shadule mein Urdu mulk ki 18 zubanon mein se ek zuban hai aur khas bat ye hai ke Urdu ke sawa baqi sabhi 17 zubanein ilaqai hai is liye Urdu ko kisi ilaqe se mukhtas nahi kiya ja sakta, Urdu ke sath urdu walon ka rishta jism-o-rooh ka hai, Urdu zuban hi mein hamara ilmi, adbi, mazhabi, tehzebi-o-saqafati sarmaya poori aan ban aur shank e sath maujud hai, ye tamam awamil-o-anasir Urdu ki tauseeh-o-ashat taleem-o-tadrees aur tarveeh wa irteqai mein mueen-o-wa madadgar sabit hote hai lekin jahan mein ek khalis aur munfarid shinakht ki hamil hone ka dar awami rabte hai, is ke bawjood Urdu ke sath tasib barta jata hai kyunki Hindustan mein angrezon ne lisani buniyadon par musafirah ki buniyat dali thi, Khaliji mumalik ki mukhtasar tareekh aur Geographyai Halat 1 Khaliji mumalik mein Urdu ka aghaz 2. Khaliji mumalik mein Urdu ke muntakhba shorai-o-adbai 3. Arab tazad Urdu Shorai-o-adba. Ma-hasil, Kitabiyat.

Contents

1. Khaleeji mumalik ki mukhtasar tareekh aur geographiai halat 2. Khaleeji mumalik mein Urdu ka aghaz 3. Khaleeji mumalik mein Urdu ke muntakhib Shora-o-Adba 4. Arab nasard Urdu Shora-o-Adba. Ma-Hasil. Kitabiyat.

117. GULNAWAZ PARVEEN

Sharahin-e-Ghalib ka Tanqeedi Mutalea.

Supervisor: Prof. Najma Rehmani

Th 27821

Abstract

Urdu mein Ghalib ki shairi ka ek aham maqam hai, un ki shairi ki tafheem majh jaisi adbi taiba ke liye aasan nahi, tahim jo kuch bhi ab tak un ki shairi ka mutalah kiya hai us se ye yaqeen kise sath kaha ja sakta hai Ghalib ki shairi mein ek nahi duniya abad hai, yaha is bat ki bhi-o-wazahat zaruri hai ke Ghalib ki shairi ki taqseem ki koshish un ke apne ahad mein nahi ki gini, us ka nasha tez ho jata hai, is se sharab ki qeemat badh jati hai aur who anmol ho jati hai, unhone apni shairi ko usi purane sharab ke manind qarar diya hai, aur aaj ki tehqeeq Ghalib ki paisheen goni ko durust batata hai ki un ki shairi ke dariche jo jo kehlate ja rahe hai un ki ahmiyat aur un ki qadoor qeemat din ba din padhti jaa rahi hai, Ghalib ki shairi ka un kea had mein koi kharidar nahi raha lekin aaj is ke talab garon ki lambi bheed lagi hui hai. Bab Awwal: sharheen-e-ghalib- tareef aur tanqeedi nazariyat (Alif) tamam sharheen ka tareef (ba) agan sharheen ke tanqeed nazaryat. Bab Doom: Ghalib madah sharheen (Alif) Altaf Hussain Hali (Ba) saha Majdadi (Jeem) Yousuf Saleem Chishti (Daal) Abdurrehman bjanuuri. Bab Soom: Ghalib ke nukta xheen Sharheen (Alif) Nazm Tabataba (Ba) Abdullateef (Jeem) Gyan Chand Jain. Bab Chaharum: Ma-haslil, Kitabiyat.

Contents

1. Sharheen-e-Ghalib: taaruf aur tanqeedi nazariyat 2. Ghalib madah Sharheen 3. Ghalib ke nukta cheen sharheen. Ma-Hasil. Kitabiyat.

118. INAM ULLAH

Jagan Nath Azad ki Adbi Khidmat ka Tanqidi Tajzia.

Supervisor: Dr. Mujeeb Ahmad Khan

Th 27819

Abstract

میرے اس مقالے کا تعلق جگن ناتھ آزاد کی ادبی خدمات ان کی ادبی شخصیت اور ذات سے اس لیے میں نے یہاں از حد کوشش کی ہے کہ ان کی ذات اور ادبی رتبے کے ممکنہ تعارف پیش کرتے ہوئے یہ وضاحت کر دوں کہ کس طرح آزاد کی ذات اور ان کی شخصیت ان کے معاصرین سے جدا اور معنی خیز رہی ہے۔ لہذا اس تحقیقی مقالے میں جہاں بہت سارے بکھرے ہوئے مضامین کو یکجا کر کے تحقیقی اعتبار و وقار کا خیال رکھتے ہوئے انہیں پیش کیا گیا ہے، وہیں عبد حاضر میں جگن ناتھ کی ذات سے ادب کے لیے ملنے والے فوائد فیوض و برکات سے دستبرداری سے بھی بچنے کی کوشش رہی ہے۔ ان کے فن کو تحریک بخشنے والی روحانی علمی اور پشت پناہ فضاؤں کو بھی اس مقالے کے ذریعے حتی المقدرو پیش کیا گیا ہے۔ اس سے جہاں ایک طرف ادب کی عالمی قدروں، وقتی ضرورتوں، جمالیاتی مسرتوں، فنی بصیرتوں تجربے کی وسعتوں اور جذبے کی شدتوں کو قاری تک منتقل کرنے میں کامیابی حاصل ہوگی وہیں دوسری جانب ایک ادیب، فن کار، محقق، نقاد اور ادب شناس شخصیت سے اجنبیت کے شکار ہجوم کو آزاد صاحب کے علمی مشاہدوں، مطالعہ کائنات کے تجربوں، ذہنی سطحیت سے آزادی، اور سب سے اہم یہ کہ آج سے قبل ہماری ثقافت کے سمجھنے میں تاریخی اور ادبی سطح پر وسعت قلبی میسر آئے گی۔ اردو کی ادبی روایت اس اعتبار سے قابل قدر ہے کہ عظیم ادبی شخصیات نے اس کے دامن میں جگہ پائی ہے اور اس عنایت میں کسی بھی قسم کی کم ظرفی کا مظاہرہ نہیں دیکھنا پڑا بلکہ اردو لفظیات، شعریات، اور اصناف تک پر جگہ مختلف انداز لہجوں اور مذاہب کے ذریعے خدمات کا جذبہ دیکھا گیا،

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1. Pesh-e-lafz 2. Prof. Jagan Nath Azad- ek taaruf 3. Jagan Nath Azad aur Kashmir
4. Jagan Nath Azad ki Iqbal shanasi 5. Jagan Nath Azad ki shairi 6. Jagan Nath
Azad ki tehqeeq-o-tanqeed nigari 7. Jagan Nath Azad ke muasireen. Ma-Hasil.
Kitabiyat.

119. MOHAMMAD WASEEM

Aazadi ke Baad Urdu Inshaiya ka Mozuaati aur Usloobiyati Mutaala.

Supervisor: Dr. Mohammad Alam

Th 27826

Abstract

Urdu zaban-o-adab mein nasr ki mukhtalif asnaf hai, nasr mein bhi afsanonvi aur ghair afsanvi dar qasmein hai, ghari afsanvi nasr ki ek aham sinf inshaiya hai, ye sinf bazahiriyaat aasan hai, lekin babtin kahsi pechida aur mushkil hoti hai, ek inshaiya wahi shakhs takhleef kar sakta hai jo inshie-o-adab ke anmol aur gonagon rangon se waqifiyaat rakhta ho, inshaiya kea ham anasir ghair sasmi andaz aur dilchasp tariqe par guftfu ki jati hai inshaiye ki baqaidah ek sinf ke taur par shurat azadi ke baa dhoti hai, inshaiye qarneen ke liye kam waqt mein zehni aur tabi bashashat ka zariya banta hai aur qari ko tazgi-o-nishat ata karta hai, unhein tamam khususiyat aur ahmiyat ke pesh nazar mein ne inshaiy par tehqeeqi kam karne ka irada kiya aur inshaiya ka mauzuati-o-usloobiyati mutala mauzu ka intekhab anpe ustazah aur kahir khahon ke mashura se muntakhib kya mera ye tehqeeqi maqala panch abuwab par mushtamil hai jo mundarja zail hai (1) Urdu inshaiye mani-o-muqahem (2) Urdu inshaiye azadi se qabl (3) Urdu inshaiye azadi ke bad (4) Urdu abshaiyae ke mauzuat (5) Urdu inshaiye ki asaleeb.

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1. Urdu inshaiya maani-o-mufaheem 2. Urdu inshaiya azadi se qabl 3. Urdu inshaiya azadi ke bad 4. Urdu inshaiya ke mauzuat 5. Urdu inshaiya ke asaleeb. Ma-Hasil. Kitabiyat.

120. RAZA (MD HASNAIN)

Nuaminda Urdu Naqdeen ki Afsana Nigari Tajziyati mutala.

Supervisor: Prof. Abu Bakar Abbad

Th 27830

Abstract

اردو میں فکشن کا باقاعدہ آغاز تقریباً انیسویں صدی کے نصف آخر سے ہوتا ہے۔ اس عہد کو ہندوستان کی تاریخ میں بہت اہمیت حاصل ہے کیونکہ اسی عہد میں ہندوستان میں سیاسی، سماجی، تہذیبی، معاشی گویا ہر سطح پر تبدیلیاں رونما ہو رہی تھیں۔ اس دور میں زندگی نے نئی کروٹ لی یا یوں کہیں کہ زندگی کے ہر شعبے نے ایک نیا طریقہ اختیار کیا چونکہ ادب زندگی کی حقیقتوں کا ترجمان ہے اس لیے زندگی میں رونما ہونے والی تبدیلیوں کا عکس ادب میں بھی جا بجا نظر آتا ہے۔ ادب کے ساتھ ساتھ فن میں بھی تجربے کیے گئے نئے خیالات و تصورات اور نئی فکر کو ادب میں پیش کیا گیا، نئے نئے اصناف کا دروا ہوا، ان میں ”ناول“ اور بعد میں ”افسانے“ منظر عام پر آئے۔ پریم چند سے جدید افسانہ نگاروں تک ایک لمبی فہرست ہے جنہوں نے اردو افسانے کو اپنی تخلیقات سے تقویت بخشا ہے۔ لیکن میرا یہ تحقیقی مقالہ بنیادی طور پر ان ناقد افسانہ نگاروں پر مرکوز ہے جنہوں نے دبستان تنقید میں کاربائے نمایاں انجام دیے ہیں اور ساتھ ہی افسانہ نگاری کی پرکشش فضا کی طرف بھی مائل ہوئے۔ میرا یہ تحقیقی مقالہ پانچ ابواب اور حاصل مطالعہ پر مشتمل ہے جس کا پہلا باب نمائندہ اردو ناقد افسانہ نگار: سوانحی و ادبی کوائف“، دوسرا باب ”نمائندہ اردو ناقد افسانہ نگار کے معاصر افسانہ نگار“، ”تیسرا باب ”نمائندہ اردو ناقدین کی افسانہ نگاری“، چوتھا باب ”نمائندہ اردو ناقد افسانہ نگاروں کے منتخب افسانوں کا تجزیاتی مطالعہ“، پانچواں باب ”مترقات“ اور اخیر میں حاصل مطالعہ ہے جس میں مقالہ کا خلاصہ و نچوڑ پیش کیا گیا ہے

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1. Numainda Urdu naqid afsana nigar: sawanehi-o-adbi kawaif 2. Numainda Urdu naqdeen afsana nigar ke muasir afsana nigar 3. Numainda Urdu naqdeen ki afsana nigari 4. Numainda Urdu naqdeen afsana nigar ke muntakhib afsanon ka tajziyati mutala 5. Mutfirqat. Hasil-e-mutala. Kitabiyat.

121. RIZWAN AHMAD

Hayatullah Ansari ke Afsanon mein Marxism.

Supervisor: Prof. Sayed Ali Karim

Th 27831

Abstract

اردو میں افسانہ نگاری کی روایت اس باب میں افسانہ کے آغاز و ارتقا سے متعلق مباحث کا میں نے مکمل احاطہ I اب اول اردو افسانے میں تحریکات ا رجحانات اس باب میں رومانی، حقیقت نگاری کے I کرنے کی کوشش کی ہے۔ باب دوم رجحانات کے علاوہ ترقی پسندی، جدیدیت، اور ما بعد جدیدیت کے رجحانات پر مکمل گفتگو کی ہے اور اردو افسانے پر ان اردو افسانے پر مارکسزم کے اثرات اس باب کا I رجحانات اور تحریکات کے اثرات کا مکمل جائزہ پیش کیا ہے۔ باب سوم میرے بنیادی موضوع سے گہرا رشتہ ہے اس میں مارکسی فلسفے اور تصور کی تفہیم اس کے تشخیصات، امتیازات کو موضوع بحث بناتے ہوئے اردو افسانہ پر اس کے گہرے اثرات کا تجزیہ کیا ہے اور یہ واضح کرنے کی کوشش کی ہے کہ اردو کے زیادہ تر افسانہ نگاروں نے شعوری یا لاشعوری طور پر مارکسزم کا گہرا اثر قبول کیا ہے۔ اور ان کے افسانوں میں کہیں واضح تو کہیں زیریں لہر کے طور پر اس کا اثر نظر آتا ہے۔ اس میں اردو کے ان سارے افسانہ نگاروں کا ذکر حیات اللہ I شامل ہے جو ترقی پسند تحریک سے باضابطہ وابستہ تھے یا جن کی ہلکی پھلکی ذہنی وابستگی تھی۔ باب چہارم انصاری کے افسانوں میں مارکسزم یہ مقالے کا بنیادی باب ہے، اس میں حیات اللہ انصاری کے ان تمام افسانوں کا مبسوط تجزیہ کیا گیا ہے جو مارکسی تصورات کے زیر اثر انہوں نے تحریر کئے تھے۔ ان میں بڈھا سودخور، ڈھانی سیر اٹا، آخری کوشش، کمزور پودا، بارہ برس کے بعد، ٹھکانہ، بھیک، خلاص، بیوقوف، ادھوری وغیرہ قابل ذکر ہیں میں نے ان تمام افسانوں میں مارکسیت کی تلاش کی ہے اور اسی کی روشنی میں میں نے حیات اللہ انصاری کے نظریات و تصورات کا مکمل جائزہ پیش کیا ہے۔

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1. Urdu mein afsana nigari ki riwayat 2. Urdu afsane mein tehrikat-o- rujhanat 3. Urdu afsane par Marxism ke asrat 4. Hayatullah Ansari ke afsanon mein Marxism. Khulasa-e-kalam. Kitabiyat.

122. WANI (Gh. Hassan)

Rajinder Singh Bedi ka Afsano mein nafsiyati Kashmakash.

Supervisor: Prof. Syed Ali Karim

Th 27838

Abstract

Mandir jab Bala meri tehqeeqi maqale ka mauzu hai raqim ne apne tehqeeqi maqale ko char abuwab mein munqasim kiya hai, Bab Awwal: Rajinder Singh Bedi ki ilmi-o-adbi khidmat aur samaji zindagi Bab awwal mein Rajinder singh bedi ki samaji zindagi jis mein un ke bal bachon ke sath sath un ke abu ajdad par bhi Roshni dali gai hai, Bab Doom: nafsiyati mutale ki mudiyat maqale ke is bat ko raqim ne teen zaili abuwab mein taqseem kiya hai jis mein pehle anuwan ke tehat” taqsiyat ki tareef, mauli-oi-mafhoom” aur doosra “ taqsiyat mein nazariya saaz Freud, Adler aur Young” ek tareef jabke is bab ke teesre aur akhri anuwan ke tehat “ adab aur tafsiyat ka bahmi rishta” ko mauzu behas banaya gaya Bab soom: Rajinder singh Bedi ke afsanon mein nafsiyati kashmakash maqale ka ye baba sab se aham hai jo ke maqale ka teesra bab hai maqale ke teesra bab hai maqale ke is bab ko raqim ne dar zail anuwanat ke tehat mnqasim kya hai sab se pehle hisse Rajinder Singh Bedi ke afsanon kirdar marad aur aurat ka nafsiyati kashmakash mutala lpush kiya gaya aur doosre hisse mein bachon aur budhon ka nafsiyati mutala pesh kiya gaya hai, Bab Chaharum: Rajinder Singh Bedi bahaisiyat fiction nigar maqale ke is bab ko

Raqim “Rajinder Singh Bedi bahaisiyat Fiction nigar” ke hawale se janizah pesh kiya gaya ahi aur is bab ko teen zaili abuwab mein taqseem kiya gaya hai, majmuie janiza: maqale ke akhir mein majmuie jaizah bhi pesh kiya gaya hai, jis mein maqale ke mashmulat par bat karte hue Rajinder Singh Bedi bahaisiyat mahir samaji nafsiyat ke hawale se bhi janizah liya gaya hai, Kitabiyat: maqale ke aakhir mein raqim alharuf ne buniyadi aur sanvi makhizdunon ko kitabiyat ke taur par darj kiya hai.

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1. Rajinder Singh Bedi ki ilmi-o-adbi khidmat 2. Nafsiyati mutale ki mubadiyat 3. Rajinder Singh Bedi afsanon mein nafsiyati kashmakash 4. Rajinder Singh Bedi Bahaisiyat Fiction nigar 5. Novel Ek Chadar Maili Si ka tanqeedi mutala. Kitabiyat.

ZOOLOGY

123. AGGARWAL (Nikita)

Human Papillomavirus Associated Transcriptional Regulation in Head and Neck Squamous Cell Carcinoma.

Supervisor: Prof. Alok Chandra Bharti

Th 27840

Abstract

Human Papillomavirus (HPV)-positive head and neck squamous cell carcinoma (HNSCC) constitutes a diverse group of cancers with distinct clinical presentations. Evidence suggests better prognosis of HPV-positive HNSCC, only in those cases where the virus is transcriptionally active. Presence of key transcription factors (TFs) provides a conducive environment for HPV to become transcriptionally active. Therefore, the present study investigated the spectrum of expression and nuclear presence of LCR-associated TFs that participates in activation of HPV LCR responsible for HPV's oncogenic potential. The TFs involved were identified based on available literature & bioinformatic tools like FIMO and TFBIND. Expression profiling of these TFs in HPV-negative (OCT1, UPCI:SCC084 and UPCI:SCC131) and HPV-positive (UDSCC2 and 93VU147T) cell lines by immunoblotting revealed high expression of JunB whereas low expression of Fra1, pSTAT3(S727), SP1, and SOX2 in HPV-positive HNSCC cells. Immunofluorescence was performed to determine nuclear localization that reflects their participation in transcriptional regulation. Inducible TFs showed cell line-specific nuclear localization and did not correlate with HPV positivity. Whereas, constitutive factors were strongly associated with the nucleus in HPV-positive HNSCC cells. HNSCC transcriptome TCGA database showed high expression of JunB, JunD, p50, p52, RelB, STAT3, FOXA1, SOX2, SP1 and NF-1, whereas low expression of Fra1 and CEBPB in HPV-positive HNSCC lesions. Notably, high expression of Fra1 and SP1 correlated with better survival, while elevated GR and FOXA2 levels were linked to poorer outcomes in HNSCC patients. Evaluation of HPV16 LCR reporter activity in HPV-positive and HPV-negative HNSCC cell lines revealed that in HPV-positive HNSCC cells; UDSCC2 exhibited higher LCR activity in comparison to 93VU147T whereas some of the HPV-negative HNSCC cells could activate HPV16 LCR, UPCI:SCC131 and OCT1 displayed high HPV16 LCR activity comparable to HPV-positive HNSCC cells. Finally, among tested phytochemicals (Morusin, Phenethyl Isothiocyanate,

Sanguinarine, Psoralidin), sanguinarine demonstrated potent efficacy against HPV-negative HNSCC cells.

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124. ANJALI

Prevalence of Antibiotic Resistance and Identification of the Genetic Determinants of Resistance in Enterobacteriaceae Isolated from Commercial Layer Chickens and Chicken Based Salads.

Supervisor: Prof. Rajagopal Raman

Th 27839

Abstract

Antibiotics have been instrumental in saving millions of lives, but the emergence of antibiotic resistance (AR) has become a grave global concern. This study investigates the pattern of AR and underlying genetic determinants in Enterobacteriaceae isolated from layer chickens and Ready-to-Eat (RTE) chicken salads served in restaurants in Delhi, India. The objectives of the study were: to assess phenotypic and genotypic antibiotic resistance in Escherichia coli isolated from layer chickens; to analyse physical resistance and screen antibiotic resistance genes (ARGs) in E. coli from RTE salads, and to examine phenotypic AR and screen underlying ARGs in Salmonella sp. and Shigella spp. from RTE salads. E. coli isolated from layer chickens, assessed for antibiotic susceptibility showcased a high degree of resistance to nalidixic acid (88.33%) and tetracycline (68.88%), with 94% of the isolates being multi-drug resistant (MDR). Upon screening of 22 plasmid-borne ARGs tetA (83.33%) and aadA1 (51%) were prevalent. Assessment of E. coli isolates from RTE salads revealed 55% of them were MDR, showcasing resistance against nalidixic acid (35.89%) and tetracycline (35.0%). 25.83% isolates harboured ≥ 2 ARGs, with qnrS (42.5%) and tetA (40.83%) being the most common. For Salmonella sp. and Shigella spp. isolated from 40 RTE salads, significant percentages were found resistant to β -lactams, tetracyclines, aminoglycosides, and quinolones. Notably, 76% of Salmonella sp. and 44% of Shigella spp. isolates were MDR. 76% of Salmonella sp. and 38% of Shigella spp. harboured ≥ 2 ARGs. These findings highlight the extensive occurrence of AR in poultry and related food products in Delhi. Our results underscore the importance of active real-time surveillance of the microbiological status of meat-based RTE foods. Implementation of strict measures to curb the non-therapeutic use of clinically important antibiotics in the veterinary sector is crucial in combating the growing threat of AR and safeguarding public health and food safety.

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1. Introduction 2. Review of literature 3. Phenotypic and genotypic assessment of antibiotic resistance in Escherichia coli isolated from layer chickens 4. Assessment of physical resistance and screening of antibiotic resistance genes in Escherichia coli isolated from chicken based ready-to-eat salads 5. (A): Analysis of phenotypic antibiotic resistance and screening of underlying resistance determinants in (a) Salmonella isolated from chicken based ready-to-eat salads 5 (B): Analysis of phenotypic antibiotic resistance and screening of underlying resistance determinants in (b) Shigella isolated from chicken based ready-to-eat salads. Summary. Appendices and list of publications.

125. BOHOT (Monica)

Identification of the Histone H2A Specific Protease (H2Aase) and Exploring the Interacting Proteins in Chicken Liver Nuclear Extract.

Supervisors: Prof. Rina Chakrabarti, Dr. J. S. Purohit and Prof. M. M. Chaturvedi
Th 27841

Abstract

DNA is compacted into a macromolecular complex, being associated with histone and non-histone proteins, forming a dynamic polymer called chromatin. These histones not only serve as packaging materials for DNA but also as facilitators of many nuclear events. All these molecular processes are governed by the epigenetic mark on the histone tails. Most of the epigenetic marks such as acetylation, methylation etc. are reversible; while site specific cleavage of the N- or C-terminal tails are irreversible modifications. Both N-terminal and C-terminal cleavage are observed in H2A histone. The C-terminal of H2A is reported to regulate the chromatin structure, stabilize the core particles in chromatin, and mediate the protein interaction thereby controlling the dynamics and conformation of chromatin. A novel aspartyl protease specific to histone H2A was reported by our group while its identity was unknown. In the present study, the H2Aase assay system was re-established. The H2Aase was purified from the chicken liver nuclear extract and the major band was sequenced and identified to be vinculin, which was further confirmed by western blotting using anti-vinculin antibody. Further, through immunoprecipitation assay using antivinculin antibody, it was observed that vinculin immune precipitated actin, H2Aase and the H3ase from the chicken liver nuclear extract. Further, by sequencing of the S-200 purified fraction, the peptides aligned to two proteases namely, ubiquitin carboxyl-terminal hydrolase (USP33) and cathepsin O. By cleavage site mapping result using aspartyl protease the H2Aase was proposed to be USP33. Using C and N-terminal specific anti-H2A antibody the H2Aase cleavage site on H2A was mapped to be on the C-terminal. Further, in-silico protein-protein interaction studies were carried out to explore the physiological significance of the H2Aase mediated clipping of H2A. Further future works are needed in terms of cloning, expression and characterization of the H2Aase.

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1. Introduction 2. Material and method 3. Result 4. Discussion 5. Conclusion and future perspective 6. Summary 7. Bibliography 8. Conference certificate 9. Research paper

126. CHHOKAR (Arun)

Development of Fluorescence In situ-Hybridisation (FISH) based Assay for Detecting Active HPV Infection and STAT3 Expression.

Supervisor: Prof. Alok Chandra Bharti
Th 27842

Abstract

About 5% of cervical pre-cancerous lesions having HPV positivity progress into malignancy. However, there is no differential clinical management for HPV-positive CINs that will regress (~95%) resulting in overtreatment. This may be attributed to the lack of prognostic markers capable of discriminating progressive lesions that develop cervical cancer (CaCx). Recent studies from our group and others have shown a direct correlation of STAT3 expression with CaCx disease severity. However, STAT3 based tests are currently lacking. The present study is aimed to establish a quantitative assay for simultaneous detection of STAT3 and HPV16 E6/E7 transcripts in HPV-negative and HPV-positive CaCx cell lines using fluorescence in-situ hybridization (FISH) and flowcytometry for evaluation in patient samples having early signs of cervical pre-cancer. Based on available literature, transcript-specific, fluorescently-labelled single-locus probe (SLP) and new multi-locus probes (MLP) were designed and

examined for their performance to quantify STAT3 and HPV16 E6/E7 transcripts in CaCx cells. FISH analysis showed diffused signal of STAT3/HPV16 E6/E7 transcripts when SLP were used, whereas MLPs showed strong, quantifiable punctate signals of the transcripts. Quantification revealed enhanced expression of STAT3 transcripts per cell in HPV-positive cells than HPV-negative cells, and HPV16 E6/E7 transcripts were detected only in SiHa cells. In flowcytometric evaluation of STAT3-positive cells, using SLP the detection of STAT3 and HPV was very low yielding a small fraction of STAT3/HPV positive cells. In contrast, only MLPs were able to detect at a much higher rate and showed better detection rate. Incidentally HPV16 E6/E7 SLPs and MLPs were unable to completely discriminate among HPV-negative, HPV16-positive, and HPV18-positive. Finally, the efficacy of STAT3 detection was evaluated in cervical exfoliated cells of a small group of HPV positive pre-CaCx patients that showed presence of quantifiable STAT3 transcripts FISH. The study demonstrated establishment of the suitability of STAT3 MLP for further assay development.

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1. Introduction 2. Review of literature 3. Objectives 4. Materials and methods 5. Results 6. Discussion 7. Summary and conclusion. Bibliography and Annexures.

127. DOTANIA (Krittika)

Nucleobindin2/Nesfatin-1 in Wall Lizard, Hemidactylus Flaviviridis: Sequence Characterization, Differential Expression, Hormonal Regulation and Pleiotropic Functions.

Supervisors: Prof. Rina Chakrabarti and Prof. Umesh Rai

Th 27844

Abstract

Present Ph.D. work elucidates presence, pleiotropic role and regulation of nesfatin-1 in a reptile, Hemidactylus flaviviridis. In-silico analyses including sequence characterization, structural comparison and evolutionary analyses showed remarkable conservation of nesfatin-1 across vertebrates. nucb2/nesfatin-1 is ubiquitously expressed in wall lizard, with metabolic tissues and gonads showing high expression. Further, reproductive phase-dependent expression analyses in gonads demonstrated maximum mRNA level during active phase. In the breeding phase ovary, early growing and previtellogenic follicles were seen to be the major source of nucb2/nesfatin-1. Stimulatory role of nesfatin-1 in regulation of lizard gonadal functions is validated by upregulation of markers for proliferation/differentiation (pcna, scf and c-kit) and steroidogenesis (star) along with increased sex steroid production in gonads treated with the peptide. Also, nesfatin-1 was observed to stimulate anti-apoptotic, bcl-2 and inhibit pro-apoptotic, caspase-3. Additionally, gonadal nucb2/nesfatin-1 was inhibited by FSH while stimulated by sex steroids, DHT and E2. With regard to metabolic functions of nesfatin-1, upregulation of nucb2/nesfatin-1, glyp, pepck and fbp in liver of fasted lizard suggests glycogenolytic/gluconeogenic role of nesfatin-1 which is confirmed by reduced glycogen content, higher glucose production and upregulation of pepck and fbp in liver incubated with the peptide. Further, increase in nucb2/nesfatin-1 expression along with lipolytic markers, atgl and mgl during fasting as well as stimulation of these markers in adipose tissue cultured with nesfatin-1 establishes its lipolytic effect. Interestingly, expression of nucb2/nesfatin-1 was upregulated in pancreas of fed wall lizard which coincided with high insulin expression. In vitro experiments demonstrated an inverse relationship between insulin and nesfatin-1 where nesfatin-1 stimulated insulin expression while incubation with insulin inhibited pancreatic nucb2/nesfatin-1. Our observations indicate towards tissue-specific dual role of nesfatin-1 in regulation of glucose homeostasis in wall lizard. Current work is the first to present a comprehensive picture of the role and regulation of nesfatin-1 in a reptile.

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1. In silico analysis and tissue-specific sexually dimorphic expression of nucb2/nesfatin-1 2. Involvement of nesfatin-1 in regulation of gonadal functions. a. Nesfatin-1-mediated regulation of testicular functions and hormonal regulation of its expression in the testis of wall lizard. b. Role and hormonal regulation of nucb2/nesfatin-1 in the ovary of wall lizard 3. Nesfatin-1-mediated regulation of glucose homeostasis. Summary. Appendices and list of publications.

128. KUNGREILIU PANMEI

Studies on the effects of Lufenuron on the Growth, Development and Chitin Synthesis of an Indian Strain of *Aedes aegypti* L. (Diptera: Culicidae).

Supervisor: Prof. Sarita Kumar

Th 27855

Abstract

Aedes aegypti transmits various arboviruses with significant public health implications accounting for millions of deaths each year. The current study evaluated the effects of lufenuron, a Chitin Synthesis Inhibitor, on the growth, development and chitin synthesis of an Indian strain of *Ae. aegypti* L. Lufenuron significantly inhibited the survival of all the four larval instars (L-1, L-2, L-3 and L-4); the maximum toxic effects recorded on L-4. Additionally, lufenuron exposure considerably prolonged the duration of development, reduced pupation rates and inhibited adult emergence in *Ae. aegypti*. The growth regulatory impact of lufenuron assessed on the fourth instar larvae of *Ae. aegypti* showed pronounced growth inhibition leading to the formation of intermediates (larval-pupal and pupal-adult) and reduced reproductive fitness with lower oviposition and egg hatch. The larval midgut epithelium was substantially impacted by lufenuron resulting in disintegrated epithelia, vacuolization and intermembrane spaces. Lufenuron treatment also augmented the total protein content in the larvae corresponding to both the treatment period and lufenuron concentration, while the lipid and carbohydrate contents of the larvae dropped drastically. Involvement of detoxification enzymes; α -esterases, β -esterases, Glutathione S-transferase, Acetylcholinesterase and cytochrome P450 monooxygenase; was evident in imparting immunity to the mosquito larvae. Lufenuron was also found to impede the growth and development of mosquito larvae by interfering with the chitin biosynthesis. The treated larvae showed alleviated chitin content and significantly decreased cuticular thickness. The expression of the *AeCHS1* gene responsible for chitin synthesis in *Ae. aegypti* larvae rose 1.353-fold over the control after 48 hours of lufenuron exposure at IE50 level indicating feedback system. Finally, in silico validation study provided valuable insights into the potential interaction between lufenuron and enzymes involved in chitin biosynthesis and detoxification mechanisms in *Ae. aegypti*. The study may contribute towards the integrated mosquito management programs, ultimately lowering the prevalence of mosquito-borne diseases.

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1. Review of literature 2. Materials and methods 3. To assess the toxicity and adult emergence inhibition efficacy of lufenuron on the larvae of *Aedes aegypti* 4. To evaluate the effects of lufenuron on the growth and physiological parameters of the fourth instar larvae of *Aedes aegypti* 5. To study the effect of lufenuron on the biochemical parameters, chitin content, *AeCHS1* gene expression pattern; and conduct in silico molecular docking studies of metabolic enzymes with lufenuron in the fourth instar larvae of *Aedes aegypti* 6. Discussion 7. Summary and conclusion. References and List of publications.

129. YADAV (Joni)

Investigation of the Role of Head and Neck Cancer Exosomes in Tumor Microenvironment.

Supervisor: Prof. Alok Chandra Bharti

Th 27860

Abstract

Exosomes are nanosized (30–100 nm) membrane vesicles which act as short and long-distance messenger for intercellular communication. Alterations in the exosomal cargo have been linked with various disease pathologies including cancer. Multiple factors affect the cargo contents of exosomes. In different systems viruses are among key modulators of exosomal cargoes. Human papillomavirus (HPV) infection has been associated with ~33% of head and neck cancers (HNCs). Better prognosis and survival were reported in case of HPV-associated HNCs in comparison to HPV-negative HNCs. However, molecular determinants contributing to differential prognosis and survival of HPV-positive are poorly defined. Here, we evaluated the impact of HPV-infection associated changes in exosomal cargoes of HNSCC cells by studying the transcriptomic and proteomic cargo of exosomes from HPV-positive (93VU147T, UDSCC2) and HPV-negative (OCT-1) HNSCC cells and assessed their effect on macrophage polarization that strongly influence the tumor microenvironment. Transcriptomic analyses of exosomes showed presence of 3785 differentially expressed transcripts (DEGs) in HPV-positive exosomes in comparison to HPV-negative exosomes. DEGs responsible for regulating the protein machinery, redox potential of the cell and that are involved in various neurological disorder related pathways were over-represented in HPV-positive exosomes. Further, proteomic analyses of exosomes revealed 485 proteins as differentially expressed in HPV-positive exosomes. Exosomal proteome differed from the cells suggesting selective packaging of protein in HNC exosomes. THP1 resting macrophages showed higher uptake of HPV-negative exosomes. Treatment of M0 macrophages with HNSCC cells' exosomes showed macrophage polarization of mixed phenotype (both M1 & M2 markers) by HPV-positive exosomes. Exosomes of HPV-negative cells activated M1 polarization. The phenomenon was found to be mediated through upregulation of STAT1, NF- κ B, and AP1. Overall, this study showed HPV-infection mediated differential packaging of exosomal cargoes, enhanced uptake of HPV-negative exosomes and thereby a stronger impact on macrophage M1 polarization via STAT1, NF- κ B, and AP1 signaling.

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1. Introduction 2. Review of literature 3. Objectives 4. Materials and methods 5. Results 6. Discussion 7. Summary and Conclusion. Bibliography. Annexures.