CHAPTER 28

MATHEMATICAL SCIENCES
COMPUTER SCIENCE

Doctoral Theses

336. AGGARWAL (Seema)
Using Mutual Information for Extracting Biclusters from Gene Expression Data.
Supervisor : Dr. Neelima Gupta
Th 20073

Contents

1. Introduction. 2. Biological background. 3. Biclustering. 4. Mutual Information. 5. MRB : Extracting maximum related biclusters. 6. BRC: Extracting biclusters with related conditions. 7. GenBiClus: Extracting general biclusters. 8. Concluding remarks.

337. AHUJA (Sangeeta)
Novel Algorithms for Cluster Ensemble With Applications.
Supervisor : Dr. Vasudha Bhatnagar
Th 20076

Contents

1. Introduction. 2. Related work. 3. Robust clustering using discriminant analysis (RCDA). 4. Applications of RCDA in regionalization. 5. Kernel based bayesian cluster ensemble (KDBCE). 6. Conclusions.

338. BANSAL (Roli)
Computationally Intelligent Watermarking for Securing Fingerprint Images.
Supervisors : Dr. Punam Bedi and Dr. Priti Sehgal
Th 20071

Contents

1. Introduction. 2. Basic concepts. 3. Fingerprint image

enhancement. 4. Fingerprint minutiae extraction. 5. PSO based watermarking in the spatial domain. 6. Watermarking in transform domain using PSO and NN. 7. Conclusion. References.

339. GANDOTRA (Vandana)
Proactive Threat Management for Securing Software Systems.
Supervisor :   Dr. Archana Singhal
Th 20072

Contents

1. Introduction. 2. Recent trends in secure software engineering. 3. Innovative security techniques in proactive threat management. 4. Avoiding threats using multi-agent system planning. 5. Optimal countermeasures identification for threat avoidance. 6. Threat-oriented security model for securing software systems. 7. Proactive threat management in online banking: A case study. 8. Conclusions. Research publications, Annexures and references.

340. GUPTA (Anamika)
Lattice Based Rule Mining.
Supervisors : Dr. Naveen Kumar and Dr. Vasudha Bhatnagar
Th 20075

Contents

1. Introduction. 2. Background and related work. 3. Lattice based closed Itemsets mining in static datasets. 4. Incremental algorithm for discovery of closed itemsets. 5. Lattice based mining of multiobjective association rules. 6. Discovery of multiobjective associative classifiers. 7. Concluding remarks.

341. MEHTA (Shikha)
Contextual Web Search Using Nature Inspired Algorithms.
Supervisor : Dr. Hema Banati
Th 20077

Contents

1. Introduction. 2. Literature review. 3. Contextual WWW search based on BDI multi Agent architecture. 4. Contextual retrieval using shuffled frog leaping algorithm. 5. Contextual deep web search using shuffled frog leaping algorithm. 6. Reforming shuffled frog leaping algorithm. 7. Conslusion and future work. Research publications and references.

342.   SHARMA (Richa)
        Adaptive Content Sequencing Incorporating Social Opinion in an E-Learning Environment.
        Supervisors :   Dr. Punam Bedi and Dr. Hema Banati
        Th 20070

Contents

1. Introduction. 2. Evolution in e-learning. 3. Knowledge management in e-learning systems. 4. Identification of stakeholders and classification of learners. 5. Content prioritization through social opinion. 6. Stigmergy-based adaptive content sequencing. 7. MANet-based knowledge sharing in e-learning. 8. Conclusion and future directions. Appendix and references.

343.   THUKRAL (Anjali)
        Retrieving and Organizing Web Resources Semantically for Informal E-Mentoring.
        Supervisors :   Dr. Punam Bedi and Dr. Hema Banati
        Th 20074

Contents

1. Introduction. 2. Web information retrieval. 3. Organization of concepts and content in ontology. 4. Focused crawlers for web content retrieval. 5. Ranking web resources. 6. Informal e-mentoring using multi agent system. 7. Conclusion. Research publications and references.