CHAPTER 61

THESES OF THE PREVIOUS YEAR
(A List of Theses Accepted for Awarded of the Degree of Ph.D. in 87th Annual Convocation-2010)

Doctoral Theses

MATHEMATICS

677. ARORA (Ritu) NEE NARANG (Ritu)
**Various Aspects of Multi-Level Programming Problems.**
Supervisors : Dr. S R Arora and Prof. B K Dass
Th 16923

*Contents*


678. GUPTA (Neenu)
**Regular and Chaotic Motions in Stellar Pulsations.**
Supervisor : Prof. L M Saha
Th 16927

*Contents*

1. Introduction. 2. Regularity and chaos in stellar pulsation. 3. Application of dynamical system to study stellar pulsations. 4. On regular and chaotic evolutions in stellar oscillations. 5. Lyapunov exponent in stellar oscillations for regular and chaotic evolutions. 6. Lyapunov exponent in stellar variability for regularity and chaos. References.

679. SINGH (Dhiraj Kumar)
**Om Sum Form Functional Equations in Information Theory.**
Supervisors : Prof. Prem Nath and Prof. B K Dass
Th 16926
295

Contents


680. SWARN SINGH

Supervisor : Prof. R K Mohanty
Th 16924

Contents

1. Theoretical background and difference methods for elliptic and parabolic partial differential equations. 2. Third order variable mesh arithmetic average discretization for the solution of singularly perturbed two point non-linear boundary value problems. 3. Arithmetic average discretization of $O(h^4)$ for singularly perturbed two-dimensional non-linear elliptic boundary value problems. 4. Arithmetic average discretization of $O(h^6)$ for three dimensional singularly perturbed non-linear elliptic partial differential equations. 5. Non-uniform mesh arithmetic average discretization for singularly perturbed one space dimensional non-linear parabolic initial boundary value problems. 6. A new two level implicit discretization of $O(k^2+kh^2+h^4)$ for singularly perturbed two space dimensional non-linear parabolic partial differential equations. 7. A new high order two-level implicit discretization for the solution of singularly perturbed three dimensional non-linear parabolic equations. 8. Conclusions and scope for future research work. Bibliography.

681. VANI

Study of Optimality and Duality in Vector Optimization Problems.
Supervisor : Prof. Surjeet Kaur Suneja
Th 16928

Contents