

CHAPTER 28

MATHEMATICAL SCIENCES MATHEMATICS

Doctoral Theses

255. VANI
Study of Optimality and Duality in Vector Optimization Problems.
Supervisor : Prof. Surjeet Kaur Suneja
Th 15775

Abstract

Concentrates on optimality and duality aspects in vector optimization problems. Discusses the optimality conditions and duality results for multiobjectives nonlinear and multiobjectives fractional programming problems involving generalized convex functions. Also studies optimality and duality results for vector minimization problems involving generalized cone-convex functions including mond-weir type second order duality and monotonicity over cones.

Contents

1. Introduction 2. Optimality and duality in multiobjectives programming. 3. Vector optimization over cones:optimality and duality. 4. Second order duality and monotonicity in vector optimization problem over cones. 5. Bibliography.

256. VASHISTHA (Sachin)
Fixed Point Theorems in Metric Spaces and Probabilistic Metric Spaces.
Supervisor : Dr. J. K. Kohli
Th 15774

Abstract

Gives historical development and motivation to the fixed point theory and preliminaries and basic definations. Provides a brief discussion on compatible mappings, weakly compatible mapping and their varients in metric spaces.Using the

technique of control functions, besides other results, proved the common fixed point theorem for weakly compatible mappings. Proved common fixed point theorems for compatible and weakly compatible mappings and their variants satisfying general contractive integral type inequalities. Extends the notion of R-weak commutativity and its variants to probabilistic metric spaces and prove common fixed point theorems concerning them. Introduced several variants of R-weak commutativity and give examples to reflect upon the distinctiveness of the types of mappings so defined.

Contents

1. Introduction. 2. Common fixed point theorems for weakly compatible mappings. 3. Common fixed point theorems satisfying general contractive integral type inequalities. 4. Common fixed point theorems in probabilistic metric spaces. 5. Common fixed point theorems for R-weakly commuting mappings in fuzzy metric spaces. 6. Bibliography.

M.Phil Dissertations

257. AGGARWAL (Shivani)
Operator Amenability of the Fourier Algebra.
 Supervisor : Prof. Ajay Kumar
258. CHHABRA (Anu)
On Some Aspects of BCH Codes.
 Supervisor : Dr. B. K. Dass
259. GROVER (Shveta)
Study of Weighted Toeplitz Operators.
 Supervisor : Prof. S. C. Arora
260. GUPTA (Tanu)
Study of Certain Aspects of Semidefinite and Second Order Cone Programming Problems.
 Supervisor : Dr. C. S. Lalitha
261. GURPREET KAUR
Integral Operators in Clifford Analysis and Polydomains.
 Supervisor : Prof. Ajay Kumar

262. LAXMI
Study of Furi-Martelli-Vignoli Spectrum for Nonlinear Operators.
Supervisor : Dr. R. K. Panda
263. NEELIMA
Fundamental Theorem of Algebra.
Supervisor : Prof. Dinesh Singh
264. SAROHE (Poonam)
On Regular Semirings.
Supervisor : Dr. S. K. Bhambri
265. SHARMA (Lalit)
On the Norms of Elementary Operators.
Supervisor : Prof. S. C. Arora