

Annual Report 2012-13

Books

1. Lecture notes on Discrete Mathematics (under NPTEL – II). (Prof. Arbind k. Lal)
2. Monograph : Vector Optimization : A View through Variational Analysis. The work is jointly in progress. Co-authored with Prof. Christiane Tammer (Germany) and Prof. Marius Durea (Romania). The work is expected to be finished by October 2014. Contract has been signed with Springer. (Prof. Joydeep Dutta)
3. Statistical Signal Processing: Frequency Estimation, D. Kundu and S. Nandi, Springer, ISBN 978-81-322-0627-9, 2012.
4. Book Chapter (with Khan, M.A.): *Algebras for information systems*. In: *Rough Sets and Intelligent Systems - Professor Zdzisław Pawlak in Memoriam*, Eds. Skowron, A. and Suraj, Z., *Intelligent Systems Reference Library (ISRL) 42*, Springer-Verlag, Berlin, 2013, 381-407. (Prof. (Mrs) Mohua Banerjee)
5. About to complete a NPTEL course on Probability & Distributions. A book based on this course is in progress. (Prof. (Ms.) Nandini Nilakantan)
6. A book on *ALGEBRA* is in progress. (Prof. G. Santhanam)
7. Book writing in progress: A book on the topic “Calculus of Single and Several Variables” is in progress. (Prof. P. Shunmugaraj)
8. Magnetic Resonance Imaging of Neurological Diseases in Tropics, (Editor in Chief Rakesh K Gupta, Director and Head, Department of Radiology and Imaging, Fortis Memorial Research Institute, Gurgaon, Haryana, India, (Editor) Sunil Kumar, Professor Department of Radiodiagnosis, Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow, Uttar Pradesh, India). Jaypee Brothers Medical Publishers (P) Ltd, New Delhi, London, Philadelphia, Panama, Chapter 8 - Preprocessing Tools for Magnetic Resonance Quantification. RKS Rathore, Rakesh Gupta. pp. 89-118., (Prof. R. K. S. Rathore)

Book chapters

- 1.) T. Romano, M. Banerjee, E. Venturino: A comparison of several plankton models for red tides, In `Zooplankton: Species Diversity, Distribution and Seasonal Dynamics, Nova Science Publishers, New York, in progress.

2) M. Banerjee: Turing and non-Turing patterns in two-dimensional prey-predator models, In 'Applications of Nonlinear Dynamics and Chaos in Science and Engineering', Springer, in progress.

3) Book Chapter in Progress: Convergence of slices, geometric aspects in Banach spaces and proximality, (To be published by Springer; the chapter is being revised). (Prof. P. Shunmugaraj)

JOURNAL PAPERS

1) Completely bounded λ_p -sets that are not Sidon (with K.E. Hare)
Submitted

2) M.K. Panda, S. Ghorai; Penetrative phototactic bioconvection in an isotropic scattering suspension; (submitted)

3) A. Ganguly, D. Kundu and Sharmishtha Mitra. "Bayesian Analysis of Simple Step-Stress Model under Weibull Lifetimes";

4) A. Ganguly, D. Kundu and Sharmishtha Mitra. "Bayesian Analysis of Simple Step-Stress Model under Weibull Lifetimes";

5) Convergence of Cubic Spline Super Fractal Interpolation Functions (with Srijanani Anurag Prasad), uploaded in arxiv: 1201.3997v1 (Math. DS), Submitted.

6) Multiresolution Analysis Based on Coalescence Hidden Variable FIF (with Srijanani Anurag Prasad), uploaded in arxiv: 1201.3550v1 (Math. DS), Submitted.

7) Super Fractal Interpolation Functions (with Srijanani Anurag Prasad), uploaded in arxiv: 1201.3491v1 (Math. DS), Submitted.

8) Chaos in Dynamics of a family of Transcendental Meromorphic Functions (with M. Sajid), Submitted

Awards

Prof. Peeyush Chandra (Math) has been elected President, Indian Society of Theoretical and Applied Mechanics.

Editorships

1) Prof. Peeyush Chandra (Math), Review Bulletin of the Calcutta Mathematical Society.

2). Prof. Debasis Kundu (Math), Associate Editor, Journal of Statistical Distributions and Applications, Springer.

3). Prof. Manjul Gupta (Math), Vice President, Bharat Ganita Parisad, Lucknow.