

## Annual Report 2013-14

### MATHEMATICS

389. G. P. Kapoor and Srijanani Anurag Prasad. , Fractals, Cubic Spline Super Fractal Interpolation Functions, 2014 , 22,63-69
390. Ananya Lahiri, Debasis Kundu and Amit Mitra., Sankhya, Series B, Efficient algorithm for estimating the parameters of two dimensional chirp signal, 2013, 75,65-89
391. Ahad Jamalizadeh and Debasis Kundu., Statistics, Weighted Marshall-Olkin bivariate exponential distribution, 2013, 47, 917-928
392. P.G. Sankaran and Debasis Kundu., Statistics, On a bivariate Pareto model, 2014, 48,241-255
393. Sharmistha Mitra, Ayon Ganguly, Debashish Samanta and Debasis Kundu., Statistical Methodology, On simple step-stress model for two-parameter exponential distribution, 2013, 15, 95-114
394. K.S. Sultan, N.H. Alsadat and Debasis Kundu., Journal of Statistical Computation and Simulation, Bayesian and maximum likelihood estimation of the inverse Weibull parameters under progressive Type-II censoring, 2014 , 84, 2248-2265
395. Biswabrata Pradhan and Debasis Kundu. , Sankhya, Series B, Analysis of interval censored data with Weibull lifetime distribution, 2014, 76, 120 – 139
396. Debasis Kundu, Manuel Franco and Juana-Maria Vivo, Computational Statistics and Data Analysis, Multivariate Distributions with Proportional Reversed Hazard Marginals, 2014, 77, 98-112
397. Sanku Dey, Tanujit Dey and Debasis Kundu., American Journal of Mathematical and Management Science, Two-parameter Rayleigh distribution: different methods of estimation, 2014, 33, 55-74
398. Debasis Kundu and Arjun Gupta., Journal of Multivariate Analysis, Bivariate Weibull-Geometric distribution, 2014, 123,19-29
399. Ananya Lahiri Debasis Kundu and Amit Mitra., Statistics, On least absolute deviation estimator of one dimensional chirp model, 2014, 48, 405-420
400. M. K. Panda, S. Ghorai., Physics of Fluids, Penetrative phototactic bioconvection in an isotropic scattering suspension, 2013, 25,071902
401. Shalabh., Journal of Multivariate Analysis, A revisit to the efficient forecasting in linear regression models, 2013, 114, 161-169

402. A.K.Md.E. Saleh and Shalabh., *Journal of Multivariate Analysis*, Ridge Regression Estimation Approach to Measurement Error Model, 2014, 123, 68-84
403. C.L. Cheng, G. Garg and Shalabh., *Journal of Multivariate Analysis*, Coefficient of Determination for Multiple Measurement Error Models, 2014, 123, 137-152
404. P. S. Mandal and M. Banerjee., *Differential Equations and Dynamical Systems*, Deterministic and stochastic dynamics of a competitive phytoplankton model with allelopathy, 2013, 21, 341-372
405. B. S. R. V. Prasad, M. Banerjee and P. D. N. Srinivasu., *Mathematical Biosciences*, Dynamics of additional food provided predator-prey system with mutually interfering predators, 2013, 246, 176-190
406. P. S. Mandal, L. J. S. Allen and M. Banerjee. , *Applied Mathematical Modelling*, Stochastic modeling of phytoplankton allelopathy, 2014, 38, 1583-1596
407. R. P. Gupta, M. Banerjee and P. Chandra. , *Communications in Nonlinear Science and Numerical Simulations*, Period doubling cascades of prey-predator model with nonlinear harvesting and control of over exploitation through taxation, 2014, 19, 2382-2405
408. M. Sen, M. Banerjee and A. Morozov. , *Ecological Complexity*, Stage-structured ratio-dependent predator-prey models revisited: when should the maturation lag results in systems destabilization, 2014, 19, 23-34
409. P. S. Mandal, S. Abbas, and M. Banerjee., *Applied Mathematics and Computation*, A comparative study of deterministic and stochastic dynamics for a non-autonomous allelopathic phytoplankton model, 2014, 238, 300-318
410. A. Lahiri, D. Kundu and Amit Mitra, "On least absolute deviation estimator of one dimensional chirp model", *Statistics*, pages 405-420, Volume 48, Issue 2, 2014.
411. S. Mitra and Amit Mitra, "M-estimator based robust estimation of the number of components of a superimposed sinusoidal signal model", *Journal of Applied Statistics*, pages 853-878, Volume 41, Issue 4, 2014
412. Kumar, Pradeep; Pandey, Dwijendra N.; Bahuguna, D.; Approximations of Solutions to a Fractional Differential Equation with a Deviating Argument. *Differ. Equ. Dyn. Syst.* 22 (2014), no. 4, 333–352.
413. Kumar, Pradeep; Pandey, D. N.; Bahuguna, D. Impulsive boundary value problems for fractional differential equations with deviating arguments. *J. Fract. Calc. Appl.* 5 (2014), no. 1, 146–155. 34K37 (34K10 34K45)
414. Kumar, Pradeep; Pandey, D. N.; Bahuguna, D. Approximations of solutions to a retarded type fractional differential equation with a deviated argument. *J. Integral Equations Appl.* 26 (2014), no. 2, 215–242. 34K30 (34G20 35R11 65L60)
415. Maqbul, Md.; Bahuguna, D. Almost periodic solutions for Stepanov-almost periodic differential equations. *Differ. Equ. Dyn. Syst.* 22 (2014), no. 3, 251–264. 34C27 (34G10)

416. Kumar, Pradeep; Pandey, Dwijendra N.; Bahuguna, D. On a new class of abstract impulsive functional differential equations of fractional order. *J. Nonlinear Sci. Appl.* 7 (2014), no. 2, 102–114. 34K37 (26A33 34K45 35R11 45J05)
417. Kamaljeet; Bahuguna, D. Controllability of the impulsive finite delay differential equations of fractional order with nonlocal conditions. *Neural Parallel Sci. Comput.* 21 (2013), no. 3-4, 517–532. (Reviewer: Krishnan Balachandran) 34K30 (26A33 34K37 34K45 93B05)
418. Mishra, Indira; Bahuguna, D. Weighted pseudo almost automorphic solution of an integro-differential equation, with weighted Stepanov-like pseudo almost automorphic forcing term. *Appl. Math. Comput.* 219 (2013), no. 10, 5345–5355. 45J05.
419. ‘A mathematical model for the control of carrier-dependent infectious diseases with direct transmission and time delay’ – A. K. Misra, S. N. Misra, A.L.Pathak, P. K. Srivastava, Peeyush Chandra; *Chaos, Solitons and Fractals*, Vol. 57, pp41-53, 2013
420. ‘Periodic doubling cascades of prey-predator model with nonlinear harvesting and control of over exploitation through taxation’ – R. P. Gupta, Malay Banerjee, Peeyush Chandra, *Commun Nonlinear Sci Numer Simult*, 2013
421. ‘Effects of habitat characteristics on the growth of carrier population leading to increased spread of typhoid fever: A model’ – J. B. Shukla, Ashish Goyal, Shikha Singh, Peeyush Chandra; *J. Epidemiology and Global Health*, Volume 4, Issue 2, Pages 107–114, June 2014,
422. Estimation After Selection From Gamma Populations With Unequal Known Shape Parameters M Arshad, N Misra, P Vellaisamy *Journal of Statistical Theory and Practice*, 1-24
423. Selecting the best of two gamma populations having unequal shape parameters N Misra, M Arshad *Statistical Methodology* 18, 41-63
424. Estimating the Common Location of Two Exponential Populations Under Order Restricted Failure Rates MR Tripathy, S Kumar, N Misra *American Journal of Mathematical and Management Sciences* 33 (2), 125-146
425. A study-based ranking of LiDAR data visualization schemes aided by georectified aerial images S Ghosh, B Lohani, N Misra *Cartography and Geographic Information Science* 41 (2), 138-150
426. Monotonicity of certain integrals involving gamma distributions and their applications in multiple comparisons N Misra, M Arshad *Statistics & Probability Letters* 85, 144- 152
427. Classification Rules for Exponential Populations Under Order Restrictions on Parameters N Jana, S Kumar, N Misra *Mathematics and Computing* 2013, 243-250
428. Probability and Distributions N Misra *National Programme on Technology Enhanced Learning (NPTEL)*
429. On comparison of reversed hazard rates of two parallel systems comprising of independent gamma components N Misra, AK Misra *Statistics & Probability Letters* 83 (6), 1567-1570

430. C\*-algebras Generated by Spherical Hyperexpansions, *New York Jour of Math*, 19 (2013), 511-531
431. Rigidity Theorems for Spherical Hyperexpansions (With V. M. Sholapurkar), *Complex Analysis and Operator Theory*, 7 (2013), 1545-1568
432. An Inequality for Spherical Cauchy Dual Tuples, *Colloquium Math*, 131 (2013), 265-271
433. Banerjee, M., Dubois, D. and Godo, L. (2014): Possibilistic vs. relational semantics for logics of incomplete information. In: CCIS 442, *Proc. Information Processing and Management of Uncertainty (IPMU'2014)*, Montpellier, France, 2014, Eds. Laurent, A. et al. (Springer-Verlag), 335-344.
434. Banerjee, M. and Dubois, D. (2014): A simple logic for reasoning about incomplete knowledge. *Int. J. Approximate Reasoning*, 55 (2), 639-653.
435. Khan, M.A., Banerjee, M. and Rieke, R. (2014): An update logic for information systems. *Int. J. Approximate Reasoning*, 55 (1), 436-456.
436. Chakraborty, M.K. and Banerjee, M. (2013): Rough sets: some foundational issues. *Fundamenta Informaticae*, 127 (1-4), 1-15.
437. Khan, M.A. and Banerjee, M. (2013): 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), 381-407.

