Curriculum Vitae **Poonam Kesarwani**

Contact Information

System and Control Engineering Building, Indian Institute of Technology Bombay, Maharashtra 400076, India; Email: kesari.poonam24@gmail.com

Research Interest

Continuous and convex optimization, Multi-Criteria Optimization, Variational Analysis, Nash equilibrium problems, Electricity market models, and, their applications.

Current Position

Since June 2019	Senior research associate in the project SPORES: SMART Planning and Operations of Grids with Renewable and Storage at Indian Institute of Technology Bombay, India.

Education

2013- May 2019	Ph.D., Department of Mathematics, Indian Institute of Technology Kanpur, India; Supervisors: Prof. Joydeep Dutta, Prof. Arbind K. Lal; Dissertation: "A study of approximate solutions and error bound in multiobjective optimization"; 9.3 CPI in course work.
2010-2012	M.Sc. in Mathematics with 9.9 CPI; Indian Institute of Technology Kanpur, India.
2007-2010	B.Sc. in Mathematics with 69.1% marks; C.S.J.M. University of Kanpur, India.

Publications and Preprint

2019	P. Kesarwani, J. Dutta. Charnes and Cooper scalarization and Vector optimization problem, Journal of Optimization letters, 2019, DOI 10.1007/s11590-019-01502-0.
2019	P. K. Shukla, J. Dutta, K. Deb, P. Kesarwani. On a Practical Notion of Geoffrion Proper Optimality in Multi-Criteria Optimization, Optimization, 2019, DOI: 10.1080/02331934.2019.1613403.
2017	J. Dutta, P. Kesarwani, S. Gupta. Gap functions and error bounds for non-smooth convex vector optimization problem. Optimization 66 (2017), no. 11, 1807–1836.
Preprint	P. Kesarwani, P. K. Shukla, J. Dutta, K. Deb. Approximations for Pareto and Proper Pareto solutions and their KKT conditions, preprint arXiv:1909.00714, 2019 (Communicated).
Preprint	D. Aussel, P. Kesarwani, J. Dutta. An algorithm for the projected solution of Quasi-Variational Inequality with application in Electricity markets, under preparation.
Preprint	P. Kesarwani, A. Kulkarni, Comparison between Priced Based and Incentive-Based Demand Response program in smart grid, under preparation.

Research Experience

Feb 2019- May 2019	Senior research associate in a project at Indian Institute of Technology Kanpur, India.
2016-2017	Research Project Funded by Indo-French Centre of Applied Mathematics (IFCAM) under the supervision of Didier Aussel, University of Perpignan Via Domitia, France. Project title is Local Nash Equilibrium with application to Electricity markets.
2015-2018	Senior Research Fellow in IIT Kanpur Funded by Institute Fellowship.
2013-2015	Junior Research Fellow in IIT Kanpur Funded by Institute Fellowship.
2011	Summer project funded by SURGE in IIT Kanpur.

Teaching Experience

2014-2017	Teaching assistant for NPTEL online course Convex Optimization (2014), Probability and Stochastics for Finance I & II (2016), Teaching assistant for NPTEL online course Basic Calculus for Engineers, Scientists and Economists (2017).
2015-2018	Teaching assistant for the courses Mathematics-I (MTH-101), Mathematics-II (MTH-102), Complex Analysis (MSO-209A) in IIT Kanpur.
2012-2013	Lecturer, Mathematics Department, Kanpur Institute of Technology (KIT), Kanpur.

Academic Achievements

2014	Secured JRF (Junior Research Fellowship) with All India Rank 75 in NET (National Eligibility Test) in the subject Mathematical Sciences under CSIR-UGC test.
2013	Secured All India Rank 142 in GATE (Graduate Aptitude Test in Engineering) in Mathematics.
2012	Academic Excellence Award in MSc in Mathematics with department rank-1.
2012	Dr. R.C. Srivastava Memorial Scholarship and Prof. J N Kanpur Prize for the best Student of MSc in Mathematics.
2011-2012	MCM (Merit cum Means) scholarship from IIT Kanpur during MSc.
2010	Secured All India Rank 34 in JAM (Joint Admission Test for Masters) in Mathematics.

Conference Talks

2017	International Symposium on Mathematical Programming and Game Theory at Indian Statistical Institute Delhi. Title of the talk: "On a Practical Notion of Geoffrion Proper Optimality in Multi-criteria Optimization".
2016	International Recent Advances in Optimization Theory and Applications organized at Delhi University. Title of the talk: "Error Bounds and Multi-objective Location Problem".

Workshops Attended

2018	GIAN course on "Multiobjective Optimization Using Metaheuristics" taken by Carlos Artemio Coello Coello.
2018	GIAN (Global Initiative of Academic Network) course on "Stochastic Programming and Applications" taken by John R Birge and Prof. Joydeep Dutta: March.
2018	International Symposium on Operations Research and Game Theory: Modelling and Computation organized at Indian Statistical Institute Delhi: January.
2017	"International Workshop on Convex Analysis and Optimization (IWCAO)" held at Aligarh Muslim University; India: November.
2016	"Advanced Instructional School on Optimization" held at Indian Institute of Technology, Bombay; India: May.
2016	"Mini Symposium on Computation and Optimization in the Sciences and Engineering" held at Indian Institute of Technology, Kanpur; India: February.
2016	International Conference on Recent Advances in Optimization Theory and Applications organized at Delhi University: January.

Language

Hindi	Native
English	Fluent
French	Basic (Level A1)

Computer Skills

Language	Matlab, Python, GAMS.
Tools	Latex, Microsoft Word, Excel.