

Enclosure A-1: CV of Indian PI

Dr. Sanjeev Kumar

Associate Professor

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Work experience:

- **Associate Professor** (Continuing from 28 April, 2016)
Department of Mathematics, IIT Roorkee, Roorkee-247667, India.
- **Assistant Professor** (18 November 2010 to 27 April 2016)
Department of Mathematics, IIT Roorkee, Roorkee-247667, India.
- **Postdoctoral Fellow** (12 March 2008 to 15 November 2010)
Department of Mathematics & Computer Science, University of Udine, Italy.

Research Interests: Image Processing (Optimization and Inverse Problems); Machine Learning; Computer Vision

Summary of Research Publications:

Sl No	Journal / Conference	Total	Present Status	
			Published	Accepted/ in press
1.	Journal Papers	21	21	00
2.	Book chapters/ Monograph	04	04	--
3.	Conference Proceedings	24	23	01

Academic Qualifications:

Degree	Institute	Title/Grade/point/Percentage
Ph.D (Applied Mathematics)	Indian Institute of Technology Roorkee, Roorkee-247667, India, September 2008	Reconstruction of 3D Objects from 2D Views: Simulation, Applications and Error Analysis
M. Sc (Applied Mathematics)	Indian Institute of Technology Roorkee, Roorkee-247667, India, June' 2003	8.42/10.0
B. Sc (Mathematics)	D.A.V. College, CCS University, Meerut June' 2001	69.8%

Sponsored Research Projects:

S. No.	Title of the Project	Sponsoring Agency	Grant (in Lacs) Indian rupees	Status
1.	3D Reconstruction and Software Development for City Model Generation from Satellite Images	ISRO, SAC Ahmedabad	7.73	Completed in 2015
2.	Study and Development of Multispectral Active Stereo Vision	SERB, New Delhi	5.30	Completed in 2016

	System for Video Surveillance			
3.	Characterization of Storms Signatures using Satellite Images based on Optical Flow	Indian Space Res. Org. (ISRO)	17.00	Ongoing 2016-2018

Ph. D. Thesis supervised:

S. No.	Particulars	Details	Remark
1.	Ph.D./Doctoral thesis	Completed: 03	
		Ongoing: 02	
2.	Master's/P.G. Thesis	Completed: 21	
		Ongoing: 03	

Workshop/Conferences organized:

- Organized two short term courses in Image Processing at QIP Centre, IIT Roorkee (**role: coordinator**)
- Organized an International Conference on Computer Vision & Image Processing during February 26-28, 2016 (**role: convener**)

Research Visits:

- Visited International Centre for Mathematical Sciences, Edinburgh as a member of the DST delegation to attend DST/EPSRC interaction meeting for future research collaboration between UK and India in Applied Mathematics from 11-13 July 2012.
- Visited International Centre of Theoretical Physics (ICTP) Trieste, Italy from June 01, 2014 to June 22, 2014 as a visiting researcher

Awards, Honors and Recognitions:

- Qualified CSIR-UGC NET Examination twice (Dec 2003 and June 2004)
- CSIR JRF & SRF Fellowship 2004 to 2008
- MIUR Postdoctoral Fellowship from 2008 to 2010

Selected publications:

- Pushpendra Kumar and Sanjeev Kumar, A modified variational functional for estimating dense and discontinuity preserving optical flow in various spectra, International Journal of Electronics and Communications (Elsevier), **70**(3) (2016), 289-300 (**2015 IF: 0.786**)
- Pushpendra Kumar, Sanjeev Kumar and R. Balasubramanian, A fractional order variational model for the robust estimation of optical flow from image sequences, Optik - International Journal for Light and Electron Optics, 127(20), 8710-8727, 2016 (**2015 IF: 0.742**)
- Sanjeev Kumar and Asha Rani, DF-LDA Tree: A Nonlinear Multilevel Classifier for Pattern Recognition, Journal of Experimental and Theoretical Artificial Intelligence (Taylor and Francis), 25(2): 177-188, 2013. (**2014 IF: 1.703**)
- Deepika Saini, Sanjeev Kumar and T. R. Gulati, Reconstruction of Freeform Space Curves using NURBS-Snakes based Energy Minimization Approach, Computer Aided Geometric Design (Elsevier), 33: 30-45, 2015. (**2014 IF: 1.639**)
- Sanoj Kumar, Sanjeev Kumar, N. Sukavanam and Balasubramanian Raman, Dual Tree Fractional Quaternion Wavelet Transform for Disparity Estimation, ISA Transactions (Elsevier), 53(2): 547-559, 2014. (**2015 IF: 2.600**)
- Asha Rani, Sanjeev Kumar, Christian Micheloni, Gian Luca Foresti, Incorporating Linear Discriminant Analysis in Neural Tree for Multidimensional Splitting, Applied Soft Computing (Elsevier), 13(10): 4219-4228, 2013. (**2015 IF: 2.857**)
- Christian Micheloni, Asha Rani, Sanjeev Kumar and Gian Luca Foresti, A Balanced Neural Tree for Pattern Classification, Neural Network Journal (Elsevier), 27: 81-90, 2012. (**2015 IF: 3.216**)