PROFORMA FOR BIO-DATA (to be uploaded)

1. Name and full correspondence address:

    Dr. Sanjeev Kumar

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3. Institution   **INDIAN INSTITUTE OF TECHNOLOGY ROORKEE**

4. Date of Birth   **01 MARCH 1982**

5. Gender (M/F/T)   **MALE**

6. Category Gen/SC/ST/OBC   **GENERAL**

7. Whether differently abled   **NO**

8. Academic Qualification (Undergraduate Onwards)

	Degree	Year	Subject	University/Institution	% of marks
1.	B.Sc.	2001	Physics, Chemistry, Mathematics	CCS University Meerut	69.8 %
2.	M.Sc.	2003	Applied Mathematics	IIT Roorkee	84.2 %
3.	Ph.D.	2008	Applied Mathematics	IIT Roorkee	----
4.					

9. Ph.D thesis title, Guide's Name, Institute/Organization/University, Year of Award:
   Title: Reconstruction of 3D Objects from 2D views: Simulation, Applications and Error Analysis
   Guides: Prof. N. Sukavanam and Prof. R. Balasubramanian
   Institute: IIT Roorkee
   Year: 2008

10. Work experience (in chronological order).

S.No.	Positions held	Name of the Institute	From	To	Pay Scale
1.	Postdoctoral Fellow	University of Udine, Italy	12 March 2008	15 November 2010	Euro 1750.00 consolidate
2.	Assistant Professor	IIT Roorkee	18 November 2010	28 April 2016	PB-3 and PB-4
3.	Associate Professor	IIT Roorkee	29 April 2016	Till date	Pay Matrix 13-A2

11. Professional Recognition/ Award/ Prize/ Certificate, Fellowship received by the applicant.

S.No	Name of Award	Awarding Agency	Year
1.	CSIR Research Fellow (JRF and SRF)	CSIR	2004 to 2008
2.	MIUR Postdoctoral Fellowship	MIUR Italy	2008 to 2010
3.	Outstanding Teachers Award	IIT Roorkee	2019

12. Publications *(List of papers published in SCI Journals, in year wise descending order).*

S.No.	Author(s)	Title	Name of Journal	Vol.	Page	Year
1.	S. Shakya, S. Kumar and M.Goswami	Deep Learning Algorithm for satellite imaging-based cyclone detection	IEEE Journal of Selected Topics in Applied earth observations and Remote Sensing	13(1)	827-839	2020
2.	F. Musanna, D. Dangwal, S. Kumar and V. Malik	A Chaos Based Image Encryption Algorithm based on Multiresolution Singular Value Decomposition and a Symmetric Attractor	The Imaging Science Journal (Royal Photographic Society)	doi.org/10.1080/13682199.2020.1732116		2020
3.	S. Shakya and S. Kumar	Characterizing and predicting the movement of clouds using fractional-order optical flow	IET Image Processing	13(8)	1375-1381	2019
4.	S. Nandal and S. Kumar	Single Image Fog Removal Algorithm in Spatial Domain using Fractional Order Anisotropic Diffusion	Multimedia Tools and Applications	78(8)	10717-10732	2018
5.	F. Musanna and S. Kumar	A Novel Fractional order Chaos-based Image Encryption using Fisher Yates Algorithm and 3-D Cat Map	Multimedia Tools and Applications	78(11)	14867-14895	2018
6.	P. Kumar and S. Kumar	A modified variational functional for estimating dense and discontinuity preserving optical flow in various spectrum	International Journal of Electronics and Communications	70 (3)	289-300	2016
7.	P. Kumar, S. Kumar and R. Balasubramanian	A fractional order variational model for the robust estimation of optical flow from image sequences	Optik	127(20)	8710-8727	2016
8.	D. Saini, S. Kumar and T. R. Gulati	Reconstruction of Freeform Space Curves using NURBS-Snakes based Energy Minimization Approach	Computer Aided Geometric Design	33	30-45	2015
9.	D. Saini and S. Kumar	Stereo Vision based Conic Reconstruction using a Ray-Quadric Intersection,	International Journal of Image and Graphics	15(04)	1550019	2015
10.	G. Mekonnen, S. Kumar and P.M. Pathak	Wireless Hybrid Visual Servoing of Omnidirection Wheeled Mobile Robots	Robots and Autonomous Systems	75(B)	450-462	2015
11.	S. Kumar, S. Kumar, R. Balasubramanian, N. Sukavanam	Dual Tree Fractional Quaternion Wavelet Transform for Disparity Estimation	ISA Transactions	53(2)	547-559	2014
12.	S. Kumar, A. Rani and R. Balasubramanian	A Robust Watermarking Scheme Exploiting Balanced Neural Tree for Rightful Ownership Protection	Multimedia Tools and Applications	72(3)	2225-2248	2014
13.	A. Rani, S. Kumar, C. Micheloni and G. L. Foresti	Incorporating Linear Discriminant Analysis in Neural Tree for Multidimensional Splitting	Applied Soft Computing	13(10)	4219–4228	2013
14.	A. Rani and S. Kumar	DF-LDA Tree: A Nonlinear Multilevel Classifier for Pattern	Journal of Experimental and	25(2)	177-188	2013

		Recognition	Theoretical Artificial Intelligence			
15.	A. Rani, S. Kumar, C. Micheloni and G. L. Foresti	A Balanced Neural Tree for Pattern Classification	Neural Network Journal	27	81-90	2012
16.	A. Rani, S. Kumar, C. Micheloni	An Application of Balanced Neural tree for Classifying Tentative Matches in Stereo Vision	Optical Engineering Journal	51(8)	87202	2012
17.	S. Kumar, C. Micheloni and G. L. Foresti	Stereo Rectification of Uncalibrated and Heterogeneous	Pattern Recognition Letters	31	1445-1452	2010
18.	S. Kumar, R. Balasubramanian and N. Sukavanam	Error estimation in reconstruction of quadratic curves in 3-D space	International Journal of Computer Mathematics	84(1)	121-132	2007

13. Book- Chapters:

S.No	Title	Author's Name	Publisher	Year of Publication
1.	Stereo Vision in a Network of Cooperative Cameras	S. Kumar, C. Micheloni and G. L. Foresti	Springer+ Science Media	2009
2.	An Optimally Robust Watermarking Algorithm for Stereo Image Coding	S. Kumar and R. Balasubramanian	Springer	2009
3.	Multiresolution Depth Map Estimation in PTZ Camera Network	S. Kumar, R. Balasubramanian and C. Micheloni	Springer	2013

14. Any other Information (maximum 500 words)