Faculty Profile on University Website

www.mjpru.ac.in

Title	Dr.	**First Name**	Brajesh	**Last Name**	Kumar	**Photograph**

Designation		Professor
Department		Computer Science & Information Technology
Address	**Campus**	First Floor, Central Computer Center
	Residence	5-A, Umang Part 1, Mahanagar Colony, Bareilly-243006
Phone No.	**Campus**	0581-2520310
	Residence	0581-3566311
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Webpage		

Educational Qualifications (Graduation Onwards)

Course/Degree	Institution	Year	Details/Thesis Topic/Subjects
BSc	CCS University, Meerut	1996	Physics/Chemistry/Mathematics
MSc	CCS University, Meerut	1998	Physics/Electronics
MTech	Indian Institute of Technology Roorkee, Roorkee	2001	Computer Science & Technology
PhD	Indian Institute of Technology Kanpur, Kanpur	2017	Spectral-spatial classification of hyperspectral imagery

Career Profile

Organization / Institution	Designation	Duration	Nature of Duties
MJP Rohilkhand University, Bareilly	Professor	2017 onwards	Academic & Research
MJP Rohilkhand University, Bareilly	Associate Professor	20011 - 2017	Academic & Research
MJP Rohilkhand University, Bareilly	Reader	2008 - 2011	Academic & Research
MJP Rohilkhand University, Bareilly	Lecturer	2002 - 2008	Academic & Research

Research Interests / Specialization

Image Processing, Remote Sensing, Natural Language Processing, Machine Learning, Parallel Computing

Teaching Experience (Subjects/Courses Taught)

BTech: Soft Computing, Image Processing, Advanced Computer Architecture, Principles of Programming Language, Remote Sensing, Data Structure, Compiler Design, Theory of Computation

MCA: Image Processing, Advanced Computer Architecture

PhD: Matlab Programming, Image Processing, Parallel Processing

Honours & Awards

Year	Award / Fellowship	Details
2016	TEQIP-III International Travel Grant	Awarded travel support to present research work at an international conference in Prague, Czech Republic.
2014	Institute Travel Grant	Awarded financial assistance to present research work at an

		international conference in Lausanne, Switzerland.
2012	QIP Fellowship	Awarded by AICTE, Government of India, for pursuing Ph.D. at IIT Kanpur.
1999	MHRD GATE Fellowship	Awarded by the Ministry of Human Resource Development (MHRD), Government of India, for pursuing M.Tech. at IIT Roorkee through GATE.

Publications /Academic Activities (Numbers Only)

Books & Monographs (Single Author)	**2**	**Research Papers Published in International Journals**	44	**Papers Presented in Seminars/ Conferences**	**3**	**Seminars/ Conferences Organized**	**7**	**Research Projects (Completed)**	**2**
Books (Co-authored)		**Research Papers Published in Other Journals**		**Seminar/ Conferences Attended**	**3**	**Workshops Organized**	**1**	**Research Projects (Ongoing)**	**7**
Books (Edited)	**4**	**Articles Published in Popular Fora, e.g., Websites, Blogs, Newspapers, Magazines etc.**		**Sessions Chaired in Seminars/ Conferences**	**2**	**Membership of Academic/ Professional Bodies**	**2**	**Foreign Countries Visited for Academic Assignments**	**2**
Chapters in Edited Books				**Resource Lectures Delivered**	4				

Details of Publications /Academic Activities (2010 Onwards)

(a) Books and Monographs

Year of Publication	Title	Publisher	ISBN	Co-Author(s) (if any)
2019	Self-Learning Material (SLM) on Computer Architecture	U.P. Rajarshi Tandon Open University, Prayagraj	978-93-83328-17-8	
2021	Self-Learning Material (SLM) on Python	U.P. Rajarshi Tandon Open University, Prayagraj	978-93-94487-20-8	

(b) Papers Published in Indexed/ Peer Reviewed Journals

Year of Publication	Title	Journal	ISSN/Indexing	Co-Author(s) (if any)
2026	Super-Resolution GAN Based Dual Channel CNN for Hyperspectral Image Classification	Advances in Space Research	SCI/SCIE (Elsevier)	M. M. Khan, D. Varade
2026	A Fusion of Social Media Context for Efficient Multimodal Sentiment Analysis Using Deep Learning	Discover Artificial Intelligence	SCOPUS (Springer)	S. Singh, K. Kumar
2026	Theoretical insights into the h-NbN monolayer for selective and moisture-resistant gas sensing: an ab initio study	Electronic Structure	SCI/SCIE (IOPscience)	P. Kumar, S. Kumar
2026	First-Principles Investigation of h-NbN Monolayer for Electrical and Optical Biosensing	Physica E	SCI/SCIE (Elsevier)	P. Kumar, S. Kumar
2026	Enhancing hydrogen storage performance through Lithium functionalization of 2D k-C 6 B 4: An ab initio study	Computational Condensed Matter	SCI/SCIE (Elsevier)	L. Kumari, P. Kumar, S. Kumar
2026	Anisotropic Transport Modulation in Bismuthene-Based FETs: An Ab-initio Study	Solid State Communications	SCI/SCIE (Elsevier)	Jayanti, P. Kumar, S. Kumar
2026	Suitability of Two-Dimensional TaS2 Anodes for Li, Na and Mg	Computational Condensed Matter	SCI/SCIE (Elsevier)	M. Nouman, S. Kumar

	Rechargeable Batteries			
2025	Integration of Machine Learning and Remote Sensing for Water Quality Monitoring and Prediction: A Review	Sustainability	SCI/SCIE (MDPI)	S. Mohan, A. P. Nejadhasemi
2025	Plant leaf disease detection using local binary pattern and deep convolutional neural networks	Environment Conservation Journal	SCOPUS	P. Pradhan, K. Kumar, R. Bhutiani
2025	A Comparative Analysis of Deep Learning Techniques for Sentiment Analysis Using Social Media Content	Turkish Journal of Engineering	SCOPUS	S. Singh, K. Kumar
2025	First-Principles Investigation of Stanene-Based Toxic Gas Sensors	Solid State Communications	SCI/SCIE (Elsevier)	P. Kumar, S. Kumar
2024	Paddy yield prediction based on 2D Images of Rice Panicles using Regression Techniques	The Visual Computer	SCI/SCIE (Springer)	Pankaj, P. K. Bharti, V. K. Visnoi, K. Kumar, S. Mohan, K. P. Singh
2024	Analysis of feature extraction techniques for sentiment analysis of tweets	Turkish Journal of Engineering	SCOPUS	S. Singh, K. Kumar
2024	Plant disease detection using leaf images and an involutional neural network	Environment Conservation Journal	SCOPUS	P. Pradhan, K. Kumar, R. Bhutiani
2024	A stacking ensemble machine learning based approach for classification of plant diseases through leaf images	Environment Conservation Journal	SCOPUS	V. K. Vishnoi, K. Kumar, R. Bhutiani
2023	Detection of Apple Plant Diseases Using Leaf Images Through Convolutional Neural Network	IEEE Access	SCI/SCIE (IEEE)	V. K. Visnoi, K. Kumar, A. A. Khan
2023	A New Design of Occlusion-Invariant Face Recognition Using Optimal Pattern Extraction and CNN with GRU-Based Architecture	International Journal of Image and Graphics	SCOPUS (World Scientific)	Pankaj, P. K. Bharti
2022	Comparison of Various Deep Convolutional Neural Network Models to Discriminate Apple Leaf Diseases Using Transfer Learning	Journal of Plant Diseases and Protection	SCI/SCIE (Springer)	P. Pradhan, S. Mohan
2022	Fusion of Hyperspectral and LiDAR Data Using Sparse Stacked Autoencoder for Land Cover Classification with 3D-2D Convolutional Neural Network	Journal of Applied Remote Sensing	SCI/SCIE (SPIE)	M. K. Singh, S. Mohan
2022	A comprehensive study of feature extraction techniques for plant leaf disease detection	Multimedia Tools and Applications	SCI/SCIE (Springer)	V. K. Visnoi, K. Kumar
2021	Hyperspectral image classification using deep convolutional neural network and stochastic relaxation labelling	Journal of Applied Remote Sensing	SCI/SCIE (SPIE)	M. K. Singh, S. Mohan
2020	Plant disease detection using computational intelligence and image processing	Journal of Plant Diseases and Protection	SCI/SCIE (Springer)	V. K. Visnoi, K. Kumar
2020	Hyperspectral image classification using three-dimensional geometric moments	IET Image Processing	SCI/SCIE (Wiley)	N/A
2020	Feature extraction for hyperspectral image	International Journal of Remote	SCI/SCIE (Taylor &	A. Gupta, M. K. Singh, O. Dikshit

	classification: a review	Sensing	Francis)	
2017	Hyperspectral Image Classification Based on Morphological Profiles and Decision Fusion	International Journal of Remote Sensing	SCI/SCIE (Taylor & Francis)	O. Dikshit
2017	Spectral Contextual Classification of Hyperspectral Imagery with Probabilistic Relaxation Labelling	IEEE Transactions on Cybernetics	SCI/SCIE (IEEE)	O. Dikshit
2016	Parallel probabilistic relaxation labelling based on Markov random fields for spectral-spatial hyperspectral image Classification	International Journal of Remote Sensing	SCI/SCIE (Taylor & Francis)	O. Dikshit
2016	Spectral-spatial classification of hyperspectral imagery based on moment invariants	IEEE Journal on Selected Topics in Applied Earth Observation s and Remote Sensing	SCI/SCIE (IEEE)	O. Dikshit

(c) Articles

(d) Seminar/Conference Presentations

1. Brajesh Kumar, and Onkar Dikshit, "Parallel implementation of morphological profile based spectral spatial classification scheme for hyperspectral imagery," The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences (XXIII ISPRS Congress, Prague, Czech Republic), ISPRS, vol. XLI-B7, pp. 263-267, 2016.
2. Brajesh Kumar, and Onkar Dikshit, "Integrating spectral and texture features for urban land cover classification with hyperspectral data," Joint Urban Remote Sensing Event (JURSE), Lausanne, Switzerland, IEEE, pp. 1-4, 2015.
3. Brajesh Kumar, and Onkar Dikshit, "Texture based hyperspectral image classification," The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences (ISPRS Technical Commission VIII Symposium, Hyderabad, India), vol. XL-8, pp. 793-798, 2014.

(e) Resource Lectures Delivered

1. Image Processing Using MATLAB, Lecture, FDP on MATLAB Tools and Its Applications, SRMS CET, Bareilly, 2018
2. Neural Networks, Lecture, FDP on MATLAB, SRMS CETR, Bareilly, 2019

(f) Seminars/Conferences/Workshops Organized

1. Symposium on Wavelet and its Applications in Engineering Problems, 2015.
2. IEEE Int. Symposium on Internet of Things: Smart Innovation & Usage (IOT-SIU), 2016.
3. IEEE Int. Conference on Advances in Computing, Communication, and Automation, 2016.
4. IEEE Int. Conference on Internet of Things: Smart Innovation & Usage (IOT-SIU), 2017.
5. Workshop on Data Analytics Using Python and R, 2020.

(g) Public Service / University Service / Consulting Activity

Program Officer, National Service Scheme, MJP Rohilkhand University Campus, 2020-2023

(h) Memberships of Academic/Professional Bodies

1. Senior Member, Institute of Electrical and Electronics Engineers (IEEE), USA (Elevated to Senior Member in 2020)
2. Life Member, Indian Science Congress Association (ISCA), Kolkata, India

Projects (With Title, Year, Grants, Funding Agency and Collaborations)

Project Title	Funding Agency	Role	Duration	Funding
Partnerships for Accelerated Innovation and Research (PAIR)	ANRF	Co-PI	2025–2030	₹100 Crore*

Electron–Phonon Coupling Effects on Thermoelectric Performance of High Entropy Alloys Based on Heusler Compounds	ANRF, Govt. of India	Co-PI	2024–2027	₹30.08 Lakh
HyImC: A Python-Based Software Package for Hyperspectral Image Classification Using Deep Learning Frameworks	ANRF, Govt. of India	PI	2024–2027	₹27.16 Lakh
Crop Health Monitoring Using Machine Learning	Govt. of Uttar Pradesh	PI	2022–2025	₹6.00 Lakh
Atal Centre for Artificial Intelligence	Govt. of Uttar Pradesh	Co-PI	2022–2027	₹21.50 Lakh
Smart Organic Agriculture (SOA): AI-Based IoT Framework for Crop Recommendation and Supply Chain Management Using Blockchain	UP Council of Science & Technology	Co-PI	2023–2026	₹9.00 Lakh
Plant Disease Identification Using Computer Vision Techniques	Govt. of Uttar Pradesh	PI	2021–2024	₹6.00 Lakh
Integration of Spectral and Spatial Information for Hyperspectral Image Classification	Indian Space Research Organisation (ISRO)	Co-PI	2018-2020	₹22.35 Lakh
Feature Extraction for Hyperspectral Image Classification	TEQIP-III	PI	2018-2020	₹2.00 Lakh

Administrative Positions/Assignments Held

Position	Organization	Duration
Associate Director	Directorate of Research, MJP Rohilkhand University, Bareilly	2020 – Present
Coordinator	Atal Center for Artificial Intelligence, MJP Rohilkhand University, Bareilly	2020 – Present
Coordinator	University Computer Center, MJP Rohilkhand University, Bareilly	2023 – Present
Head of the Department	Dept. of Computer Science & IT, MJP Rohilkhand University, Bareilly	31 Aug 2017 – 30 Aug 2020
Program Officer	National Service Scheme (NSS), MJP Rohilkhand University, Bareilly	29 Oct 2020 – 28 Oct 2023
Head of the Department	Dept. of Computer Science & IT, MJP Rohilkhand University, Bareilly	30 Aug 2011 – 29 Jul 2012
Convenor, Board of Studies	Dept. of Computer Science & IT, MJP Rohilkhand University, Bareilly	08 Sep 2010 – 29 Jul 2011

Academic Foreign Visits

1. Charles University, Prague, Czech Republic, 2016
2. EPFL - Swiss Federal Technology Institute of Lausanne, Switzerland, 2014

Any Other Details