




Faculty Profile on University Website

www.mjpru.ac.in

Title	Dr.	First Name	Mukul Kumar	Last Name	Gupta	Photograph 
Designation		Associate Professor				
Department		Electronics and Instrumentation Engineering				
Address	Campus	Department of Electronics and Instrumentation Engineering, FET, MJP Rohilkhand University, Bareilly, Uttar Pradesh				
	Residence	239, Green Park, Bareilly				
Mobile No.		9639977496				
Email ID		Personal	mukulvjti@gmail.com			
		University Domain	mukul.ei@mjpru.ac.in			
Professional Networking ID, i.e. LinkedIn, Twitter etc.		https://www.linkedin.com/in/dr-mukul-kumar-gupta-72a4271a/				
Educational Qualifications (Graduation Onwards)						
Course/Degree	Institution	Year	Details/Thesis Topic/Subjects			
B. Tech	U.P.T.U. Lucknow	2006	Electronics and Instrumentation Engineering			
M. Tech	V.J.T.I. Mumbai	2008	Control System			
Ph.D.	UPES Dehradun	2015	Design and Modeling of Nonlinear Dynamical System			
Career Profile						
Organization / Institution		Designation	Duration	Nature of Duties		
MJP Rohilkhand University		Associate Professor	June 2023 – Till date	Academic/ Administrative		
UPES Dehradun		Faculty Position	Dec 2009- May 2023	Academic/ Administrative		
Research Interests						
Nonlinear Control, Robotics and Automation, Intelligent Control						
Research Experience in Years - 18						
No of Research Scholars Successfully Guided						
Name of Programme	Awarded		Under Supervision			
Ph.D.	05		01			
M.Tech	22		-			

Researcher/ Expert ID	Scopus	Orchid	Publons	Vidwan	Google Scholar
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Details of Publications /Academic Activities (2010 Onwards)

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Teaching Experience (Subjects/Courses Taught) – 18 Years

Signal and System, Modern Control System, Basic Electronics, Industrial Instrumentation, Robotics Based Control, Sensor and Instrumentation, Process Control

Honours / Awards & Fellowship FOR OUTSTANDING WORK

Name of Award/ Fellowship	Awarded By		
	Name of Governmental Agency	Name of Government Supported Organizatio n/ Department	Name of International Recognized Body
GATE Scholarship (2 years)	MHRD	MHRD	

Publications /Academic Activities (Numbers Only)

Books & Monographs (Single Author)	01	Research Papers Published in International Journals	25	Papers Presented in Seminars/ Conferences	22	Seminars/ Conferences Organized	03	Research Projects (Completed)	04
Books (Co-authored)	01	Research Papers Published in Other Journals	05	Seminar/ Conferences Attended	03	Workshops Organized	06	Research Projects (Ongoing)	01
Books (Edited)		Articles Published in Popular Fora, e.g., Websites, Blogs, Newspapers, Magazines etc.	01	Sessions Chaired in Seminars/ Conferences	05	Membership of Academic / Professional Bodies	01	Foreign Countries Visited for Academic Assignments	02
Chapters in Edited Books	11			Resource Lectures Delivered	02				

(a) Edited Books					
Year of Publication	Title	Publisher	ISBN	DOI No.	Citations
2025	Technology Developments in Computer Intelligence and their Applications in the era of Industry 5.0	CRC, Taylor and Francis	9781003568995		
(c) Papers Published in UGC Care Listed /Indexed/ Peer Reviewed Journals					
Year of Publication	Title	Name of Journal	ISSN No	Citations	Impact Factor
2026	Leveraging machine learning for optimized microgrid management: Advances, applications, challenges, and future directions	Renewable and Sustainable Energy Reviews	1879-0690	3	16.3
2025	Squirrel cage induction generator based micro grid voltage assessment with STATCOM using different metaheuristic approaches	e-Prime - Advances in Electrical Engineering, Electronics and Energy	2772-6711	10	
2024	Microgrid digital twins: concepts and their controlling through multi-agent systems	International Journal of High Performance Systems Architecture	1751-6528	02	
2023	Trajectory Control of Robotic Manipulator using Metaheuristic Algorithms	International Journal of Mathematical, Engineering and Management Sciences	2455-7749/ scopus	05	
2022	Intelligent Control of Robotic Manipulators: A Comprehensive Review	Spatial Information Research	2366-3286 / scopus	50	
2022	Solar tree-based water pumping for assured irrigation in sustainable Indian agriculture environment	Sustainable Production and Consumption	2352-5509 / SCI	17	12.1

2022	Analysis of electronic clutch control unit for manual transmission vehicle oriented toward safety	Material Today Proceedings	2214-7853 / SCOPUS	2	
2021	Robust Control Based Stability Analysis and Trajectory of triple link Robot Manipulator	Journal Européen des Systèmes Automatisés	1269-6935 / SCOPUS	7	
2021	Renewable energy adoption: Design, development, and assessment of solar tree for the mountainous region	International Journal of Energy Research,	0363-907X / SCI	13	4.6
2021	Frequency Based Estimation of Angular Velocity in Triple Pendulum	Mathematical Modelling of Engineering Problems	2369-0739 / SCOPUS	1	
2020	Design and Analysis of New Haptic Joysticks for Enhancing Operational Skills in Excavator Control	Journal of Mechanical Design by ASME	1050-0472 / SCI	10	3.4
2020	Developments and Clinical Evaluations of Robotic Exoskeleton Technology for Human Upper-Limb Rehabilitation	Advanced Robotics by Taylor and Francis	0169-1864 / SCI	26	2.05
2020	Performance estimation of computed torque control for surgical robot application	journal of Mechanical Engineering and Sciences	2231-8380 / scopus	10	
2019	Disturbance Observer-assisted Trajectory Tracking Control for Surgical Robot Manipulator	Journal Européen des Systèmes Automatisés	1269-6935 / scopus	5	
2019	Kinematic Dynamic Analysis and Control of 3 DOF Upper-limb Robotic Exoskeleton	Journal Européen des Systèmes Automatisés	1269-6935 / scopus	22	
2019	Disturbance observer-assisted hybrid control for autonomous manipulation in a robotic backhoe	Archive of Mechanical Engineering	0004-0738 / SCOPUS	8	
2019	Development and motion control of spatial serial robotic manipulator under	World Journal of Engineering	1708-5284 / scopus	3	

	varying disturbances				
2019	Maximizing Lifetime of Barrier Coverage Wireless Sensor Network with Tell Neighbor Algorithm	International Journal of Mathematical, Engineering and Management Sciences	2455-7749 / scopus		
2019	3 D Multilayer Mesh NoC Communication and FPGA Synthesis	Wireless personal communication	0929-6212 / SCI	10	2,07
2018	Machine Learning Based Resource Utilization and Pre-estimation for Network on Chip (NoC) Communication	Wireless personal communication	2193-567X /SCI	30	2,07
2018	A Review on Forest Fire Detection Techniques: A Decadal Perspective	International Journal of Engineering &Technology	2227-524X	31	
2017	Pattern Similarity Score Based on One Dimensional Time Series Analysis	Journal of Pattern Recognition Research (JPRR)	2234-7593 / SCI	3	
2017	FM Receiver Design Using Programmable PLL	Wireless personal communication	0004-0738 / SCI	2	
2016	Visual Recurrence Analysis of Chaotic and Regular Motion of a multiple pendulum system	Arabian Journal for Science and Engineering	2231-8380 / scopus	6	2.8
2016	Advances in Floating Aerogenerators: Present Status and Future	International Journal of Precision Engineering and Manufacturing	1269-6935 / scopus	11	4.6
2015	Natural frequencies of multiple pendulum systems under free condition	Archive of Applied Mechanics	1269-6935 / scopus	13	2.4
2012	A New Method of Load– Flow Solution of Radial Distribution Networks	International Journal of Electronics and Communication Engineering	0974-2166	13	

(d) Chapter/Paper Published in Edited Books

Publication	Title of the Book	Title of the Chapter	Name & Address of Publisher	Year	ISBN	DOI	Citation Google/web of science
National/ International							
International	Technology	Potential applications,				10.4018/97	

	Developments in Computer Intelligence and their Applications in the era of Industry 5.0	challenges and future directions of artificial intelligence in healthcare	CRC	2025	9781003568995	9-8-3373-2737-2.ch010	
International	Optimizing Automation in Engineering With Energy Systems and Communication Networks	Environmental Impacts of Automation Systems: Energy Consumption, Waste, and Carbon Footprints	Springer	2025	9798337327372		
International	Renewable Energy Development: Technology, Material and Sustainability	Sustainable Electricity Generation Through Solar Energy Technologies	CRC	2024	978-981-97-9625-0	https://doi.org/10.1007/978-981-97-9625-0_8	
International	Machine Learning-Driven Hydrogen Yield Prediction for Sustainable Environment	Artificial Intelligence for Air Quality Monitoring and Prediction	CRC	2024	9781032683805	https://doi.org/10.1201/9781032683805	
International	Recent Trends and Best Practices in industry 4.0	Control of Mobile Manipulator with Object Detection for EOD Applications	River Publisher, IEEE	2023	9788770228046	https://doi.org/10.1201/9788770228046	
International	Internet of Things in Modern Computing	A next-gen IoT-based semi-automatic	CRC Press, Taylor & Francis	2023	978100340	https://doi.org/	

	g	mobile manipulator			730 0	g/10.1201/9783110621105	
International	Intelligent Decision Support Systems: Applications in Signal Processing	Machine Vision for Human Machine Interaction using Hand Gesture Recognition	De gruyter	2023	978-3-11-062110-5	https://doi.org/10.1515/9783110621105	
International	- Medical Big Data and Internet of Medical Things: Advances, Challenges, and Applications	IoT and Robotics in Healthcare - Book Title - Medical Big Data and Internet of	CRC Press, Taylor & Francis	2023	978138492479	https://doi.org/10.1201/978138492479	

(e) Invited as Resource Lectures Person/Examiner/Expert

Invited Talk	Detail of Event	Title of Lecture	Date	Institution
Mukul Kumar Gupta	Distinguished Keynote Speaker	Essential of AI and Robotics	October 2024	AMITY University Gwalior
Mukul Kumar Gupta	Invited as Guest Lecture	Essential Elements of Robotics	28/8/2023	MIT Moradabad

(f) Seminars/Conferences/Workshops Organized (Selected)

- Coordinated three days Hands on National workshop Robotics IoT and Embedded System from 21-23 Feb 2026 at MJPRU
- Workshop Organized on the Topic MATLAB and Simulink for Engineers

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

Year	Name of Project	Funding Agency	Amount	Duration	
				From	Till
<p>Topic –Centre of Robotics Automation and Control, Funding Agency U.P. Government under Centre of Excellence scheme (2024), U.P. Govt. No. “78/ 2024/ 1015/ सत्तर-4-2024-001-70-4002(002)/4/2023” ,1140000 INR</p>					
<p>Topic - Modelling and control of multilink Pendulum System, Funding Agency, U.P. Government, R&D scheme, U.P. Higher Education Department (2024) ,U.P. Govt. No. 39/2024/242/ सत्तर -04-2024-001-04-(33)/2023,</p>					

350000 INR

Topic - Analysis Design and Development of Haptic Interface for Hydraulic Manipulator, Funding agency UPES R &D, (2017), 85550 INR

Topic - Design and analysis of robotics system for minimal invasive surgery. UPES R &D, (2018), 200000 INR

Topic- Development of wearable robotic exoskeleton for human upper limb rehabilitation with redundant forearm pronation and supination using micro ratchet mechanism for shoulder link adjustment, UPES R & D, (2019), 200000 INR

(h) Administrative Positions/Assignments Held (Selected)

Post	Organization	Duration	
		From	To
Assistant Dean Student Welfare	MJPRU	July 2023	Till Now
Campus Counsellor	Nasha Mukti Bharat Abhiyan	2024	Till Now
IQAC Member	MJPRU	2024	-
UPTAC Counselling	MJPRU	2025	
Department Training and Placement coordinator	MJP Rohilkhand University	June 2023	Till Now
MTech Automation and Robotics coordinator	UPES Dehradun	2017	2023

(i) Seminar/Conference Presentations (Selected)

1. Gaurav Singh Negi, Mukul Kumar Gupta, Nitin Kumar Saxena, Kapil Joshi, Nagendar Yamsani, Surmadhur Pant, "Empowering Sustainability and Resilience: The Prominence of Microgrids in a Decentralized Energy Future" 2nd International Conference on Sustainable Computing and Smart Systems (ICSCSS),IEEE, July, 2024, DOI: 10.1109/ICSCSS60660.2024.10625205
2. Devendra Rawat, Mukul Kumar Gupta, Abhinav Sharma ,Optimum point trajectory tracking of a robotic manipulator system using Extremum Seeking control, International Conference on Intelligent Communication, Control and Devices , River Publisher , 2023
3. A. Raghuvanshi, A. Sharma and M. K. Gupta, "Maximum Likelihood Direction of Arrival Estimation using GWO Algorithm," *2022 International Conference on Advances in Computing, Communication and Materials (ICACCM)*, Dehradun, India, 2022, pp. 1-5, doi: 10.1109/ICACCM56405.2022.10009124.
4. Vineeth Veeramalla, Jagriti Mishra, Meera C S, Varnita Verma, **Mukul Kumar Gupta** "Development and Gesture Control of Virtual Robotic Arm" paper presented in third international conference on Intelligent Communication, Control and Devices (ICICCD), 21st and 22nd December 2018
5. Varnita Verma, Piyush Goyal, Meera C.S, **Mukul kumar Gupta**, Piyush Chauhan "Virtual Simulation of Regulated Power Supply for Various Microcontroller Board and Their Peripherals" presented in third international conference on Intelligent Communication, Control and Devices (ICICCD) 21st and 22nd December 2018
6. Varnita Verma, **Mukul Kumar Gupta**, paper presented in third Advances in Robotics (AIR) at IIT Delhi, 02 July 2017 at doctoral symposium under the title "Smart Technique for Minimally Invasive Automatic Suturing Robot"
7. Akash Gupta, **Mukul Kumar Gupta**, paper presented in third Advances in Robotics (AIR) at IIT Delhi, 02 July 2017 at doctoral symposium under the title "Design and Analysis of Robotic Exoskeleton for

Human Upper Limb Rehabilitation”

8. Meera C S, **Mukul Kumar Gupta**, paper presented in third Advances in Robotics (AIR) at IIT Delhi, 02 July 2017 at doctoral symposium under the title “Novel Approach towards safety in backhoe with haptics”
9. **Mukul Kumar Gupta**, Vinit Gupta, Arun K. Singh, “Linear and Non- Linear Dynamics of Double Pendula with Distributed Mass” presented in Sixth International Conference on Theoretical, Applied, Computational and Experimental Mechanics (ICTACEM) 29-31 Dec.2014 at IIT Kharagpur
10. **Mukul Kumar Gupta**, Bansal K., and Singh A.K. , “Stabilization of Triple Link Inverted Pendulum system based on LQR control Technique”, Presented IEEE International Conference ICRAIE at Jaipur during May 9-11,2014
11. **Mukul Kumar Gupta**, Bansal K., and Singh A.K. ,Paper presented in third international conference on Advances in control and Dynamical System (ACODS) at IIT Kanpur from March 13-15, 2014, under the title of Mass and Length Dependent Chaotic Behavior of a Double Pendulum, D.O.I. 10.3182/20140313-3-IN-3024.00071
12. Ms. Meera C S, P Swami Sairam, **Mukul Kumar Gupta** paper presented under the topic “Path Planning and Motion Control for a 3 DOF Massaging Robot” in IEEE International Conference on Robotics and Automation for Humanitarian Applications (RAHA) , Amrita University Kerela December 18-20 2016
13. Akash G, Vernita V, Adesh K, Paawan S, **Mukul Kumar Gupta**, Meera C S “Stabilization of Underactuated mechanical system using LQR Technique”,Proceedings of international conference on Intelligent Communication, Control and Devices (ICICCD) 2nd -3rd April 2016, Advances in Intelligent Systems and Computing, Springer, Vol. 479,pp(653-659)
14. Kapil S, Mayank R, Vivek K, Amit K Mondal, Abhishek S, **Mukul Kumar Gupta**, Design for Structured Uncertainty of mass spring system using robust control technique, Proceedings of international conference on Intelligent Communication, Control and Devices (ICICCD) 2016, Advances in Intelligent Systems and Computing, Springer, Vol. 479,pp(601-608)
15. Paawan S, **Mukul Kumar Gupta**, Amit K Mondal, Vivek Kaundal, “HAAR like feature based Car key detection using Cascade Classifier” Proceedings of international conference on Intelligent Communication, Control and Devices (ICICCD) 2016, Advances in Intelligent Systems and Computing, Springer, Vol. 479,pp(689-694)
16. Vinay Chowdary, **Mukul Kumar Gupta**, Automatic Forest Fire Detection and Monitoring Techniques: A Survey published in *Intelligent Communication, Control and Devices. Advances in Intelligent Systems and Computing, vol 624. Springer*, Pg. 1111-1117, (2018), doi: https://doi.org/10.1007/978-981-10-5903-2_116.
17. Arpit Jain, **Mukul kumar Gupta**, “Speed regulation of a non-linear Separately Excited DC Motor using optimized Fuzzy Logic Control” presented in international conference on Intelligent Communication, Control and Devices (ICICCD), 15-16 April 2017

(I) International Student Supervised

- Prigent Thomas, **ENSEM, Paris**, on the topic Linear and non - linear dynamics of cart - double pendulum with distributed mass,
- Michael James Smith, **Memorial University of Newfoundland, Canada** on the topic Design and

Modelling of a 2-DOF Tele-Operated Manipulator

- Murphy, Chad Reginald , **Memorial University of Newfoundland, Canada**, on the topic Modelling and Control of a Two-Link tele- operated Robot,

(m) Any Other Details

All India Rank 289 in GATE Examination
Patent Granted - 07

Mukul Kumar Gupta
Signature of Faculty Member