



Faculty Profile on University Website

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महात्मा ज्योतिर्बा फूले
रहेतखड विश्वविद्यालय, बरेली

Title	Dr.	First Name	Mukul Kumar	Last Name	Gupta	Photograph			
Designation	Associate Professor								
Department	Electronics and Instrumentation Engineering								
Address (Campus) (Residence)	Department of Electronics and Instrumentation Engineering, FET, MJP Rohilkhand University, Bareilly								
Phone No (Campus) (Residence)	9639977496								
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Educational Qualifications (Graduation Onwards)									
Course/Degree	Institution		Year	Details/Thesis Topic/Subjects					
Ph.D.	UPES Dehradun		2015	Design and Modeling of Nonlinear Dynamical System					
M. Tech	VJTI Mumbai		2008	Control System					
B. Tech	U.P.T.U. Lucknow		2006	Electronics and Instrumentation Engineering					
Career Profile									
Organization / Institution		Designation	Duration	Role					
MJP Rohilkhand University		Associate Professor	June 2023 – Till date	Academic					
UPES Dehradun		Assistant Professor (Selection Grade)	Jan 2018 – May 2023	Academic					
UPES Dehradun		Assistant Professor (Senior Scale)	Jun 2014 – Dec 2017	Academic					
UPES Dehradun		Assistant Professor	Dec 2009 – Jun 2014	Academic					
DIT Dehradun		Lecturer	July 2009 – Dec 2009	Academic					
DMCE Mumbai		Lecturer	Aug 2008 – May 2009	Academic					
Research Interests / Specialization									
Nonlinear Control and Robotics, Data Driven Control, Multiagent System, Intelligent Control									
Research Guidance (PhD Scholar) - 04									
<ol style="list-style-type: none">1. Meera C. S. , Research Title - Analysis Design and development of haptic Interface for hydraulic manipulator (As a Supervisor)2. Vinay Chowdhury, Research Title - Design and implementation of an energy efficient k barrier coverage network for rural applications (As a Supervisor)3. Varnita Verma, Research Title- Design and analysis of ex-vivo minimally invasive robotic system for antebrachium laceration suturing task (As a Co- supervisor)4. Akash Gupta, Research Title - Design Analysis and Control of Robotic Exoskeleton for Human Upper Limb Rehabilitation (As a Supervisor)									
M. Tech Supervised – 18									
Teaching Experience (Subjects/Courses Taught)									
15 Years (Signal and System, Instrumentation and sensor, Modern Control System, Robotics Control)									
Honors & Awards									



GATE All India Rank - 289 in Instrumentation Engineering, received MHRD scholarship from 2006-08
 Certificate of Appreciation from R & D department, UPES, Dehradun

Publications /Academic Activities (Numbers Only)

Books & Monographs (Single Author)	-	Research Papers Published in International Journals	22	Papers Presented in Seminars/ Conferences	14	Seminars/ Conferences Organized	01	Research Projects (Completed)	
Books (Co-authored)	-	Research Papers Published in Other Journals	-	Seminar/ Conferences Attended		Workshops Organized	03	Research Projects (Ongoing)	
Books (Edited)	-	Articles Published in Popular Fora, e.g., Websites, Blogs, Newspapers, Magazines etc.	-	Sessions Chaired in Seminars/ Conferences	2	Membership of Academic/ Professional Bodies		Foreign Countries Visited for Academic Assignments	
Chapters in Edited Books	03			Resource Lectures Delivered	1				

Details of Publications /Academic Activities (2010 Onwards)

(a) Books / Monographs

<u>Year of Publication</u>	<u>Title</u>	<u>Publisher</u>	<u>ISBN</u>	<u>Co-Author (s) (if any)</u>
2023	Chapter - A next-gen IoT-based semi-automatic mobile manipulator Book Title - Internet of Things in Modern Computing	CRC Press, Taylor & Francis	978100 340730 0	Mukul Kumar Gupta, Shival Dubey
2019	Chapter - Machine Vision for Human Machine Interaction using Hand Gesture Recognition Book Title - Intelligent Decision Support Systems: Applications in Signal Processing	De gruyter	978-3-11-062110-5	Varnita Verma, Anshuman Rajput, Piyush Chauhan, Harshit Rathore, Piyush Goyal, Mukul Kumar Gupta
2018	Chapter - IoT and Robotics in Healthcare Book Title - Medical Big Data and Internet of Medical Things: Advances, Challenges, and Applications	CRC Press, Taylor & Francis	9781138 492479	V verma, V Chowdary, Mukul Kumar Gupta, A K Mondal,

(b) Papers Published in Indexed/ Peer Reviewed Journals

<u>Year of Publication</u>	<u>Title</u>	<u>Journal</u>	<u>ISSN/ Indexing</u>	<u>Co-Author (s) (if any)</u>
2023	Trajectory Control of Robotic Manipulator using Metaheuristic Algorithms	International Journal of Mathematical, Engineering and Management Sciences	2455-7749/ scopus	D Rawat, Mukul Kumar Gupta, Abhinav Sharma
2022	Intelligent Control of Robotic Manipulators: A Comprehensive Review	Spatial Information Research	2366-3286 / scopus	D Rawat, Mukul Kumar Gupta, Abhinav Sharma
2022	Solar tree-based water pumping for assured irrigation in sustainable Indian agriculture environment	Sustainable Production and Consumption	2352-5509 / SCI	Roushan Kumar, Adesh Kumar, Mukul Kumar Gupta, Jitendra Yadav, Arpit Jain
2022	Analysis of electronic clutch control unit for manual transmission vehicle oriented toward safety	Material Today Proceedings	2214-7853 / SCOPUS	Roushan Kumar, Mukul Kumar Gupta, Adesh

				Kumar, Paawan Sharma, Rajesh Deorari,
2021	Robust Control Based Stability Analysis and Trajectory of triple link Robot Manipulator	Journal Européen des Systèmes Automatisés	1269-6935 / SCOPUS	Mukul Kumar Gupta, Roushan Kumar, Varnita Verma, Abhinav Sharma
2021	Renewable energy adoption: Design, development, and assessment of solar tree for the mountainous region	International Journal of Energy Research,	0363-907X / SCI	Kumar, R., Bansal, K., Kumar, A., Yadav, J., Gupta, M. K., & Singh, V. K.
2021	Frequency Based Estimation of Angular Velocity in Triple Pendulum	Mathematical Modelling of Engineering Problems	2369-0739 / SCOPUS	Mukul Kumar Gupta, Paawan Sharma, Nitish Sinha, Adesh Kumar, Varnita Verma
2020	Design and Analysis of New Haptic Joysticks for Enhancing Operational Skills in Excavator Control	Journal of Mechanical Design by ASME	1050-0472 / SCI	Meera C S , P S Sairam, Vineeth V, Adarsh K, Mukul K Gupta
2020	Developments and Clinical Evaluations of Robotic Exoskeleton Technology for Human Upper-Limb Rehabilitation	Advanced Robotics by Taylor and Francis	0169-1864 / SCI	Akash Gupta, Anshuman Singh, Varnita Verma, Amit Kumar Mondal and Mukul Kumar Gupta
2020	Performance estimation of computed torque control for surgical robot application	journal of Mechanical Engineering and Sciences	2231-8380 / scopus	V.Verma, A. Gupta, M. K. Gupta and P. Chauhan
2019	Disturbance Observer-assisted Trajectory Tracking Control for Surgical Robot Manipulator	Journal Européen des Systèmes Automatisés	1269-6935 / scopus	Varnita Verma, Piyush Chauhan, Mukul Kumar Gupta
2019	Kinematic Dynamic Analysis and Control of 3 DOF Upper-limb Robotic Exoskeleton	Journal Européen des Systèmes Automatisés	1269-6935 / scopus	Akash Gupta, Amit Kumar Mondal, Mukul Kumar Gupta,
2019	Disturbance observer-assisted hybrid control for autonomous manipulation in a robotic backhoe	Archive of Mechanical Engineering	0004-0738 / SCOPUS	Meera C S; Mukul Kumar Gupta , Santhakumar Mohan,
2019	Development and motion control of spatial serial robotic manipulator under varying disturbances	World Journal of Engineering	1708-5284 / scopus	Alex Barre Epenetus, C S Meera, S Mohan, Mukul Kumar Gupta ,
2019	Maximizing Lifetime of Barrier Coverage Wireless Sensor Network with Tell Neighbor Algorithm	International Journal of Mathematical, Engineering and Management Sciences	2455-7749 / scopus	Vinay Chowdary , Mukul Kumar Gupta , Sushabhan Choudhury
2019	3 D Multilayer Mesh NoC Communication and FPGA Synthesis	Wireless personal communication	0929-6212 / SCI	Adesh Kumar, Gaurav Verma, Mukul Kumar

		n		Gupta, Mohammad Salauddin, B. Khaleelu Rehman, Deepak Kumar
2018	Machine Learning Based Resource Utilization and Pre-estimation for Network on Chip (NoC) Communication	Wireless personal communication	0929-6212 / SCI	A Kumar ,P Sharma, Mukul Kumar Gupta , R Kumar
2017	Pattern Similarity Score Based on One Dimensional Time Series Analysis	Journal of Pattern Recognition Research (JPRR)	1558-884X /ESCI	Paawan Sharma, Mukul Kumar Gupta , Amit Kumar Mondal, Vivek Kaundal
2017	FM Receiver Design Using Programmable PLL	Wireless personal communication	0929-6212 / SCI	A Kumar , Gaurav V, Mukul Kumar Gupta,
2016	Visual Recurrence Analysis of Chaotic and Regular Motion of a multiple pendulum system	Arabian Journal for Science and Engineering	2193-567X /SCI	Mukul Kumar Gupta , Paawan Sahrma, Amit Mondal, Adesh Kumar,
2016	Advances in Floating Aerogenerators: Present Status and Future	International Journal of Precision Engineering and Manufacturing	2234-7593 / SCI	A.K. Mondal, Surajit Mondal, Vindhya Devella, Paawan Sharma, Mukul Kumar Gupta
2015	Natural frequencies of multiple pendulum systems under free condition	Archive of Applied Mechanics	0004-0738 / SCI	Mukul Kumar Gupta , Nitish Sinha, Kamal Bansal, Arun K. Singh

(c) Articles

(d) Seminar/Conference Presentations

1. 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
2. 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
3. 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”
4. 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”
5. 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”

6. **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
7. **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
8. **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
9. 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
10. 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)
11. 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)
12. 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)
13. 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.
14. 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

(e) Resource Lectures Delivered -01

(f) Seminars/Conferences/Workshops Organized -

Conference secretary at third international conference on Intelligent Communication, Control and Devices (ICICCD) 21-22 December 2018

(g) Public Service / University Service / Consulting Activity

(h) Memberships of Academic/Professional Bodies

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

Administrative Positions/Assignments Held

Academic Foreign Visits

Any Other Details

Signature of Faculty Member
(in Hard Copy Only)

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