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|---|----|--|----|--|----|--|----|---|--|
| GATE All India Rank - 289 in Instrumentation Engineering, received MHRD scholarship from 2006-08<br>Certificate of Appreciation from R & D department, UPES, Dehradun |    |  |    |  |    |  |    |   |  |
| <b>Publications /Academic Activities (Numbers Only)</b>   |    |  |    |  |    |  |    |   |  |
| <b>Books &amp; Monographs (Single Author)</b>   | -  | <b>Research Papers Published in International Journals</b>                                   | 22 | <b>Papers Presented in Seminars/ Conferences</b> | 14 | <b>Seminars/ Conferences Organized</b>             | 01 | <b>Research Projects (Completed)</b>                      |  |
| <b>Books (Co-authored)</b>  | -  | <b>Research Papers Published in Other Journals</b>   | -  | <b>Seminar/ Conferences Attended</b>             |    | <b>Workshops Organized</b>                         | 03 | <b>Research Projects (Ongoing)</b>                        |  |
| <b>Books (Edited)</b>   | -  | <b>Articles Published in Popular Fora, e.g., Websites, Blogs, Newspapers, Magazines etc.</b> | -  | <b>Sessions Chaired in Seminars/ Conferences</b> | 2  | <b>Membership of Academic/ Professional Bodies</b> |    | <b>Foreign Countries Visited for Academic Assignments</b> |  |
| <b>Chapters in Edited Books</b>   | 03 |  |    | <b>Resource Lectures Delivered</b>               | 1  |  |    |   |  |

| <b>Details of Publications /Academic Activities (2010 Onwards)</b> |   |  |                       |   |
|--|---|--|-----------------------|---|
| <b>(a) Books / Monographs</b>                                      |   |  |                       |   |
| <b>Year of Publication</b>   | <b>Title</b>  | <b>Publisher</b>   | <b>ISBN</b>           | <b>Co-Author (s) (if any)</b>   |
| 2023   | Chapter - A next-gen IoT-based semi-automatic mobile manipulator<br>Book Title - Internet of Things in Modern Computing   | CRC Press, Taylor & Francis  | 9781003407300         | <b>Mukul Kumar Gupta</b> , Shival Dubey   |
| 2019   | Chapter - Machine Vision for Human Machine Interaction using Hand Gesture Recognition<br>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, <b>Mukul Kumar Gupta</b> |
| 2018   | Chapter - IoT and Robotics in Healthcare<br>Book Title - Medical Big Data and Internet of Medical Things: Advances, Challenges, and Applications                              | CRC Press, Taylor & Francis  | 9781138492479         | V verma, V Chowdary, <b>Mukul Kumar Gupta</b> , A K Mondal,   |
| <b>(b) Papers Published in Indexed/ Peer Reviewed Journals</b>     |   |  |                       |   |
| <b>Year of Publication</b>   | <b>Title</b>  | <b>Journal</b>   | <b>ISSN/ Indexing</b> | <b>Co-Author (s) (if any)</b>   |
| 2023   | Trajectory Control of Robotic Manipulator using Metaheuristic Algorithms  | International Journal of Mathematical, Engineering and Management Sciences | 2455-7749/ scopus     | D Rawat, <b>Mukul Kumar Gupta</b> , Abhinav Sharma  |
| 2022   | Intelligent Control of Robotic Manipulators: A Comprehensive Review   | Spatial Information Research   | 2366-3286 / scopus    | D Rawat, <b>Mukul Kumar Gupta</b> , 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, <b>Mukul Kumar Gupta</b> , 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, <b>Mukul Kumar Gupta</b> , 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; <b>Mukul Kumar Gupta</b> , 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, <b>Mukul Kumar Gupta</b> ,                 |
| 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 , <b>Mukul Kumar Gupta</b> , Sushabhan Choudhury                     |
| 2019 | 3 D Multilayer Mesh NoC Communication and FPGA Synthesis  | Wireless personal communicatio   | 0929-6212 / SCI    | Adesh Kumar, Gaurav Verma, <b>Mukul Kumar</b>                                       |

|             |  |  |                 |   |
|-------------|--|--|-----------------|---|
|             |  | n  |                 | <b>Gupta,</b><br>Mohammad<br>Salauddin, B.<br>Khaleelu<br>Rehman,<br>Deepak Kumar |
| <b>2018</b> | Machine Learning Based Resource Utilization and Pre-estimation for Network on Chip (NoC) Communication | Wireless personal communication                                  | 0929-6212 / SCI | A Kumar ,P Sharma, <b>Mukul Kumar Gupta</b> , R Kumar                             |
| <b>2017</b> | Pattern Similarity Score Based on One Dimensional Time Series Analysis                                 | Journal of Pattern Recognition Research (JPRR)                   | 1558-884X /ESCI | Paawan Sharma, <b>Mukul Kumar Gupta</b> , Amit Kumar Mondal, Vivek Kaundal        |
| <b>2017</b> | FM Receiver Design Using Programmable PLL  | Wireless personal communication                                  | 0929-6212 / SCI | A Kumar , Gaurav V, Mukul Kumar Gupta,  |
| <b>2016</b> | Visual Recurrence Analysis of Chaotic and Regular Motion of a multiple pendulum system                 | Arabian Journal for Science and Engineering                      | 2193-567X /SCI  | <b>Mukul Kumar Gupta</b> , Paawan Sahrma, Amit Mondal, Adesh Kumar,               |
| <b>2016</b> | 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    |
| <b>2015</b> | Natural frequencies of multiple pendulum systems under free condition                                  | Archive of Applied Mechanics                                     | 0004-0738 / SCI | <b>Mukul Kumar Gupta</b> , 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) 2<sup>nd</sup> -3<sup>rd</sup> 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](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

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| (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  
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