ZAKIR HUSAIN DELHI COLLEGE
(University of Delhi)

Faculty Details

Title	Dr.	First Name	**MANISH**	Last Name	**KUMAR**	Photograph
Designation	**Assistant Professor**					
Address	**4148, Ward No. 24, Chanarthal, Near NIT, Kurukshetra.**					
Phone No Office	**011-23233420**					
Residence						
Mobile	**8708020850**					
Email	**manishelectronics@zh.du.ac.in**					
Web-Page						

Educational Qualifications

Degree	Institution	Year
Ph.D. Electronics	**CSIR-CEERI Pilani Rajasthan and Kurukshetra University**	**2021**
MTech. Electronics and Communication	**Kurukshetra University**	**2011**
BTech. Electronics and Communication	**Kurukshetra University**	**2008**

Career Profile

Name of Institution	Department	Position held	Form	To
Swami Devi Dyal Institute of Engineering, Barwala, Panchkula	Department of Electronics & Communication Engineering	Assistant Professor	28-07-2011	03-08-2013
Jai Prakash Mukund Lal Institute of Engineering, Radaur	Department of Electronics & Communication Engineering	Assistant Professor	16-08-2013	23-01-2015
CEERI, Pilani, Rajasthan	Department of Electronics & Communication Engineering	Assistant Professor	01-09-2015	31-08-2016
University Institute of Engineering & Technology, Kurukshetra University, Kurukshetra	Department of Electronics & Communication Engineering	Assistant Professor	21-10-2016	30-06-2020

Shri Krishna Ayush University, Kurukshetra.	Department of Research and Innovation	Assistant Professor	01-07-2020	31-5-2023
Zakir Husain Delhi College, New Delhi.	Department of Electronics	Assistant Professor	01-06-2023	till date

Administrative Assignments

- Contributed as a Convener of Dr. B.R. Ambedkar Center of Zakir Husain Delhi College, University of Delhi.
- Contributed as In-charge of Research and Innovation of Shri Krishna AYUSH University, Kurukshetra.
- Contributed as **Management Coordinator of District COVID CARE CENTER** established at SMB Gita Sr. Sec, School, Kurukshetra.
- Contributed as Nodal Officer of IT Cell of Shri Krishna AYUSH University, Kurukshetra.
- Contributed as a Nodal Officer of Public Relation of Shri Krishna AYUSH University, Kurukshetra.
- Contributed as a member of admission committee (2020) of Shri Krishna AYUSH University, Kurukshetra.
- Contributed as a member of **PRATISPARDHA-2019**.
- Contribution in making list of text books and reference books to be provided to library for UG and PG course of ECE Dept.
- Contributed as a member of result committee for Credit-Based-Examination System of UIET, KUK.
- Contributed as a member of Admission committee.
- Contributed as a member of Time Table committee.
- Contributed as a member of Students Culture Affairs (including excelsior) committee.
- Contributed as a member of EDP Cell committee.
- Contributed as a member of TEQIP Project.
- Contributed as a member of Unnat Bharat Abhiyan committee.
- Contributed as a member of Start-up Cell committee.
- Contributed as a member of Alumni Cell committee.
- Organized an orientation Programme for 1st year students of UIET, KUK on 17/08/2017.

Areas of Interest / Specialization

Broad Area: Artificial Intelligence, Machine Learning, Material Science.

Subjects Taught

Digital Electronics, Artificial intelligence, operating System, Embedded System.

Publications Profile

1. 2024, Kumari, A., Babita, Panghal, A., Kataria,N., Dhiman, R., Dalal, R., **Kumar, M.,** Kumar, S. Uranium concentration in groundwater of charkha dadri district of Haryana, India by using LED Fluorimeter, Journal of Radioanalytical and Nuclear Chemistry,

2. 2023, Bhattacharjee, S.B., Gangwar, S., **Kumar, M**., Saini, K., Saini, R., Chauhan, S., Pandey, K., Essah, R., and Goyal N. An efficient framework for secure data transmission using blockchain in IoT environment, Journal of Autonomous Intelligence,Volume 7 Issue 2, ISSN: 2630-5046.

3. 2023, Mishra, M., Dhakla, S., Deendyal, P.K., **Kumar, M.** and Kashyap, M.K. Recent Advances in Indium Selenide based Photodetectors: A mini review, Indian Journal of Pure & Applied Physics, ISSN: 0975-1041.

4. Sharma, R.K., Chanalia, P., Sharma, A., **Kumar, M.** and Kumar, B. 2023. Quantitative Estimation of Secondary Metabolites of Shadanga Paniya Classical Ayurvedic Formulation and Constituent Herbs, Ancient Science of Life, ISSN: 0257-7941 (accepted)

5. **Kumar, M.,** Raju KS, Kumar D, Goyal N, Verma S and Singh A. 2020.An Efficient Framework Using Visual Recognition for IoT Based Smart City Surveillance, Multimedia Tool and Application, ISSN:1432-1882. (SCI- Index, IF: 2.313)

6. **Kumar, M.,** Gupta, R., Raju KS and Kumar D. 2020. Effective Feature Dimensionality Reduction for Visual Recognition Using Fast Subspace Decomposition, A Journal of Science and Technology (Ciência e Técnica Vitivinícola Journal) 35(1), ISSN:2416-3953. (SCI- Index)

7. **Kumar, M**., Gupta, R., Raju KS and Kumar D. 2019. Modified Local Binary Pattern Algorithm for Feature Dimensionality Reduction. Recent Advances in Computer Science and Communications. 13(1), ISSN: 2666-2566. (Scopus- Index)

8. Lakshay, Pandey, K, **Kumar, M.** and Bansal P. 2018. Assessment of Different Routing Protocols with movement Models in DTN. Journal of Emerging Technologies and Innovative Research, 5(8): 53-64, ISSN 2349-5162.

9. Saini, S., Goel, A., **Kumar, M.,** Pandey, K., Gupta, R. and Singh, R., Face Identification Based on Local Binary Patterns: A Survey. Research review International Journal of multidisciplinary, 3(8): 345-350, ISSN 2455-3085.

10. **Kumar, M**., Gupta, R., Saini, S. and Goel, A. 2018. Implementation of Face Recognition System Using LBP. International Journal of Creative research and Thoughts, 6(1): 1353-1356, ISSN 2320-2882

11. **Kumar, M.,** Gupta, R., Saini, S. and Goel, A. 2018. Novel Weighted LBP Approach for Face Recognition System, Journal of Emerging Technologies and Innovative Research, 5(4). ISSN 2349-5162

12. **Kumar, M**., Saini, S. and Goel, A. 2017. Enhancement of biometric image by implementing Gabor filter. International Journal of Academic Research and Development, 2(5): 708-712, ISSN 2455-4197

13. **Kumar, M.** and Kumar, A. 2011. Novel Methods of Blind Source Separation. International Journal of Electronics Communication and Technology, II (4): 103-106. ISSN 2230-7109

Conference Presentations

1. **Kumar, M.,** Gupta, R., Kumar D. and Raju KS, UMLBP- A Novel Approach for Recognition System using OPENCV. 7th IEEE International Conference on Reliability, Infocom Technologies and Optimization to be held during 29-31 Aug 2018 at Amity University Noida.

2. **Kumar, M.,** Gupta, R., Kumar D. and Raju KS, Implementing Gabor filter for biometric image enhancement. International Conference on Sustainable development through Research in Engineering and Management, has been held on 26-27 Dec 2016 at YMCAUST Faridabad.

Research Projects (Major Grants/Research Collaboration)

- **Design and analysis of Nadi Tarangini Apparatus for Nadi observation of Chronic diseases**

  o Phase 1: To collect the database of OPD patients of Ayurveda Hospital of SKAU, Kurukshetra for Nadi Parikshan. Comparison and analysis using Machine learning algorithms to classify, diagnose and automatic diet advisory generation.

  o Phase 2: To enhance the performance of Nadi Tarangani apparatus in terms of cost using alternate hardware.

  o Funding Agency: **SKAU, Kurukshetra**

- **To design Automatic Taila Bindu Pariksha Analysis instrument.**

  o The project is to automate this mechanism using a small hardware like camera, Raspberry Pi board to detect the pattern under microscope.

  o Once patterns are classifieds, then the generated reports may be sent to doctors for further analysis.

  o Funding Agency: **SKAU, Kurukshetra**

- **To design web-based platform for Prakriti Analysis.**

  o An android/web application for Prakriti Parikshan questionnaire need to be developed for common man

  o The analysis of the answers provided by the user will let him/her know about the inherit Prakriti (Vata, Pitta, Kapha)

  o Advisory of diet plan is provided based on Prakriti and advised to visit the Ayurveda Doctor for further investigation.

- **To design and development of communication, safety and security (biometric) system**

  o Project Leader **Dr. K. S. Raju Senior Principal Scientist CSIR-CEERI**.

  o Project funded by **Department of Science and Technology**, Government of India.
  o **Fingerprint Recognition System**.

  o Tool: - Visual Studio 2013, OpenCV 2.4.9 on windows 7 and GCC compiler, OpenCV 3.1.0 on Linux 16.0.4.

  o Successfully completed all objectives (like accuracy, false acceptance rate, False Rejection rate, performance of the system).

  o The project is demonstrated on Zed board ZC-702(FPGA board).

Awards and Distinctions

- Qualified CSIR-UGC NET in Dec., 2014 for Lectureship in Electronics Sciences discipline
- Qualified GATE-2012, 2013, 2014 with 94 percentiles in Electronics and Communication Engineering.
- Life member of Indian Science Congress Association (ISCA), India.
- Awarded URS in Electronics Science Dept. KUK.

Books Chapter

- Pandey, K. and Kumar, M. (2021). Recent and Future Node Deployment Strategies in the Underwater Sensor Network (UWSN). In: Energy-Efficient Underwater Wireless Communications and Networking. Goel N., Sapra L. and Sandhu J.K. IGI Global, Sep 2020, ISBN13: 9781799836407, pp 34-44.

Patents

- Rohit Sharma, Satish Khatak, Krishna Pandey, Dr, Ruchi Nagar, Dr. Sujata Joshi, Dr. Manish Kumar Mishra, Anshuman Prakash, Saurav Sambhav, Rajiv Sharma, Dr. Manish Kumar, "System for Monitoring and Enhancing Well-Being of A Person on Smart Bed", Application No. 202111038601A, Publication Date: 03.09.2021, Patent Office Journal No. 36/2021.

Association With Professional Bodies

- **Executive member** for many years, Anuvrat Samiti Delhi in the past.

Other Activities

WORKSHOPS/ SEMINARS

- Attended the Faculty Development Program on topic **Managing Online Classes & Co- creating MOOCS,** from 7-21 October 2023, organized by Ramanunjan College, University of Delhi under the aegis of Ministry of Education Pandit Madan Mohan Malviya National Mission on Teachers and Teaching.
- Attended the Faculty induction/Orientation Programme from 22 Julu to 20 August 2023, organized by Ramanunjan College, University of Delhi under the aegis of Ministry of Education Pandit Madan Mohan Malviya National Mission on Teachers and Teaching.
- Attended the Faculty Development Program/ Workshop on **Internet of Things (IOT),** Sponsored by AICTE under Atal Academy online from 27th April to 01st May, 2020 organized by ECE Department, University Institute of Engineering and Technology, Kurukshetra University, Kurukshetra.
- Participated in AICTE recognized shot term Course on **Student Evaluation (Module-III: IPD) through ICT** conducted by Education and Educational Management Development from 7th - 11th Jan, 2019 at University Institute of Engineering and Technology, Kurukshetra University, Kurukshetra.
- Contributed as a member of organizing committee in two days' Workshop on "**Graphene based Device fabrication and Characterization**" Sponsored by MHRD under TEQIP-III and organized by Department of Electronics and Communication Engineering, University Institute of Engineering and Technology, Kurukshetra University, Kurukshetra held during 26th - 27th February, 2019.

- Attended the Faculty Development Program/ Workshop on **VLSI Design- Mind To Market,** Sponsored by MHRD under TEQIP-III from 28th Jan to 02nd Fab, 2019 organized by ECE Department, J.C. Bose University of Science and Technology, YMCA, Faridabad.
- Attended the Trainer's Training Programme on **Employability, Entrepreneurship and Life Skills** on 23th to 27th July, 2018 organized by Haryana Vishwakarma Skill University (HVSU) sponsored by Haryana Skill Development Mission (HSDM) conducted by Institute NIESBUD In Dehradun, Uttarakhand.
- Attended the one-day workshop on **Unnat Bharat Abhiyan (UBA)** 18th July, 2018 organized by IIT Delhi.
- Attended the Faculty Development Program for student induction program on **Human Values**, Sponsored by AICTE from 14th to 16th July, 2018 organized by UIET, KUK.
- Completed 4 months **e-Yantra (IIT Bombay) task-based training (TBT-2107)** on "Robotics"**.**
- **Attended workshop on "Introduction to Robotics" organized by e-Yantra (IIT Bombay) on 21st January 2017 held at Cluster Innovation Center, Delhi.**
- Attended the Short-term course on **HDL for Signal, Image and Video Processing (HSIVP)** at Department of Electronics Engineering, **Indian Institute of Technology BHU Varanasi** from August 21-26, 2017.
- Attended the workshop on **Printable Electronics** 16th to 20th Jan, 2017 organized by ECE Department, UIET, KUK.
- Attended the Faculty Development Program on **Measuring Instruments and Power Supply,** Sponsored by MHRD (TEQIP-II) from 03th to 08th Oct, 2016 organized by ECE Department, UIET, KUK.
- Attended the Faculty Development Program on **Recent Developments in Microwave & RF Engineering**, Sponsored by MHRD (TEQIP-II) from 05th to 10th May, 2014 organized by ECE Department, UIET, KUK.

Signature of Faculty Member