

Dr. Naresh Kumar

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Department of ECE,
University Institute of Engg & Technology (UIET),
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Teaching Experience

Feb 2021- till date: Professor
Deptt. of ECE, UIET, Panjab University, Chandigarh
Feb 2018- Feb 2021: Associate Professor
Deptt. of ECE, UIET, Panjab University, Chandigarh
Feb 2005 – Feb 2018: Assistant Professor,
Deptt. of ECE, UIET, Panjab University, Chandigarh
Jan 2005 - Feb 2005: Lecturer, Deptt. Of ECE, NIT Kurukshetra
Aug 2004 – Jan 2005: Lecturer, Deptt. Of ECE, NIT Hamirpur

Administrative Experience

Jan 2023- till date: **Associate Dean Student Welfare**, Panjab University Chandigarh
Dec 2022-June 2023: **Incharge**, Incubation Center under RUSA 2.0, P. U. Chandigarh
Jan 2021- till date: **Coordinator**- Department of ECE,
UIET, Panjab University, Chandigarh
June 2014 –June 2019 **Warden**, Boys' Hostel No. 8, Panjab University, Chandigarh
Jan 2011 –Dec 2017 **Library In-charge** of Library of UIET, PU Chandigarh
Aug 2004-Dec 2004 **Resident Warden**, Kailash Boys' Hostel, NIT Hamirpur

Professional Qualifications

Doctorate: PhD in Electronics and Communication Engineering, Year: 2017
Panjab University Chandigarh
Post-Graduation: M.E. (Master of Engineering) – Electronic Engg
Punjab Engineering College (Affiliated to Panjab University)
Chandigarh, passed in 2004 with First division.
Graduation: B.E. (Bachelor of Engineering) Electronics & Communication
C.R. State College of Engg. Murthal (Sonepat), passed in 2001
with the First division.

Research Domain: Wireless communication, Underwater acoustic Communication, Cognitive radios.

Doctoral thesis title: Wavelet based Multi Carrier Modulation for Performance Enhancement for under water acoustic communications.

Received **Research Award** for the year 2016 by UIET, Panjab University Chandigarh

Research Publications

- ❖ International Journal **36 [SCI/SCIE/Scopus]**
- ❖ International Conferences **20 (IEEE/Springer/Elsevier)**

Publications in International Journals/Conferences since 2018

S. No.	Name of authors	Name of paper	Journal /Conference	Year	SCI/Scopus/UGC	DOI
1.	Pawan Kumar, Ki-Hyun Kim, Kowsalya Vellingiri, Pallabi Samaddar, Parveen Kumar, Akash Deep, Naresh Kumar	Hybrid porous thin films: Opportunities and challenges for sensing applications	Biosensors and Bioelectronics	2018	SCI indexed (Impact factor 12.545)	https://doi.org/10.1016/j.bios.2018.01.006
2.	Shubhani Aggarwal Gurjot Kaur, Jasleen Kaur Nitish Mahajan Naresh Kumar Makhan Singh	On a Hardware Selection Model for Analysis of VoIP-Based Real-Time Applications	Smart Innovations in Communication and Computational Sciences. Advances in Intelligent Systems and Computing, vol 670. Springer	2018	Scopus	https://doi.org/10.1007/978-981-10-8971-8_23
3.	Sandeep Sarowa, Naresh Kumar , Sunil Agrawal	Performance Analysis of CP-Reuse based Estimation Technique for High Mobility Node	International Conference on Recent Innovations in Electrical, Electronics & Communication Engineering (ICRIEECE) , IEEE	2018	Scopus	https://doi.org/10.1109/ICRIEECE44171.2018.9009294
4.	Aarti Kochhar, Naresh Kumar	Wireless sensor networks for greenhouses: An end-to-end review	Computers and Electronics in Agriculture	2019	SCIE (Impact Factor 6.757)	https://doi.org/10.1016/j.compag.2019.104877
5.	Navdeep Kaur, Naresh Kumar	Comparative Analysis of ICI Self Cancellation Techniques for Wavelet OFDM Under Different Channels in Simulink	Wireless Personal Communications	2019	SCIE (Impact Factor 2.017)	https://doi.org/10.1007/s11277-019-06157-9
6.	Pawan Kumar, Ki-Hyun Kim, Jechan Lee, Jin Shang, Mohammed Iqbal Khazi, Naresh Kumar , Grzegorz Lisak	Metal-organic framework for sorptive/catalytic removal and sensing applications against nitroaromatic compounds	Journal of Industrial and Engineering Chemistry	2020	SCIE (Impact Factor 6.760)	https://doi.org/10.1016/j.jiec.2019.12.024
7.	Sandeep Sarowa, Naresh Kumar , Sunil Agrawal, Balwinder Singh Sohi	Evolution of PAPR reduction techniques: A wavelet based OFDM approach	Wireless Personal Communications	2020	SCIE (Impact Factor 2.017)	https://doi.org/10.1007/s11277-020-07643-1
8.	Manoj Sharma, Monika, Naresh Kumar , Pardeep Kumar	Badminton match outcome prediction model using Naïve Bayes and Feature Weighting technique	Journal of Ambient Intelligence and Humanized Computing	2021	SCIE (Impact Factor 7.10)	https://doi.org/10.1007/s12652-020-02578-8
9.	Navdeep Kaur, Naresh Kumar	On Effects of Frequency Offset on Simulink Model of OFDM	Wireless Personal Communications	2020	SCIE (Impact Factor 2.017)	https://doi.org/10.1007/s11277-020-07685-5
10.	Sandeep Sarowa, Naresh Kumar , Ram Sewak Singh	Analysis of WOFDM over LTE 1.25 MHz Band	Wireless Communications and Mobile Computing	2021	SCIE (Impact Factor 2.146)	https://doi.org/10.1155/2020/8835879

11	Rajat, Naresh Kumar, Manoj Sharma	Smart Street Lights to Reduce Death Rates from Road Accidents	Proceedings of International Conference on Recent Trends in Machine Learning, IoT, Smart Cities and Applications	2020	Scopus	https://doi.org/10.1007/978-981-15-7234-0_75
12	Manoj Sharma, Naresh Kumar	Improved hepatocellular carcinoma fatality prognosis using ensemble learning approach	Journal of Ambient Intelligence and Humanized Computing	2021	SCIE (Impact Factor 7.10)	https://doi.org/10.1007/s12652-021-03256-z
13	KS Bhamra, G Joshi, N Kumar	An Efficient Design of Binary to Gray Code Binary Converter using QCA	IOP Conference Series: Materials Science and Engineering	2021	Scopus	https://doi.org/10.1088/1757-899X/1033/1/012014
14	Simrandeep Kaur, Naresh Kumar, Subhash Dubey	Investigation of Adaptive Beam-forming Algorithms for Smart Antennas System	IOP Conference Series: Materials Science and Engineering	2021	Scopus	https://doi.org/10.1088/1757-899X/1033/1/012015
15	Nishant Gupta, Nitish Mahajan, Sakshi Kaushal, Naresh Kumar, Harish Kumar, Arun Kumar Sangaiah	Predictive model for hardware calibration to transmit real-time applications in VoIP networks	Concurrency and Computation: Practice and Experience	2021	SCIE (Impact Factor 1.831)	https://doi.org/10.1002/cpe.5190
16	Aarti Kochhar, Naresh Kumar	WSN sensor deployment and sampling: Role of dynamics	Intelligent Circuits and Systems	2021	Scopus	https://doi.org/10.1201/9781003129103
17	Manoj Sharma, Monika, Naresh Kumar, Pardeep	Naive bayes-correlation based feature weighting technique for sports match result prediction	Evolutionary Intelligence	2021	Scopus/E SCI	https://doi.org/10.1007/s12065-021-00629-3
18	Sandeep Sarowa, Surender Kumar, Davinder S Rathee, Naresh Kumar	Performance Analysis of Improved Self Cancellation Technique for Wavelet Based OFDM Through Simulink Model	Wireless Personal Communications	2021	SCIE (Impact Factor 2.017)	https://doi.org/10.1007/s11277-020-08058-8
19	Pratibha, Sharmelee Thangjam, Naresh Kumar, Sanjiv Kumar	A Survey on Prevention of the Falsification Attacks on Cognitive Radio Networks	IOP Conference Series: Materials Science and Engineering	2021	Scopus	https://doi.org/10.1088/1757-899X/1033/1/012021
20	Neha, Naresh Kumar, Aarti Kochhar	Efficient Channel Estimation in mm Wave Massive MIMO Using Hybrid Beamforming	Proceedings of First International Conference on Computational Electronics for Wireless Communications: ICCWC 2021	2021	Scopus	https://doi.org/10.1007/978-981-16-6246-1_8

21	Naresh Kumar , Manoj Sharma , Vijay Pal Singh, Charanjeet Madan, Seema Mehandia	An empirical study of handcrafted and dense feature extraction techniques for lung and colon cancer classification from histopathological images	Biomedical Signal Processing and Control	2022	SCIE (Impact Factor 5.076)	https://doi.org/10.1016/j.bspc.2022.103596
22	Manoj Sharma, Naresh Kumar , Shallu Sharma, Vikas Jangra, Seema Mehandia, Sumit Kumar, and Pawan Kumar	Assessment of Fine Particulate Matter for Port City of Eastern Peninsular India Using Gradient Boosting Machine Learning Mode	Atmosphere, mdpi	2022	SCIE (Impact Factor 3.110)	https://doi.org/10.3390/atmos13050743
23	Raveena Garg, Gurpreet Kaur, and Naresh Kumar	Performance analysis of $2\lambda \times 160$ Gbps optical single sideband (OSSB) generation in polarization division multiplexed (PDM) QPSK based satellite wireless optical systems (SWOS)	Journal of Optical Communications	2022	Scopus	https://doi.org/10.1515/joc-2022-0103
24	Aarti Kochhar, Naresh Kumar and Utkarsh Arora	Signal Assessment Using ML for Evaluation of WSN Framework in Greenhouse Monitoring	International Journal of Sensors, Wireless Communications and Control	2022	Scopus	https://doi.org/10.2174/2210327913666221220154338
25	Aarti Kochhar, Naresh Kumar , Sakshi Aneja	Variance adaptive sporadic sampling for greenhouse monitoring	Sustainable Computing: Informatics and Systems	2023	SCIE (Impact Factor 4.923)	https://doi.org/10.1016/j.suscom.2022.100825

Membership of Professional Societies

Member, **IEEE**, Membership No. 93343108;

Life Member, Indian Microelectronics Society, Membership No. LM 421;

Life Member, **International Association of Engineers**, Membership No.: 147718.

Research Supervision (Thesis)

- ❖ Ph. D Guided :01 Registered : **05**
- ❖ M.E. /M.Tech. Supervision: **30** (Completed), **03** (Under Progress)

Research Projects/Consultancy

Investigator of Project **Development of 5G/5G based UAV Augmented Intelligent Monitoring and Surveillance System** sponsored by CC&BT division, Ministry of Electronics & Information Technology (MeitY), Govt. of India. And Coral Telecom, Noida as Industry partner. Duration: 3 years; Total Outlay: **2 crores** (approx.)

Investigator of Project **Development Of Unified IP based Communication Platform For Voice, Video Data and Chat Services** sponsored by CC&BT division, Ministry of Electronics & Information Technology (MeitY), Govt. of India. And Coral Telecom, Noida as Industry partner Duration: 3 years; Total Outlay: **66 Lacs** (approx.)

Principal Investigator of Project **Kisan Mitra** sponsored by Department of Agriculture & Farmers Welfare, Govt. of Haryana. Duration : 11 months; Total Outlay: 14 Lacs (approx.)

Extension activities and research Interactions

- ❖ Chaired sessions in various International Conferences sponsored by IEEE, Elsevier, IETEAN, MietY etc.
- ❖ Delivered **invited talks/expert lectures** at various institutes like NITTTR Chandigarh, SLIET Longewal, NIT Uttarakhand, CDAC Mohali, Chandigarh University, PEC University, Chitkara University, BEL Panchkula, etc.
- ❖ **Institute Visits** for Interaction IIM Lucknow, IIM Kozhikode, ISB Mohali.
- ❖ **Reviewers** of many reputed International Journals **like** IEEE Transactions on Communications, IEEE; Wireless Personal Communication, Springer; Ad Hoc & Sensor Wireless Networks, Old City Press, USA.

Seminars/Workshops Organized and other activities

- ✚ **Member** of Board of studies (BoS) of Electronics and Communication 2015-21.
- ✚ **Member** of Board of studies (BoS) of Electronics Engineering 2023-25.
- ✚ **Member** of Board of studies (**BoS**) of Electronics and Communication, Jammu University, Jammu 2019-22.
- ✚ **Member** of Board of Control, UIET for **2018-19, 2022-23**.
- ✚ **Elected Added member** of Faculty of Engineering and Technology **2017-19, 2023-25**.
- ✚ **Elected Joint Secretary** of Panjab University Teachers Association (**PUTA**) (**2017-18**).
- ✚ **Member** of Core committee of **JAC-2016 & JAC-2017** for BE/BTech/BArch courses.
- ✚ **Convener**, Help Desk & Legal Cases for BE Admissions **under JAC 2016-2018**.
- ✚ **Member** Discipline Committee under UTECHNOS **2005-2023**.
- ✚ **Member**, Research Monitoring Committee (RMC) of Electronics & Communication, **Since 2015**.
- ✚ **Member** of Institution Reforms Committee under TEQIP-II.
- ✚ **Member** of Anti Ragging Squad of Panjab University **2012-19**.
- ✚ **Nodal Officer**, UIET for Prime Minister Special Scholarship Scheme for J&K Students **2017-21**.
- ✚ **NBA Coordinator**, for B.E. (ECE) & M.E.(ECE) programs **2014-21**; **BE(ECE)** is **NBA Accredited** upto 30.06.2025 & **ME(ECE)** is **NBA Accredited** upto 30.06.2024.
- ✚ **Technical Program Chair** for IEEE sponsored International Conferences RAECS **2014 & 2015**.
- ✚ **Member** of Inspection committees for various affiliated colleges.
- ✚ **Organized** National Seminar on Wireless communication and commercialization of technology On 30th April 2020.
- ✚ **Organized** International Seminar on Challenges in Power generation & instrumentation on 3rd May 2020.
- ✚ **Organized** Curriculum revision workshop on 13th March 2021.
- ✚ **Organized** Faculty Development Program on Emerging Trends in Electronics and Communication (ETEC-2020) from 4th to 8th August 2020.

Outreach Activities

- Organized **YOGA camp** for one month & acted as Team Leader for **2nd International Yoga Day**.
- Organized **Tree plantation drives**; cleanliness drives in Boys' Hostel 8.
- Organized **medical camps** in Boys' Hostel no. 8 for residents, mess/canteen staff.
- Organized **Inaugural and Annual day functions** for the residents of the Hostel.
- Lab mentor for **5 days Inspire Camp** held at University for school students in 2017.

(Dr. Naresh Kumar)