

Title	Dr.	First Name	SANJEEV	Last Name		
Designation	Professor					
Department	Electronics and Instrumentation Engineering					
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Education:						
Degree	Institution			Year	Details	
Doctor of Philosophy (Ph.D.)	UP Technical University, Lucknow / IIT(BHU), Varanasi			2012	Electronics Engg.	
Master of Technology (M.Tech.)	Panjab University, Chandigarh / Central Scientific Instrument Organisation (CSIO), Chandigarh			1998	Instrumentation Engg.	
Master of Science (M.Sc.)	University of Roorkee (now IIT Roorkee), Roorkee			1995	Physics	
Academic Career Profile:						
Organisation / Institution		Designation	Duration	Role		
Dept of Electronics and Instrumentation Engineering, MJP Rohilkhand University, Bareilly		Professor	26 th August 2014 to till date	Teaching, Research and Administrative		
Dept of Electronics and Instrumentation Engineering, MJP Rohilkhand University, Bareilly		Associate Professor	26 th August 2011 to 25 th August 2014	Teaching, Research and Administrative		
Dept of Electronics and Instrumentation Engineering, MJP Rohilkhand University, Bareilly		Reader	26 th August 2008 to 25 August 2011	Teaching, Research and Administrative		
Dept of Electronics and Instrumentation Engineering, MJP Rohilkhand University, Bareilly		Sr. Lecturer	7 th October 2007 to 25 th August 2008.	Teaching, Research and Administrative		
Dept of Electronics and Instrumentation Engineering, MJP Rohilkhand University, Bareilly		Lecturer	7 th October 2002 to 6 th October 2007	Teaching, Research and Administrative		
National Research and Technology Consortium, Parwanoo (HP) (Govt. of HP)		Scientific Officer	25 th June 1998 to 6 th October, 2002	Industrial Research and Consultancy		
Department of Applied Physics, Regional Engineering College (now NIT), Kurukshetra (Haryana)		Junior Research Fellow	Oct. 1995 to Aug. 1996.	Experimental Research		
Research Interests / Specialization:						
(i) Mid-infrared Semiconductor Optoelectronics (ii) Physical Design of Electronics/ Instrumentation Systems. (iii) Metrology, Calibration and Quality Control. (iv) IPR and Entrepreneurship (v) Wireless Sensor Network						
Teaching/Industrial Experience (Subjects/Courses Taught) Last 05 years:						
Total: Teaching & Research Experience : 23 years Industrial Research/consultancy Experience : 04 years Subjects/Courses Taught: # Analytical Instrumentation to B.Tech. (EI) 4 th year # Instrument Design and Reliability to Integrated M.Tech+PhD (Dual Degree) students # Advances in Electronics and Instrumentation Engineering to Pre-PhD course work Students						

Subjects/Courses Floated:

- # Optical Fiber Instrumentation for B.Tech. (EI) 3rd year.
- # Analytical Instrumentation for B.Tech. (EI) 4th year
- # Soft Computing Techniques for B.Tech. (EI) 2nd year
- # Sensors and Transducers for B.Tech. (EL) 2nd year
- # Instrument Design and Reliability to Integrated M.Tech+PhD (Dual Degree)
- # Advances in Electronics and Instrumentation Engineering for Pre-PhD course work students

Labs. Setup:

- # Developed Advanced Instrumentation, Optical Fiber Instrumentation, Transducer Lab.
- # Research Lab. (Grant from DST, UGC New Delhi, TEQIP-III and UP-CST Lucknow)

Academic/Administrative Responsibilities Held: (Last five years)

- o **General Secretary, Rohilkhand University Teachers Association (campus) (RUTA-C)** for the session [2015-2016].
- o Member **Examination Committee**, MJP Rohilkhand University, Bareilly [2015-2016]
- o **Coordinator**, Central Evaluation, Centre-14 (Chemistry), MJP Rohilkhand University, Bareilly [October 2018]
- o **Coordinator**, Central Evaluation, Centre-3 (Education), MJP Rohilkhand University, Bareilly [August 2020]
- o **NTA Representative (Bareilly)**, for conducting NEET-2019 on 5th May 2019.
- o **Associate Research Coordinator**, Directorate of Research (DoR), MJP Rohilkhand University, Bareilly [19 September 2020- 14 January 2021]
- o **Associate Director**, Directorate of Research (DoR), MJP Rohilkhand University, Bareilly [15 January 2021 – September 2023]
- o **Expert Member, BOS Committee, IET Lucknow** since 2020.
- o **Coordinator**, Pre-PhD course work, Faculty of Engineering and Technology (EC/EI/ME/CSIT/EE) 2023 [February 2023-August 2023]
- o **Member Academic Council** since June 2023.
- o **Head, Department of E&I Engineering**, MJP Rohilkhand University Bareilly [July 2021-August 2024]
- o **Member Executive Committee, Institution of Engineers, Bareilly Local Centre (BLC)** since 2024.
- o **Representative Teaching Faculty, IQAC Cell**, since Jan. 2025
- o **Convener BOS, Department of E&I Engineering** since Aug. 2025.

Publications/Training Course attended (Last five years):

Publication in Referred Journal: 01; Training courses/FDP/STTP attended: 05
 Publication in Conferences: 01; Patents Published: 02 ; Books Chapters :02

Invited Talks/Keynote address/Expert lecture delivered (Last five years) : 03

1. Expert lecture on, “More about Electronic Testing and Measuring Instruments,” delivered online to Teethankar Mahaveer University (TMU), Moradabad December 12, 2020.
2. Expert lecture on, “The Intellectual Property Rights (IPR) and Its Ecosystem in India,” delivered online to Birla Institute of Technology Ranchi, Deoghar Campus, January 28, 2021
3. Expert lecture on, “About Electronic Testing and Measuring Instruments,” delivered online to ICFAI University Baddi (HP) Aug. 28, 2025.

Professional Societies Memberships: 11

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| • Instrument Society of India (ISOI) | : | Life Member [1919] |
| • Optical Society of India (OSI) | : | Life Fellow [L-561] |
| • Systems Society of India (SSI) | : | Life Member [32089] |
| • Metrology Society of India (MSI) | : | Life Member [LM-1237] |
| • Institution of Electronics and Telecommunication Engineers (IETE), New Delhi | : | Fellow [F-501638] |
| • Indian Association of Physics Teachers (IAPT) | : | Life Member [L8219] |
| • Indian Society of Technical Education (ISTE) | : | Life Member [LM-130037] |
| • Indian Science Congress Association (ISCA) | : | Life Member [L-40089] |
| • All India Council for Technical Skill Development | : | Member [AICTSD/PROFESSOR/11555] |
| • The Institute of Electrical and Electronics Engineers (IEEE), USA | : | Senior Member [95560688] |
| • Institution of Engineers (India) Kolkata | : | Fellow [F- 1266698] |

Research Projects completed (Major Grants / Collaborations):**(A) Research Projects completed: 08**

Sr. No.	Title of Project	Funding Agency/ Ref.	Duration/ Amount	Institute/University	Position
1.	Calibration and Validation of Data Products Obtained from Satellite Borne Remote Sensing Cameras	ISRO/ Respond	1 year/ 4.0 lacs	REC, Kurukshetra	JRF
2.	Precision Temperature Calibration System	DST, New Delhi [IDP/ Sen/07/97]	2 years/7.4 lacs	NRTC, Parwanoo	Co-PI
3.	Studies on Light Emitting Diode (LED) and Injection Laser Diode (ILD) based on Narrow Bandgap Semiconductors for Mid-Infrared Applications	UGC, New Delhi [F.No.-32-123/ 2006 (SR)]	2 years/0.91 lac	MJP Rohilkhand Univ. Bareilly	PI
4.	Analysis and Modeling of Mid-Infrared (Mid-IR) Emitters for their Applications in Optical Fiber Communication and Gas Instrumentation Systems	CST-UP, Lucknow (DO No. 1592 dtd. 31/5/2007)	2 years/2.96 lacs	MJP Rohilkhand Univ. Bareilly	PI
5.	Modeling of Injection Laser Diodes for Free Space Optical Communication in Mid-infrared (3-5 μ m) Spectral Region	FAST Scheme SERC, DST, New Delhi [Ref: SR/FT/ET-036/2009 dtd. 10/9/2009]	3 years/ 6.3 Lacs.	MJP Rohilkhand Univ. Bareilly	PI
6.	Analytical Modeling of Laser Diodes for Gas Sensor Instrumentation and Free Space Optical Communication in Mid-infrared (2-5 μ m) Spectral Region.	UGC, New Delhi [F.No. 39-393/2010(SR) dtd. 12/1/2011]	2 years/ 0.70 Lacs.	MJP Rohilkhand Univ. Bareilly	PI
7.	Computer Simulation of Long-Wavelength Vertical Cavity Surface Emitting Lasers (VCSELs) for Optoelectronics Applications	Council for Science and Technology-Uttar Pradesh, Lucknow [No. CST/597 dtd. 8/6/2011]	03 years/ 8.76	MJP Rohilkhand Univ. Bareilly	PI
8.	Comparative Studies on LEDs and Lasers Operating in Mid-infrared (2-5 μ m) Spectral Region	TEQIP-III, MJPRU, Bareilly	One year/2.0 Lacs	MJP Rohilkhand Univ. Bareilly	PI

Latest Publications, and Patents: 06+02 (Last five years)

- Sanjeev Tyagi and Sundar Singh, "Analytical Modeling of AlGaAs/GaAs Vertical Surface Emitting Lasers (VCSELs) operating at 850 nm for Free-Space Optical Communication," International Journal of Engineering Applied Sciences and Technology (ISSN No. 2455-2143), Vol. 4, Issue-9, pp. 165-167, January 2020.
- Sanjeev Tyagi, "The Comparative Studies on Modeling and Simulation of Sources Based on InAsSb Material System Operating in Mid-infrared (MIR) Spectra Region," Communicated to MOTL (Springer) April 2020.
- Sanjeev Tyagi, P.K. Saxena, and R. Kumar, "Numerical simulation of In_xGa_{1-x}As/InP PIN photodetector for optimum performance at 298 K," *Opt Quant Electron* **52**, 374, August 2020.
- DS Gangwar, S. Tyagi and S. K. Soni, "The Impact of Deployment Pattern and Routing Scheme on the Lifetime in Multi-Sink Wireless Sensor Network." *Journal of Wireless Personal Communication* (ISSN: 0929-6212, IF: 1.10), November 2020.
- DS Gangwar, Sanjeev Tyagi and S. K. Soni, "A Techno-Economic Analysis of Digital Agriculture Services: An ecological approach towards green growth," *International Journal of Environmental Science and Technology* (Springer, IF 2.540), April 2021.
- Sundar Singh, Veerendra Singh, Sanjeev Tyagi, Nupur Saxena, Zishan H. Khan and Pragati Kumar, "Room temperature ferromagnetism in metal oxides for spintronics: a comprehensive review," *Optical and Quantum Electron*, vol. 55, pp. 122-163, January 2023.

Patents:

1. AI SUPPORTED UNMAN AERIAL VEHICLE FOR SPRAYING PESTICIDES, Patent Design no. 454886-001; Date 10/04/2025 (Indian Patent)
2. AI POWERED CARDIOVASCULAR RISK ASSESSMENT COMPUTER DEVICE, Patent no. 6454953; Date:08/07/2025 (UK Patent)

Books/Book Chapter Published: 04 (Last Five years)

S.No	Title	Author's Name	Publisher	Year of Publication (ISBN)
1.	Biosensors in Climate Smart Organic Agriculture	DS Gangwar and S. Tyagi	Springer Nature (Chapter-11)	2024 (ISBN: 978-3-031-61094-3)
2.	Modeling of Mid-infrared Sources for Pollutant Gases Detection Systems (Book Chapter no. 9)	Sanjeev Tyagi, Sundar Singh and Piyush Kuchhal	Soham Publication	2021 (ISBN: 978-81-949722-4-2)
3.	Technology Enabled Learning to Counter Effect of Covid-19 Pandemic on Education in India (Book Chapter no. 11)	Sundar Singh and Sanjeev Tyagi	Soham Publication	2021 (ISBN: 978-81-949722-4-2)
4.	Nanomaterials for Pharmaceutical Applications (Book pp. 221-265)	Sundar Singh, SB Tiwari and Sanjeev Tyagi	Springer book Emerging Trends in Nanotechnology	2021 (ISBN: 978-981-15-9904-0)

Ph.D. student Supervised: 01

Mr. Deerendra Singh Gangwar, Assistant Professor, Faculty of Technology, UTU, Dehradun pursuing Ph.D. in ECE at Uttarakhand Technical University, Dehradun. Date of award of PhD degree: 24th August 2021.

Workshops/Conference Organised: 02

- (a) One day Turnitin: iThenticate User Awareness workshop organized by Department of E&I Engineering, Directorate of Research and M/s Turnitin India Education Pvt. Ltd., on 22nd December 2021.
- (b) One day Turnitin: iThenticate User Awareness workshop organized by Department of E&I Engineering, Directorate of Research and M/s Turnitin India Education Pvt. Ltd., on 23rd March 2023.

Reviewer of Journals/Conferences:

- (a) Optoelectronics and Advanced Materials-Rapid Communication (OAM-RC)
- (b) Journal of Electronics Materials (Springer)
- (c) Silicon (Springer)
- (d) Reviewers for several international/ national conferences sponsored by IEEE, Springer and Elsevier

References:

1. **Dr. P. Chakrabarti**
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Indian Institute of Engineering Science and Technology (IIST), Shibpur
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2. **Dr. Sujit K. Sinha**
CEO and Director
NIIRT- Centre for Calibration, Analysis and Testing (A NABL Accredited Lab.)
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Date: 11/11/2025

(Prof. Sanjeev)