


**Dr. Sandeep Choudhary**

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<b>Personal Information</b>		
(i)	Name	Dr. Sandeep Choudhary
(ii)	Qualification	Ph.D. (Biomedical Eng., IIT Indore), M.Tech. (Biomedical Eng., IIT Kharagpur), B.Tech. (Biomedical Eng., SGSITS Indore)
(iii)	Designation	Assistant Professor
(iv)	Email-id	sandeepiit05@gmail.com
(v)	Employee No.	221221
(vi)	Department	Department of Biomedical Engineering, School of Engineering and Technology



<b>Specialization</b>
Biomedical Instrumentations and device developments Embedded systems, and IoT for biomedical applications Biosensors development and testing Food monitoring, Environmental monitoring, and Healthcare diagnostics Biomedical Signal and Image processing Biostatistics

<b>Educational Qualification</b>					
S. N.	Degree	Thesis Title	Specialization	Year	University/Board
01	Post-doc	Raman scattering with GNPs for biofluid analysis and bovine semen sexing	Biomedical Engineering	2021-2022	IIT Indore
02	PhD	Optical Instrumentation for fluorescent biosensors	Biomedical Engineering	2022	IIT Indore
03	MTech	Repetitive pulse generator for Electrochemotherapy	Medical Imaging and Informatics	2017	IIT Kharagpur
04	BTech	Digital stethoscope	Biomedical Engineering	2014	SGSITS Indore

## Awards and Owners

- Got MP Young Scientist Award in the 37<sup>th</sup> edition by M.P. Council of Science and Technology (March 2022).
- Qualified UGC-NET (Assistant Professor) in December-2019.
- Qualified GATE (Instrumentation Engineering) in March 2015.

## Research/Publications

### International/National Patents

**Choudhary, S.,** Vyas, T., Joshi, A.\*, "Portable biosensing system and method for milk spoilage and adulteration detection" Indian Provisional Patent Application No. 202121023242 dated May 25, 2021.

### International/National Journal Publications

1. **Choudhary, S.,** Joshi, B., Pandey, G., & Joshi, A. (2019). Application of single and dual fluorophore-based pH sensors for determination of milk quality and shelf life using a fibre optic spectrophotometer. *Sensors and Actuators B: Chemical*, 298, 126925.
2. **Choudhary, S.,** Joshi, B., & Joshi, A. (2021). Translation of Carbon Dot Biosensors into an Embedded Optical Setup for Spoilage and Adulteration Detection. *ACS Food Science & Technology*.
3. **Choudhary, S.,** & Joshi, A. (2021). Design and development of an embedded based system for real-time milk spoilage/shelf-life monitoring and adulteration detection. *International Dairy Journal*, 105207.
4. Pandey, G., **Choudhary, S.,** Chaudhari, R., & Joshi, A. (2020). Ultrasonic atomizer-based development of pH sensor for real-time analysis. *Scientific reports*, 10(1), 1-11.
5. Pandey, G., Chaudhari, R., Joshi, B., **Choudhary, S.,** Kaur, J., & Joshi, A. (2019). Fluorescent Biocompatible platinum-porphyrin-doped polymeric hybrid particles for oxygen and glucose biosensing. *Scientific reports*, 9(1), 1-12.

### International/National Conference Publications

1. **Choudhary, S.,** & Vyas, T. (2021). Fluorescence-based sensing assay for point of care detection of healthcare parameters in food samples. *SPAST Abstracts*, 1(01).

### International/National Book Chapters

1. **Choudhary, S.,** Pandey, G., Mukherjee, R., & Joshi, A. (2019). Biomedical instrumentation: focus toward point-of-care devices. In *Biomedical Engineering and its Applications in Healthcare* (pp. 297-326). Springer, Singapore.
2. **Choudhary, S.,** Kaur, J., Chaudhari, R., Jayant, R. D., & Joshi, A. (2019). Enzyme-based biosensors. In *Bioelectronics and Medical Devices* (pp. 211-240). Woodhead Publishing.
3. **Choudhary, S.,** Vyas, T., Kumar N, Joshi, A. (2022). Point-of-Care Biosensors for Glucose Sensing. In *Nano-biosensors for point-of-care medical diagnostics*. published by Springer Nature.

### List of Conferences/Workshops/Seminars Organized

1. Organize and presented poster in International Conference on Emerging Areas in Biosciences and Biomedical Technologies (eBBT-2) at IIT Indore. (February 7-9, 2020).
2. Organize and presented poster in Symposium on "Emerging Areas in Biosciences and Biomedical Technologies (eBBT)" at IIT Indore. (January 5-6, 2018).

### Certification courses

S.N.	Details	Year
1.	Participated in the TEQIP III sponsored Short-term course on "Research Methodology in Science and Engineering" organized jointly by Department of Physics and department of Metallurgy Engineering and Materials Science.	December 26-30, 2020
2.	Participated in the Faculty Enrichment Webinar for Physics Teachers in Higher Education organized by National Resource Centre for Education	March 12, 2021
3.	Participated In the Webinar: Self-driven Nanomaterials, Devices, and Systems for Healthcare and Environmental Applications Organized by IEEE-Nanotechnology Council (NTC) Student Chapter Indian Institute of Technology, Indore.	October 5, 2021
4.	Participated in the National Science Day Event Organised by IIT Indore.	February 28, 2021
5.	Participated & completed successfully AICTE Training And Learning (ATAL) Academy Online Elementary FDP on "Internet of Things an Emerging Technology in Electronics Industry" at Institute of Engineering and Technology, Devi Ahilya University, Indore.	July 19-23, 2021
6.	Participated in 5 <sup>th</sup> National workshop on NEMS/MEMS & Theragnostic devices at Centre of Nanotechnology, IIT Guwahati.	February 21-23, 2019