

Dr. SHEEJA JAGADEVAN

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EDUCATION

Ph.D. (Engineering Science), University of Oxford, UK-2011

M. Tech. (Environmental Sc. and Engg.), Indian Institute of Technology, Bombay - 2002

M.Sc. (Environmental Science), Andhra University, Visakhapatnam - 1998

PROFESSIONAL EXPERIENCE

- **Associate Professor** (April 2022 – Till date): Environmental Science and Engineering, IIT(ISM) Dhanbad
- **Assistant Professor** (September, 2014 – April 2022): Environmental Science and Engineering, IIT(ISM) Dhanbad
- **Post-doctoral Research Fellow** (2012 - 2013): Civil and Environmental Engineering, University of Michigan, Ann Arbor, USA.
- **University Lecturer** (2004 - 2006): School of Biotechnology and Chemical Engineering, Vellore Institute of Technology, India
- **Research Fellow** (2002 - 2004): National Institute for Interdisciplinary Science and Technology (CSIR), Trivandrum, India.

RESEARCH INTERESTS

- Treatment of industrial wastewater.
- Low-cost treatment of arsenic and fluoride in drinking water.
- Resource recovery from wastewater.
- Antimicrobial resistance.
- Valorization of agricultural residues via biochar application.

AWARDS/DISTINCTIONS

- Awarded IIT Bombay Research Paper Award 2011
- Received Faculty for the Future Fellowship - 2010 and 2011
- Awarded Rajit Bhagwati Memorial Gold Medal, IIT, Bombay- 2002.
- Qualified Graduate Aptitude Test in Engineering (GATE-99) in Life Sciences (Score of 98.67, All India Rank-19).
- Qualified NET (for Lecturership / Assistant Professorship) conducted by ASRB (ICAR) - 2001.
- Andhra University topper, M Sc. (Environmental Sciences), 1998.

TEACHING EXPERIENCE

Earth System Science, Environmental Chemistry, Wastewater Engineering, Water Resource Planning and Management, Environmental Aspects of Industries, Environmental Engineering, Environmental Biotechnology, Instrumental Techniques in Environmental Analysis, Advanced Wastewater Engineering.

Ph.D. SUPERVISION

Ongoing

1. Mr. Rahul Jatav, Joined July, 2021
2. Ms. Gitanjalee Kumari, Joined July, 2022
3. Ms. Ruth Daniel, Joined July, 2022
4. Mr. Govind Chouhan, Joined July, 2023
5. Ms. Arjita Deb, Joined July 2024
6. Mr. Vishal Kumar Gupta, Joined July 2024

Awarded

1. Dr. Megha Tyagi, Hybrid systems for treatment of cyanide and phenol from coke-oven wastewater, 2021.
(*Present employment: Project Scientist, IIT(ISM), Dhanbad*)
2. Dr. Anu Rana, Treatment of arsenic contaminated groundwater by nano zero-valent iron and indigenous arsenite oxidizing bacteria, 2021.
3. Dr. Nisha Kumari, Evaluation of bacterial arsenic metabolism in isolates from contaminated groundwater and sediment, 2021.
(*Present employment: Assistant Professor, MUIT, Noida*)
4. Dr. Soni Kumari, Phosphorus recovery from nutrient-rich wastewater through struvite crystallization, 2022.
(*Present employment: Post-doctoral Research Associate, Michigan State University, USA*)
5. Dr. Krishna Yadav, Development of novel biochar composite for efficient removal of fluoride from groundwater, 2022.
(*Present employment: Post-doctoral Research Associate, Iowa State University, USA*)
6. Dr. Parmita Chawley, Evaluation of an ammonia oxidizing bacterium *Nitrosomonas mobilis* MS1 for quinoline biodegradation and biodiesel production, 2023.

AFFILIATIONS

Member, International Water Association

Member, Society for Environmental Toxicology and Chemistry (SETAC)

Associate member, The Institution of Chemical Engineers (IChemE)

Life Member, The Indian Science Congress Association.

Life-member, Biotech Research Society of India.

SPONSORED R&D PROJECTS

1. “Development of a low cost technology based on biochar supported green zerovalent iron for arsenic and fluoride removal from water”, (PI), Rs. 32.5 Lakhs, DST, 2020-2024.
2. “Microbial Remediation of Arsenic with Zerovalent Iron”, (PI), FRS, IIT(ISM) Dhanbad, March 2015- February 2018, Rs. 13.22 Lakhs.
3. “Development of Research Laboratory for Advanced Environmental Microbiology and Biotechnology”, DST-FIST, November 2015-2021, Rs. 144 lakhs. (Co-coordinator).
4. Minor Research Project titled “Low-cost defluoridation from groundwater using biochar”, November 2016-April 2017, (PI), Rs. 2 Lakhs.

ADMINISTRATIVE ROLES

INSTITUTE LEVEL

Present

- Vice-Chairperson, Career Development Centre
- Member, Environmental Advisory Committee.
- Member, Departmental Grievance Redressal Committee.
- Member, Solid Waste Management Committee.
- Faculty advisor: Quiz Club.
- External member, Doctoral Scrutiny Committee in Civil Engineering, Chemistry, Humanities and Social Science departments.

Past

- Associate Dean, Academic (UG) (May 2022 – October, 2023)
- Coordinator, Academic (UG) (September 2021 – April, 2022)
- Member, Internal Complaints Committee.
- Nominated member, Senate IIT(ISM).
- Member, Dean's Advisory Council (Information Systems)
- Member, Institute Monitoring and Review Cell.
- Member, Institute Academic Review Committee.
- Member, Pharmaceutical Chemistry Coordination Committee.
- Member, Institute Library Advisory Committee.
- Warden, Ruby and Rosaline Hostel (March 2015 – May 2018).
- Faculty advisor: Mic Drop Toastmasters Club.
- Faculty advisor: Quiz Club.
- Nominated as nodal faculty to coordinate the Female intake of IIT JEE Advanced.
- Appointed as a Reporting Center User to carry out activities of IIT JEE Advanced Reporting Center 2017, 2018, 2019.
- Member, Innovation Group, IIT(ISM) 2017.
- Represented IIT(ISM) in the JAB sub-committee meeting at IIT-Mandi in July 2017.

DEPARTMENT LEVEL

Present

- Member, Departmental Faculty Selection Committee
- Member, Departmental Budget Committee
- Faculty In charge, FIST Lab, ESE

Past

- Member Secretary, Departmental Advisory Committee
- Co-coordinator, ENVIS Centre, IIT (ISM), Dhanbad
- Member, Departmental Postgraduate Committee
- Member of moderation board
- Faculty Coordinator (MIS) PhD students.
- Member, Tabulation Committee.