

RECIPIENTS OF INSA ASSOCIATE FELLOWS (IAF)

(For the year of 2024)

1. **Dr Tanushree Bhattacharya** (30.04.1979), PhD, Associate Professor, Department of Civil and Environmental Engineering, Birla Institute of Technology, Mesra, Ranchi.

Tanushree Bhattacharya contributed significantly to the monitoring, assessment and remediation of environmental pollutants that led to the appraisal of metal contamination in ground water and soils, and provided implications on health hazards.

2. **Professor Parag Ratnakar Gogate** (30.06.1975), PhD, Professor of Chemical Engineering and Controller of Examinations, Chemical Engineering Department, Institute of Chemical Technology, Mumbai.

For his significant contributions to the fundamental understanding of the governing mechanisms and the design of cavitation reactors for process intensification of different chemical, physical, and biotechnological applications.

3. **Professor Chidambaram Gunanathan** (05.06.1977), PhD, School of Chemical Sciences, National Institute of Science, Education and Research Bhubaneswar, Jatani.

Recommended for his outstanding work on catalysis and sustainable chemistry, especially on efficient and selective catalytic transformations using bio-renewable alcohols and industrial feedstocks with no hazardous waste, chemoselective hydroelementation reactions, amine-amide metal-ligand cooperation in pincer catalysts for sustainable catalytic transformations, direct catalytic cross-coupling of secondary alcohols, alpha-alkylation and olefination of nitriles, ketazine synthesis, alpha-alkylation of ketones and beta-naphthol, N,N-dialkylation of acylhydrazides, selective hydrogenation of epoxides, self-coupling of secondary alcohols, alkenylation of organic compounds, cross-coupling of silanes and silanols, and selective reduction of esters, demonstrating his significant contributions towards advancing sustainable chemical transformations.

4. **Dr Anzar Ahmad Khuroo** (26.10.1974), PhD, Associate Professor, Centre for Biodiversity and Taxonomy, Department of Botany, University of Kashmir, Srinagar.

Dr Khuroo made extensive contributions to ecology of invasive alien species causing change in biodiversity pattern, and spread of exotic species as impacted by climate change in Kashmir mountains of the Western Himalayas.

5. **Dr Girdhari Lal** (09.08.1978), PhD, Scientist F, National Centre for Cell Science, Pune.

Dr Lal's laboratory is working on cellular and molecular mechanisms of inflammation and tolerance in relation to inflammatory diseases, autoimmunity and tumours. Further, they are investigating the role of chemokine receptors and their therapeutic importance in inflammation and autoimmunity.

6. **Dr Biswanath Maity** (26.12.1982), PhD, Associate Professor, Centre of Biomedical Research (CBMR), SGPGI Campus, Lucknow.

Dr. Maity has made significant contributions towards understanding the impact of G-protein regulation in chemotherapy-induced heart complications, drug-induced liver injury, non-alcoholic fatty liver disease and disease, etc and on synthesis/characterization of nanostructures that can help cell-selective delivery of drugs.

7. **Professor Sukhendu Mandal** (31.03.1977), PhD, Indian Institute of Science Education and Research Thiruvananthapuram, Trivandrum.

Recommended for his significant contributions in the field of metal nano-clusters, inorganic materials, and solid-state chemistry with especial focus on synthesizing new stable metal clusters and cluster-assemblies and exploring their physical and chemical properties; for example stabilization of Cu in a zero-oxidation state, synthesis of a new silver nanocluster with a hexagonal close-packed Ag₁₄ unit containing S₂-templated Ag₂S quantum dot-like core and a 2D cluster-assembled material, developing a nickel-based thiolate complex for electrochemical ammonia production from dinitrogen, and synthesizing a phosphine and halide-protected Au nanocluster useful for efficient Ullmann coupling reactions.

8. **Professor Supriyo Mitra** (12.11.1976), PhD, Department of Earth Sciences, Indian Institute of Science Education and Research Kolkata, Nadia.

Supriyo Mitra's seismological study revealed flexural underthrusting of India beneath Himalaya, thinned-continental crust beneath Shillong Plateau, and continent-oceanic transitional crust beneath Bengal Basin, and entire Indian crust seismogenic.

9. **Professor Vineeth N Balasubramanian** (29.11.1978), PhD, Department of Computer Science and Engineering, Indian Institute of Technology Hyderabad, Sangareddy.

For his outstanding contributions to the fields of deep learning, computer vision and explainable AI, especially in the development of fundamental methods for learning robust and reliable deep learning models in continually evolving environments.

10. **Dr Dimple Notani** (02.08.1976), PhD, Associate Professor, National Centre for Biological Sciences, TIFR Bangalore, Bangalore.

Outstanding contribution towards 3-D organization of genome that dictates spatio-temporal control of gene expression. Pioneering work identifying novel mechanisms that control enhancer – promoter interactions.

11. **Professor Ajith Parameswaran** (27.05.1980), PhD, Professor (H), International Centre for Theoretical Sciences, Tata Institute of Fundamental Research Bengaluru, Bangalore.

Outstanding contributions on gravitational lensing of gravitational waves.

12. **Dr Manas Ranjan Sahoo** (12.06.1983), PhD, Associate Professor, School of Mathematical Sciences, National Institute of Science Education and Research Bhubaneswar, Khurda.

For contributions to study the initial boundary value problems extending earlier results for the pure initial value problem in the area of partial differential equations.

13. **Professor Raghunath Sahoo** (28.02.1976), PhD, Indian Institute of Technology Indore, Simrol.

Outstanding work in field of QGP & phenomenology specially in small systems with application of ML techniques.

14. **Professor Neelima Satyam** (06.08.1979), PhD, Department of Civil Engineering Indian Institute of Technology Indore, Simrol.

For her significant contributions to the field of geotechnical and earthquake engineering, including landslide hazard assessment, liquefaction studies, and seismic microzonation. The liquefaction hazard assessment tool developed by her has become an industry standard for assessing liquefaction susceptibility.

15. **Professor Kamal Priya Singh** (13.07.1979), PhD, Indian Institute of Science, Education and Research Mohali, Mohali.

Pioneering work on novel electronic, optical and magnetic properties of silk and implications on understanding proteins.

16. **Professor Kashmir Singh** (24.01.1976), PhD, Department of Biotechnology, Panjab University, Chandigarh.

Prof Singh has made significant contribution in the field of plant functional genomics and metabolic engineering with a special focus on important medicinal plants of Himalayan region.

17. **Professor Neetu Singh** (20.06.1979), PhD, Center for Biomedical Engineering, Indian Institute of Technology Delhi, New Delhi.

For her significant contributions to the development of new-age materials and technologies for healthcare, including a simple drug screening platform to monitor cancer cells and bacteria and a drug delivery platform with RBC membrane towards personalized medicine.

18. **Dr Sudhir Pratap Singh** (15.12.1977), PhD, Scientist-D, Center of Innovative and Applied Bioprocessing (CIAB), NABI, Mohali.

Dr Singh generated metagenomic resources from thermal spring, cold lake, ethnic fermented food products, and acidic mine, and discovered novel genes encoding enzymes with superior catalytic properties of high-value to agriculture biotechnology.

19. **Dr Surya Prakash Singh** (15.04.1978), PhD, Principal Scientist, Department of Polymers and Functional Materials, CSIR-Indian Institute of Chemical Technology, Hyderabad.

Recommended for his significant contributions in the field of materials and molecules, especially for the development of photonic devices such as organic thin-film solar cells (OPV), dye-sensitized solar cells (DSSC), and perovskite solar cells, design and development of new light-harvesters like small molecule electron donors, soluble fullerene and non-fullerene electron acceptors, photosensitizers, and hole-transport materials, resulting in power conversion efficiencies over 10% for non-fullerene acceptors, over 13% for DSSCs, and over 22% for perovskite solar cells, as well as indoor solar cells with a remarkable efficiency of 38%.

20. **Professor Timir Tripathi** (28.01.1981), PhD, Department of Zoology, School of Life Sciences, North-Eastern Hill University, Shillong.

Dr. Tripathi is a molecular biophysicist interested in understanding protein function through its interactions and dynamics. He has published good quality work in multiple areas with a special emphasis on redox proteins from *Fasciola gigantica*, a disease causing organism in ruminants.
