

## One-day Training Program

on

### **MODELING AND EXPERIMENTAL TECHNIQUES ON DISPERSED PHASE FLOWS**

**September 21, 2022**

**Advanced Materials Research and Applications (AMRA) Lab**

**Power Engineering Department, Jadavpur University**

Jointly sponsored by SERB (CRG/2019/005887) and IEA-CNRS, France

Mode of training: In-person

**Target Group: Researchers (Faculty, Post-doc, Doctoral Students)**

**Resource Persons: 1) Prof. Harunori N. Yoshikawa, Institut de Physique de Nice (INPHYNI), France**

**2) Prof. Ranjan Ganguly, Department of Power Engineering, Jadavpur University**

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| <b>Registration:</b>  | <b>10:30 – 10:45</b> |
| <b>Inauguration:</b>  | <b>10:45 – 11:00</b> |
| <b>Session 1: Theory of particle-laden flows (HY)</b>   | <b>11:00 – 11:50</b> |
| <b>Session 2: <u>Case study 1</u>: Cooling tower fog harvesting on wettability engineered meshes (RG)</b>   | <b>12:00 – 12:50</b> |
| <b>Session 3: <u>Case Study 2</u>: Modeling of electrodynamic transport &amp; its application in Wearable Electrostatic Air-Purification System for face masks (WEAPS) (HY)</b> | <b>13:00 – 13:50</b> |
| <b>Lunch Break:</b>   | <b>13:50 – 14:30</b> |
| <b>Session 4: Laboratory visit and training on surface engineering and characterization</b>   | <b>14:30 – 15:30</b> |
| <b>Session 5: Laboratory training of high-speed imaging of particle laden flows and droplet dynamics</b>  | <b>15:30 – 16:30</b> |
| <b>Session 6: Evaluation and Feedback</b>   | <b>16:30 – 17:15</b> |
| <b>Valedictory session:</b>   | <b>17:15 – 17:30</b> |

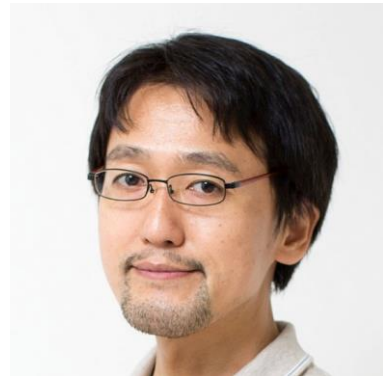
Interested candidates may email Prof. Ranjan Ganguly ([ranjan.ganguly@jadavpuruniversity.in](mailto:ranjan.ganguly@jadavpuruniversity.in)) latest by 17/9/2022 with the subject title "Request for Registration at SERB-CEA Training Workshop":

- 1) Name: \_\_\_\_\_
- 2) Affiliation: \_\_\_\_\_
- 3) Research area: Up to 5 key words
- 4) Purpose of attending the training (within 50 words):

**Coordinator: Prof. Ranjan Ganguly (+91 9830371618)**

### Resource Persons:

**Prof. Harunori N. Yoshikawa:** Dr. Harunori Yoshikawa has studied electronics at Doshisha University in Kyoto. He graduated in 2000 and worked in Applied Physics Laboratory at the same university. He obtained his master's degree in electrical engineering in 2002 and then, perform his Ph.D. research in Laboratoire Physique et Mécanique des Milieux Hétérogènes at ESPCI in Paris. After obtaining Ph.D. degree in physics in 2006 with a thesis on hydrodynamic instabilities of oscillatory flows, he had opportunities to work at different French laboratories as a postdoctoral researcher on different topics: bubble dynamics in microgravity, boiling in microgravity, pattern formation in two-phase flows, and electrohydrodynamic convection. In 2013, he has joined Université Côte d'Azur as an associated professor. His current research interest involves hydrodynamic instabilities of two-phase flows and electrohydrodynamical flow controls. He is developing the latter interest to designing a novel electrostatic air purification system thanks to an international collaboration with Prof. Ranjan Ganguly.



**Prof. Ranjan Ganguly:** Dr. Ranjan Ganguly is a Professor in the Power Engineering Department of Jadavpur University. He is also an adjunct professor at the Mechanical and Industrial Engineering Department of University of Illinois at Chicago (UIC), and a Fellow of West Bengal Academy of Science and Technology (WAST). Dr. Ganguly completed BE in Power Plant Engineering (1995) and ME with Heat Power specialization (2000), both from JU. He received PhD from UIC (2005). He also had postdoctoral research stints at Universität Hannover, TU Darmstadt, Virginia Tech, and UIC. Dr. Ganguly has received several accolades, including the Alexander von Humboldt Fellowship (2008-09), the Indian National Academy of Engineering Young Engineer Award (2008), BRNS Young Scientist Research Award (2006), Dean's Scholar Award and Provosts Award for Graduate Research at UIC (2004), and University Medals at JU (1995 and 2000). His primary research encompasses surface-microfluidics, wettability engineering, heat transfer, and energy systems. Dr. Ganguly has 101 international journal publications, six book chapters, two granted and two published patents to his credit. His work is highly cited in different fields of engineering research.

