



Module PMRF-ISSS029

Fluid Mechanics & Heat Transfer: A physical Insight

Name of the PMRF student

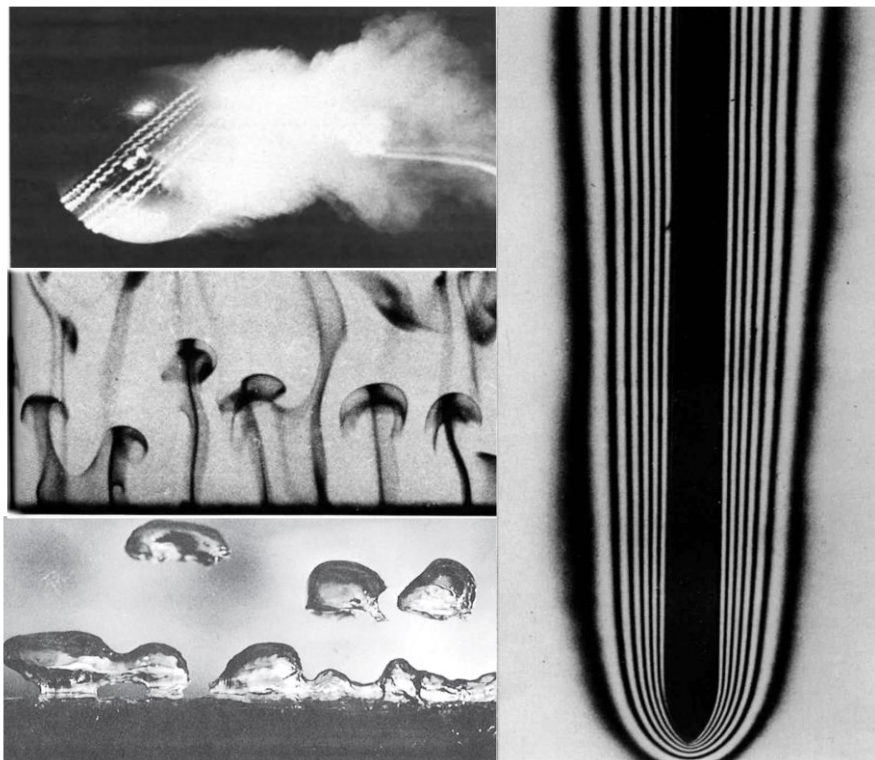
Chetan Teki, Ph. D. 4th Year, IISc

Required background of the students taught

Mechanical Engineering,
Aerospace Engineering,
Chemical Engineering,
Civil Engineering

Online session coordinator

Will be chosen from the list of registrants



Schedule of the module

Days: Saturday

Timing: 6:00 to 7:30 PM

Course Starts on: 3rd September

Details of the content of the module

This course aims to provide a qualitative insight into some fundamental and advanced concepts of Fluid Mechanics and Heat Transfer. The lectures purely focus on physical understanding of the concepts in these areas. This course helps students in strengthening their preparation for competitive exams and higher studies. Following is the brief list of the topics that will be covered:

1. Brief overview of Thermodynamics
2. Physical understanding of some fluid properties, Contact angle & Surface Wettability, Fluid Statics & Kinematics (In brief)
3. Integral equations, Some Solutions of Navier Stokes equation, Pipe flow, Regimes of Fluid flow, Potential flow
4. Boundary Layer Theory, Boundary layer separation, Compressible flow and Turbulent flow (In brief)
5. Heat Conduction and Radiation
6. External and Internal Forced and Free Convection, Boiling and Condensation (In brief)

Meeting link : Will be shared later

Link

Registration link: [https://forms.gle/](https://forms.gle/8PZ8f7dXCMoiaPQy8)

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