Ashish Arote, PhD

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EDUCATION

JULY 2017 – JUNE 2021 **PhD, Mechanical Engineering**
National Institute of Technology, Surat, India.
Dissertation: "Fundamental Properties of the Spatially Oscillating Liquid Jets: A Numerical Approach"
Advisors: Dr. Jyotirmay Banerjee and Dr. Mukund Bade

JULY 2013 – JUNE 2015 **M. Tech, Mechanical Heat and Power Engineering**
Walchand College of Engineering, Sangli, India
Dissertation: "Performance Analysis of CRDI Engine Based on Piston Geometry, Injection Pressure and EGR"
Advisor: Dr. Suhas Jagtap

JULY 2007 – JUNE 2011 **B. E., Mechanical Engineering**
Pune University, Pune, India.

JOURNAL PUBLICATIONS

1. H. Bodhanwalla, **A. Arote**, and J. Banerjee, "Linear Stability Analysis of Nappe Oscillations," Journal of Flow Visualization and Image Processing, May 2022. [In Press]

2. **A. Arote**, M. Bade, and J. Banerjee, "Behavior of Synchronous and Asynchronous Spatially Oscillating Planar Liquid Jets in Tandem," Physics of Fluids, vol. 33 no. 5, 052102, May 2021.
DOI: 10.1063/5.0046990.

3. **A. Arote**, M. Bade, and J. Banerjee, "Properties of Blended Advection Schemes for Hyperbolic Conservation Laws," Sadhana, Apr. 2021.
DOI: 10.1007/s12046-021-01609-0.

4. **A. Arote**, M. Bade, and J. Banerjee, "On Coherent Structures of Spatially Oscillating Planar Liquid Jet Developing in a Quiescent Atmosphere," Physics of Fluids, vol. 32, no. 8, 082111, Aug. 2020. (***Editor's Pick***)
DOI: 10.1063/5.0016480.

5. **A. Arote**, M. Bade, and J. Banerjee, "An Improved Compressive Volume of Fluid Scheme for Capturing Sharp Interfaces Using Hybridization," Numerical Heat Transfer, Part B: Fundamentals, pp. 1–25, Jul. 2020.
DOI: 10.1080/10407790.2020.1793543.

6. **A. Arote**, M. Bade, and J. Banerjee, "Numerical Investigations on Stability of the Spatially Oscillating Planar Two-Phase Liquid Jet in a Quiescent Atmosphere," Physics of Fluids, vol. 31, no. 11, 112103, Nov. 2019.
DOI: 10.1063/1.5123762.

CONFERENCE PROCEEDINGS

1. **A. Arote**, M. Bade, and J. Banerjee, "Numerical Investigations into Effect of Confinement on Oscillating Planar Liquid Jet," International Conference on Applications in Computational Engineering & Sciences 2020, VIT, Vellore, 30th - 31st Oct 2020.
   DOI: 10.1088/1757-899X/1128/1/012032.

2. **A. Arote**, M. Bade, and J. Banerjee, "Comparative Study of the Fluid Interface-Capturing High-Resolution Algebraic Schemes," 2nd International Conference on Future Learning Aspects of Mechanical Engineering, Amity University, Noida, 5th-7th Aug 2020.
   DOI: 10.1007/978-981-16-0159-0_3.

3. R. Jha, **A. Arote**, and J. Banerjee, "Advection Stabilization Using Lower Order Scheme Blending: A Case Study of Rayleigh Taylor Instability," 46th National Conference on Fluid Mechanics and Fluid Power, PSG Coimbatore, 9th-11th Dec 2019.
   DOI: 10.1007/978-981-16-0698-4_88

WORK EXPERIENCE

NOV 2021 – PRESENT
Assistant Professor
NEXTA (in collab with Oxford University), Shimane University, JAPAN.
Objective: CFD code development for metal solidification applications.

AUG 2015– JULY 2017
Assistant Professor, Mechanical Engineering
Sanjivani College of Engineering, Maharashtra, India.
Courses: Heat Transfer, Fluid Mechanics, Internal Combustion Engines.

AUG 2011– AUG 2013
Production Supervisor
S V Hi-Tech Pvt. Ltd., Nashik, India.
Role: Quality control inspections.

SUPPLEMENTARY TRAINING

FEB 2018
Workshop on "High Performance Computing"
S V NIT, Surat.
by C-DAC, Pune

JUNE 2018
GIAN Course on "Recent Advances on Multi-phase Flows"
IIT Kharagpur, India.
Instructor: Prof. Debjyoti Banerjee, Texas A&M University

AWARDS

AUG 2020
EDITOR'S PICK
Journal Paper "On Coherent Structures of Spatially Oscillating Planar Liquid Jet Developing in a Quiescent Atmosphere" was promoted by the editorial board of *Physics of Fluids*.

REFERENCES

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