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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. DOI: [10.1615/JFlowVisImageProc.2022041019](https://doi.org/10.1615/JFlowVisImageProc.2022041019)
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](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://doi.org/10.1007/978-981-16-0698-4_88)

WORK EXPERIENCE

NOV 2021 – PRESENT	Assistant Professor[Research Position] 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 AND GRANTS

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 <i>Physics of Fluids</i> .
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REFERENCES

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