

Department of Mechanical Engineering,
 Indian Institute of Technology, Kanpur
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- CITIZENSHIP Indian
- CURRENT ASSIGNMENT Assistant Professor, Department of Mechanical Engineering, IIT Kanpur, India.
- EDUCATION **Ph.D.** (Mechanical Engineering) January 2012
 Indian Institute of Science, Bangalore, India.
- M.Sc. (Engg.)** (Mechanical Engineering) April 2007
 Indian Institute of Science, Bangalore, India.
- B.E.** (Mechanical Engineering) June 2000
 Walchand College of Engineering, Shivaji University, Kolhapur, India.
- PUBLICATIONS PRASANTH, P. & SHINDE, S. Y. & NARASIMHA, R. 2019 “A DNS Study of entrainment in an axisymmetric turbulent jet as an episodic process.” submitted to **Physical Review Fluids**.
- SHINDE, S. Y. & ARAKERI, J. H. “Physics of unsteady thrust and flow generation by a flexible surface flapping in the absence of a free stream.” **Proc. R. Soc. A**, **474**, 20180519, doi:<http://dx.doi.org/10.1098/rspa.2018.0519>.
- SHINDE, S. Y. & ARAKERI, J. H. 2014 “Flexibility in flapping foil suppresses meandering of induced jet in absence of free stream.” **J. Fluid Mech.**, **757**, 231–250, doi:<http://dx.doi.org/10.1017/jfm.2014.480>.
- SHINDE, S. Y. & ARAKERI, J. H. 2013 “Jet meandering by a foil pitching in quiescent fluid.” **Phys. Fluids**, **25**, 041701, doi:<http://dx.doi.org/10.1063/1.4800321>.
- CONFERENCES
- NIGALTIA, C. & SHINDE, S. Y., Numerical investigation of switching of a jet generated by a foil pitching in still fluid, 7th *International Congress on Computational Mechanics and Simulation (ICCMS 2019)*, 11–13 December 2019, IIT Mandi, India. (Abstract submitted)
 - SHINDE, S. Y. & ARAKERI, J. H., Flexibility induces ‘unsteady actuator disk’ type of action for a foil flapping in the absence of free stream, 71st *Annual meeting of the American Physical Society’s Division of Fluid Dynamics (APS-DFD)*, 18–20 November 2018, Atlanta, Georgia, USA. (Talk)
 - SHINDE, S. Y. & PRASANTH, P. & NARASIMHA, R. , On the outer flow field and ‘episodic’ entrainment in a round turbulent jet, 69th *Annual meeting of the American Physical Society’s Division of Fluid Dynamics (APS-DFD)*, 20–22 November 2016, Portland, Oregon, USA. (Talk)
 - SHINDE, S. Y. & ARAKERI, J. H., Flapping flexible foil propulsion, *International Conference on Computational and Experimental Marine Hydrodynamics (MARHY 2014)*, 3–4 December 2014, Chennai, India. (Talk)
 - SHINDE, S. Y. & ARAKERI, J. H., The effect of chordwise flexibility on flapping foil propulsion in quiescent fluid, 63rd *Annual meeting of the American Physical Society’s Division of Fluid Dynamics (APS-DFD)*, 21–23 November 2010, Long Beach, California, USA. (Talk) (Received ‘Travel Award’ from the American Physical Society)
 - SHINDE, S. Y. & ARAKERI, J. H., A pitching foil with a flexible flap creates an orderly jet, Gallery of Fluid Motion, 63rd *Annual meeting of the American Physical Society’s Division of Fluid Dynamics (APS-DFD)*, 21–23 November 2010, Long Beach, California, USA. (Video)
 - SHINDE, S. Y. & ARAKERI, J. H., A novel hovering mechanism from a flapping two-dimensional flexible foil, *International Conference on Intelligent Unmanned Systems (ICIUS)*, 3–5 November 2010, Bali, Indonesia. (Talk)

- SHINDE, S. Y. & ARAKERI, J. H., A new type of hovering from a flapping flexible foil, 6th *World Congress on Biomechanics* (WCB), 1–6 August 2010, Singapore. (Talk) (Received ‘Student Travel Award’ from the World Congress on Biomechanics)
- SHINDE, S. Y. & ARAKERI, J. H., Hydrodynamic propulsion with a flapping flexible foil, *International Symposium - Fluids Days*, 31 December 2007 – 1 January 2008, Jawaharlal Nehru Center for Advanced Scientific Research, Bangalore, India. (Poster)
- SHINDE, S. Y. & ARAKERI, J. H., Study of oscillatory lift-based propulsion by flapping airfoil with flexible trailing edge, 5th *World Congress of Biomechanics* (WCB), 29 July – 4 August 2006, Munich, Germany. (Talk)
- SHINDE, S. Y. & ARAKERI, J. H., Effect of flexibility on the flow over an oscillating airfoil, *International conference on Marine Hydrodynamics* (MAHY), 5–7 January 2006, Visakhapatnam, India. (Talk)

RESEARCH INTERESTS Experimental Fluid Mechanics, Optical diagnostic techniques, Biofluidynamics, Fluid–Structure Interaction, Unsteady Flows, Propulsion by Flapping Foils, Swimming and Flying, Cloud Fluid Dynamics.

STUDENTS ADVISED **Past:**
 Graduated one Dual Degree BT-MT Student (2018)
 One BTP Group (2016): Received **the best project award** in the Department
 4 SURGE students

Present:
 M.Tech.: 3 and 2 shared
 Ph.D.: 2 students (shared)

TEACHING Aug. 2016 me401a - Energy Systems II
 Jan. 2017 me631a - Viscous Flow Theory
 Aug. 2017 me401a - Energy Systems II
 Jan. 2018 me649a - Experimental Methods in Thermal Sciences
 Aug. 2018 me647a - Introduction to Turbulent Flows
 Jan. 2019 me698c - Fluid Mechanics of Flapping Foils

Received **Teaching Excellence** recognition for me631a - Viscous Flow Theory in Jan-April 2017

Designed and taught a new course me698c - Fluid Mechanics of Flapping Foils

Tutorials: ESO201A - Thermodynamics, ESO204A - Fluid mechanics and rate processes

Lab: ME231A - Fluid Mechanics (2017, 2018, 2019)

PROJECTS **Core Research Grant (CRG)** - Science and Engineering Research Board (SERB)
 Costing: Rs. 67 Lakhs
 Status: approved on 22 February 2019 (project reference no. CRG/2018/003575)

EXTRA-CURRICULAR ACTIVITIES 2016 – 2019 Faculty Adviser - Association of Mechanical Engineers (**AME**).
 2016 – 2018 **DPGC** member.
 2017 – 2018 **BTP** evaluation committee member
 2016 – 2018 Faculty Adviser - Society of Automotive Engineers (**SAE** Students Group).
 2016 – 2018 Faculty Adviser - Autonomous Underwater Vehicle (**AUV** Students Group).

The **AUV** team achieved **2nd position** in the nationwide “Students Autonomous Underwater Vehicle (**SAVe 2017**)” held in December 2016 at National Institute of Ocean Technology (NIOT) Chennai.

Chaired a Session on “Biological Fluid Dynamics: Locomotion Flapping” at the **APS-DFD conference**, 18–20 November 2018, Atlanta, Georgia, USA.

PROFESSIONAL EXPERIENCE	Oct. 2015 onward	Assistant Professor, Dept. of Mechanical Engineering, Indian Institute of Technology, Kanpur, India.
	Oct. 2012 – Oct. 2015	Post-Doctoral Fellow, Engineering Mechanics Unit, Jawaharlal Nehru Center for Advanced Scientific Research, Bangalore, India.
	Jan. 2012 – Oct. 2012	Post-Doctoral Fellow, Fluid Mechanics Lab., Dept. of Mechanical Engineering, Indian Institute of Science, Bangalore, India.
	Jan. 2007 – July 2007	Research Assistant, Fluid Mechanics Lab., Dept. of Mechanical Engineering, Indian Institute of Science, Bangalore, India.
	July 2000 – Aug. 2001	Graduate Engineer, Production Department, PHILIPS India Ltd. (Enabling Technologies Group), Kolkata & Pune, India.
	July 1999 – Aug. 1999	Industrial training in Kirloskar-Copeland Ltd., Karad, India.
HONORS AND AWARDS	2013	stood 1st among the “ Top 20 Most Read Articles ” in Physics of Fluids in April 2013: SHINDE, S. Y. & ARAKERI, J. H. 2013, Phys. Fluids , 25 .
	2010	‘ Best Poster Award ’, at the 13 th annual symposium, Department of Mechanical Engineering, Indian Institute of Science, Bangalore, India.
	2009	Gold Medal and ‘ Best Thesis Award ’ for M.Sc.(Engg.), Department of Mechanical Engineering, Indian Institute of Science, Bangalore, India.
	1996	National Merit Scholarship for securing 12th rank in the HSC Merit List .
	1994	National Merit Scholarship for securing 26th rank in the SSC Merit List .
FELLOWSHIPS, SCHOLARSHIPS AND GRANTS	2012 – 2015	Post-Doctoral Fellowship at JNCASR, Bangalore, India.
	2012	Post-Doctoral Fellowship at IISc, Bangalore, India.
	2007 – 2012	Ministry of Human Resource & Development (MHRD), Government of India: scholarship for Ph.D. at IISc, Bangalore, India
	2002 – 2004	Ministry of Human Resource & Development (MHRD), Government of India: scholarship for M.Sc. (Engg.) at IISc, Bangalore, India
	1994 – 2000	National Merit Scholarship
