

# Sourabh V. Apte

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## (a) Professional Preparation

University of Pune, India, Mechanical Engineering, B.E. July 1994

Indian Institute of Science, Bangalore, India, Mechanical Engineering, M.E., January 1996

Pennsylvania State University, State College, PA, Mechanical and Nuclear Engineering, Ph.D.,  
December 2000

Center for Turbulence Research, Stanford University, Stanford, CA, Engineering Research Associate,  
Multiphase Turbulent Flow Simulations, 2000-2005

## (b) Appointments

Professor, Mechanical Engineering Oregon State University, (June 2016-present)

Visiting Professor, Aix-Marseille University, CNRS, Marseille (May-September 2019)

Adjunct Professor, Water Resources Science and Water Resources Engineering, Oregon State  
University, (June 2016-present)

Associate Professor, Oregon State University, (October 2011-2016)

Assistant Professor, Oregon State University, (October 2005-2011)

Air Force Summer Faculty Wright-Patterson, AFB (July-August 2010, July-August 2011)

Editorial Board, International Journal of Rotating Machinery (2010-present)

Editorial Board, Fluids (2020-present)

ORISE Faculty Research Participant, DoE's NETL, Albany, OR (November 2006-2010)

Engineering Research Associate, Stanford University (2000-2005)

## (c) Products

### (i) Five Related Products

1. Wood, BD, He, X., and **Apte, SV**, 2020, "Modeling Turbulent Flows In Porous Media," *Annual Review of Fluid Mechanics*, Vol. 52, pp. 171-203.
2. He, X., **Apte, SV**, Finn, JR, and Wood, BD, 2019, "Angular Multiscale Statistics In a Porous Bed," *Journal of Fluid Mechanics*, Vol. 873, pp. 608-645.
3. He, X., **Apte, SV**, Schneider, K. and Kadoch, B., 2018, "Angular Multiscale Statistics In a Porous Bed," *Physical Review Fluids*, Vol. 3 (8), p. 084501.
4. Hester, ET., Cardenas, BM, Haggerty, R., and **Apte, SV.**, 2017, "The Importance And Challenge of Hyporheic Mixing," *Water Resources Research*, Vol. 53 (5), pp. 3565-3575.
5. **Apte S.V.**, Martin, M. and Patankar N.A., 2009, "A Numerical Method for Fully Resolved Simulation (FRS) of Rigid Particle-Flow Interactions in Complex Flows," *Journal of Computational Physics*, Vol. 228 (8), pp. 2712-2738.

### (ii) Five Other Products

1. Jackson, T., **Apte, SV**, Haggerty, R., and Budwig, R., 2015, "Flow Structure and Mean Residence Times of Lateral Cavities in Open Channel Flows: Influence of Bed Roughness and Shape", *Environmental Fluid Mechanics*, Vol. 15 (5), pp. 1069-1100.
2. Jackson, T., Haggerty, R., and **Apte, SV**, 2013, "A Fluid-Mechanics Based Classification

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Scheme For Surface Transient Storage In Riverine Environments: Quantitatively Separating Surface From Hyporheic Transient Storage," *Hydrology and Earth System Sciences (HESS)*, Vol. 17, No. 7, pp. 2747-2779.

3. Ghodke, C., and **Apte, SV.**, 2018, "Spatio-Temporal Analysis of Hydrodynamic Forces on the Particle Bed in an Oscillatory Flow Environment," *Journal of Fluid Mechanics*, Vol. 841, pp 167-202.
4. Pakseresht, P., Esmaily, M., and **Apte, SV.**, 2020, "A Correction Scheme for Wall Bounded Two-Way Coupled Point Particle Simulations," *Journal of Computational Physics*, Vol. 420 (1), p. 10971.
5. Moin, P., and **Apte S.V.**, 2006, "Large-eddy Simulation of Realistic Gas Turbine Combustors," *AIAA Journal*, Vol. 44 (4), 698-708. (Special issue on Combustion Modeling and LES: Development and Validation Needs for Gas Turbine Combustors).

### (d) Synergistic Activities

- Scientific committee, International Conference of Liquid Atomization and Spray Systems, Edinburgh, Scotland (September 2021).
- Organizing committee, American Physical Society's DFD meeting, Portland OR (2016) and Seattle, WA (2019).
- Paper's Chair and Organizing Committee, 13<sup>th</sup> International Conference on Liquid Atomization and Spray Systems in Vail, Colorado (July 2009).
- Participated in synergistic efforts to establish academic alliance between Oregon State University and Department of Energy's National Energy Technology Laboratory (Albany, OR) in the field of oxy-coal combustion (2011-present).

### (e) Honors and Awards

- Robert T. Knapp Award, ASME Fluids Division (2013)
- American Society for Engineering Education's Air Force Summer Faculty Fellowship at Wright Patterson Airforce Base (2010 and 2011)
- Englebrecht Young Faculty Award, Oregon State University (2011)
- Editorial Board (Associate Editor), International Journal of Rotating Machinery (2010-)
- Research Equipment Reserve Award, Oregon State University (2006,2009)
- Jawaharlal Nehru Memorial Trust Outstanding Academics Award (1996)
- Graduate Aptitude Test in Engineering, All India Rank: 2<sup>nd</sup> (1994)
- Open & National Merit Scholarship for Outstanding Academics (1988)