

Curriculum Vitae

Ambrish Pandey

Department of Physics, Indian Institute of Technology Roorkee, Haridwar 247667, India

Academic Degrees

- 2016 - M. Sc. - Ph. D. (Dual Degree), Department of Physics, Indian Institute of Technology Kanpur, Kanpur 208016, Uttar Pradesh, India
- 2008 - B. Sc. (Honours) in Physics, Department of Physics, Banaras Hindu University, Varanasi 221005, Uttar Pradesh, India

Employment

- Jan. 2023 — present: Assistant Professor, Department of Physics, Indian Institute of Technology Roorkee, India
- May. 2023 — present: Joint Faculty, Centre for Space Science and Technology, Indian Institute of Technology Roorkee, Haridwar 247667, India
- Dec. 2019 — Dec. 2022: Research Associate, Center for Space Science, New York University Abu Dhabi, UAE
- Nov. 2016 — Nov. 2019: Post-Doctoral Fellow, Institut für Thermo- und Fluidodynamik, Department of Mechanical Engineering, Technische Universität Ilmenau, Germany

Awards

- *Best Paper Award of the TU Ilmenau 2020* for the article “Turbulent Superstructures in Rayleigh-Bénard convection”, *Nature Communications* **9**, 2118 (2018).
- Junior Research Fellowship, conducted by the Council of Scientific and Industrial Research (CSIR), India.

Editorial

- Associate Editor: *European Journal of Mechanics B/Fluids* (since October 2024)
- Reviewer: *Journal of Fluid Mechanics*, *Europhysics Letters*, *Scientific Reports*, *European Journal of Mechanics B/Fluids*, *Physics of Fluids*, *Chaos: An Interdisciplinary Journal of Nonlinear Science*, *Zeitschrift für Angewandte Mathematik und Mechanik (ZAMM)*

Research Visits

- January 2016 to March 2016, as guest scientist to Technische Universität Ilmenau, Germany

Invited Talks

- Title: *Attempts to approach solar convection parameters—but a long way to go*, Field Theory and Turbulence, ICTS Bengaluru, India (Dec. 18-22, 2023)
- Title: *Influence of plume activity on thermal convection in a rectangular cell*, International Symposium on Artificial Intelligence Driven Computational Fluid Dynamics, IIT Gandhinagar, India (Jan. 12-14, 2026)

PhD Students

- Shreshthi (since July 2023)
- Abhay Singh Rawat (since January 2026)

Selected Publications (see also [Google Scholar](#) and [ORCID](#))

- **A. Pandey**, J. Schumacher, M. Parsani, and K. R. Sreenivasan, *Influence of plume activity on thermal convection in a rectangular cell*, *J. Fluid. Mech.* **1034**, A41 (2026). [pdf](#)
- **A. Pandey** and K. R. Sreenivasan, *Transient and steady convection in two dimensions*, *J. Fluid Mech.* **1015**, A42 (2025). [pdf](#)
- **A. Pandey** and K. R. Sreenivasan, *Turbulent Convection in Rotating Slender Cells*, *J. Fluid. Mech.* **999**, A28 (2024). [pdf](#)
- **A. Pandey**, J. Schumacher, and K. R. Sreenivasan, *Non-Boussinesq low-Prandtl number Convection with a Temperature-dependent Thermal Diffusivity*, *Astrophys. J.* **907**, 56 (2021). [pdf](#)
- E. Fonda*, **A. Pandey***, J. Schumacher, and K. R. Sreenivasan, *Deep learning in turbulent convection networks*, *Proc. Natl. Acad. Sci. USA* **116** (18) 8667—8672 (2019). [pdf](#) [SM](#) [*equal contribution]
- **A. Pandey**, J. D. Scheel, and J. Schumacher, *Turbulent Superstructures in Rayleigh-Bénard convection*, *Nat. Commun.* **9**, 2118 (2018). [pdf](#) [SM](#)
- **A. Pandey** and M. K. Verma, *Scaling of large-scale quantities in Rayleigh-Bénard convection*, *Phys. Fluids* **28**, 095105 (2016). [pdf](#)