

## CURRENT POSITION

### Georgia Institute of Technology

Atlanta, GA, USA

Postdoctoral Fellow, Earth and Atmospheric Sciences, Advisor: Prof Annalisa Bracco

2023–Current

- Focus: “Internal waves around seamounts”

## EDUCATION

### University of New Hampshire (UNH)

Durham, NH, USA

Ph.D. in Applied Mathematics, Advisor: Prof John F Gibson

2018–2023

- Thesis: “Symmetries, Bifurcations and Transition to Turbulence”

### Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR)

Bengaluru, India

M.S. in Engineering Mechanics, Advisor: Prof M Alam

2015–2018

- Thesis: “Pattern Formation and Anomalous Modes in Axisymmetric Compressible Taylor-Couette Flow”

### Birla Institute of Technology and Science (BITS) Pilani

Pilani, India

B.E.(Hons.) in Mechanical Engineering

2011–2015

- Thesis: “Investigation of Turing Patterns Using Finite Element Method and Symmetry”

## PUBLICATIONS

- [1] **P. Aghor** and J. F. Gibson, “Invariant symmetric subspaces of plane Poiseuille flow”, *under prep.*, vol. ??, 2024.
- [2] **P. Aghor**, M. McKinley, and A. Bracco, “Internal waves around New England seamounts”, *under prep.*, vol. ??, 2024.
- [3] **P. Aghor** and M. Atif, “Effect of outer cylinder rotation on the radially heated Taylor-Couette flow”, *Physics of Fluids*, vol. 35, no. 9, 2023.
- [4] **P. Aghor** and M. Alam, “Nonlinear axisymmetric Taylor-Couette flow in a dilute gas: Multiroll transition and the role of compressibility”, *Journal of Fluid Mechanics*, vol. 909, 2021.

## TEACHING

- **Teaching Assistant** at UNH 2018 –2019, 2021–2022  
*Linearity (covers ODE's, linear algebra, phase plane analysis), Multidimensional Calculus*
- **Teaching Assistant** at BITS Pilani 2015  
*Finite Element Method (ME G512)*

## SCHOLARSHIPS AND AWARDS

- **Department of Mathematics and Statistics Teaching Assistant Award, UNH** 2022–2023
- **Dissertation Year Fellowship, UNH Graduate School Award** 2022–2023
- **Departmental Nominee, Graduate School TA Teaching Award** 2021–2022, 2022–2023

## CONFERENCES, WORKSHOPS, SUMMER SCHOOLS

---

### Dynamics days US 2023

Jan 2023

Online

- Poster presentation titled: ‘Codimension-two bifurcation in plane Couette flow’

### Boulder Summer School - Hydrodynamics Across Scales

Jul 2022

University of Colorado

Boulder, Colorado, USA

- Poster presentation titled: ‘Invariant Subspaces of Channel Flow’

### APS-DFD Meeting

Nov 2021

Phoenix Convention Center

Phoenix, Arizona, USA

- Gave a talk on ‘Exploring Invariant Symmetry Subspaces of Channel Flow’

### School on Dynamics of Complex Systems

May-Jun 2016

International Center for Theoretical Sciences (ICTS, Bangalore)

Bengaluru, Karnataka, India

- Theme - Geophysical Fluid Dynamics

### CIMPA Summer School on Current Research in Finite Element Method

Jun-Jul 2015

Indian Institute of Technology (IIT, Bombay)

Mumbai, Maharashtra, India

- Conducted tutorial sessions on FreeFem++

### Finite Element Meet 2014

Dec 2014

Tata Institute of Fundamental Research (TIFR-CAM)

Bengaluru, Karnataka, India

- Gave a talk on ‘Numerical Continuation and Bifurcation in Presence of Symmetry in FreeFem++’

## EXTRACURRICULAR ACTIVITIES (SPORTS, WRITING AND OUTREACH)

---

### • BITS Pilani University Taekwondo Team

2014–2015

*Gold Medal in BOSM 2015, Bronze Medal in BOSM 2014*

### • Wrote a Ted-Ed Script - The greatest mathematician that never lived

Jul 2020

[\*Video, Transcript\*](#)

### • Wrote an article for *Loksatta*, a state-wide prominent Marathi language Newspaper about **Black Lives Matter Protests and Stripping the Pride off Columbus**

Jun 2020

[\*Link\*](#)

### • Wrote an article for *Loksatta*, a state-wide prominent Marathi language Newspaper about the **SIR Model of Epidemiology**

Apr 2020

[\*Link\*](#)

### • Volunteer at the Student Mentoring Program at JNCASR

2017, 2018

*Taught 11<sup>th</sup> – 12<sup>th</sup> standard physics and mathematics to economically backward students.*

## REFERENCES:

---

1. Prof. John F. Gibson (john.gibson@unh.edu)
2. Prof. Gregory P. Chini (greg.chini@unh.edu)
3. Prof. Annalisa Bracco (annalisa@eas.gatech.edu)