

VINAY KUMAR
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Academic Record

- 2021-Present:** **Research Scholar (Integrated Ph.D.)**
International Centre for Theoretical Sciences¹-
Tata Institute of Fundamental Research,
Bengaluru, India
- 2018-2021:** Bachelors of Science (Honors) Physics - First Division
Jamia Millia Islamia²,
Jamia Nagar, Delhi
- 2016-2018:** Senior Secondary School - Aggregate Percentage = 88%
Apeejay School Noida, Uttar Pradesh,
CBSE Board
- 2016:** Matriculation - CGPA = 10.0
Apeejay School Noida, Uttar Pradesh,
CBSE Board

Research

- CORE AREA:** Astrophysical Fluid Dynamics and Plasma Astrophysics
- OTHER INTERESTS:** Hydrodynamics,
 PDEs and Spectral Methods,
 Turbulence.
- CODES USED:** PLUTO Code (C,C++), Dedalus (Python), Pencil-Code (Fortran)
- OTHER TOOLS:** Python, Mathematica

Conferences Attended

9. 42nd meeting of the Astronomical Society of India (ASI)
 Jan-Feb 2024
 IISc, ISRO, JNP
 Presented a poster titled '*Exploring the Tearing Mode Instability in 3D using Direct Numerical MHD Simulations*'.
8. Field Theory and Turbulence
 December 2023
 ICTS
7. Workshop on computational MHD with the PLUTO code
 July 2023
 IISc Bangalore
6. MeetStatphysIndia - School on Nonlinear Physics and Statistical Physics
 June 2023
 IIT Kharagpur

¹Had concurrent offers from DAA-TIFR, IIT-K, IISER-K, IISER-P and IACS.

²Had concurrent offers from NISER, DTU, DU, JNU and BITS.

5. Turbulence: Problems at the Interface of Mathematics and Physics
January 2023
ICTS
4. Bangalore School on Statistical Physics - XIII
July 2022
ICTS
3. ICTS Summer School on Gravitational-Wave Astronomy
May-June 2022
ICTS
2. LIGO-Virgo Open Data Workshop
May 2022
ICTS
1. Waves, Instabilities and Mixing in Rotating and Stratified Flows
April 2022
ICTS

Outreach

CLIMATE CHAOS: Organised by: ICTS and Science Gallery Bengaluru
Venue: Jawaharlal Nehru Planetarium
March, 2023

Scholarships/Fellowships

ICTS-TIFR: Graduate School Fellowship
Department of Atomic Energy
Government of India
2021-Present

INSPIRE: Scholarship for Higher Education
Department of Science and Technology
Government of India
2018-2023
(Given up in 2021 for ICTS GS Fellowship)

Performance in National Level Competitive Exams

IIT JAM (2021): Organised by IISc Bangalore
All India Rank: 26
Scored 68/100 (Physics)

JEE ADVANCED (2018): Organised by IIT Kanpur
Percentile: 99.9283
Scored 123/360 (Physics, Chemistry, Mathematics)
Scored 85/120 in Physics

JEE MAIN (2018): Organised by CBSE
Percentile: 99.9948
Scored 203/360 (Physics, Chemistry, Mathematics)
Scored 102/120 in Physics

NEST (2018): Organised by NISER Bhubaneswar
Percentile: 99.0653
Scored 99/180 (Physics, Chemistry, Mathematics)

BITSAT (2018): Organised by BITS Pilani
Scored 326/450 (Physics, Chemistry, Mathematics, English, Reasoning)