Rohan Dahale

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GitHub: rohandahale 18008 Granada, Spain.

Research Interests

Imaging supermassive black holes and relativistic jets with mm-VLBI observations (EHT, VLBA, GMVA, RadioAstron), Jet Launching, Bayesian Imaging and Modeling, Dynamical Imaging

Experience

PhD Candidate, Instituto de Astrofísica de Andalucía (IAA-CSIC)

Sep 2022–present

- Supervisor: Dr. José L. Gómez
- Event Horizon Telescope Collaboration Member
- "la Caixa" Doctoral Fellow
- Working on Bayesian Imaging using mm-VLBI data

Master Thesis, Instituto de Astrofísica de Andalucía (IAA-CSIC)

Oct 2021-Jun 2022

- Title: Magnetic Fields of Relativistic Jets of Supermassive Black Holes
- Supervisor: Dr. José L. Gómez
- Funded by JAE-INTRO Fellowship by CSIC

Research Intern, University of California, Santa Barbara

May-July 2019

- Supervisors: Dr. Emilia Järvelä, Prof. Robert Antonucci
- Extended Radio Emission in Narrow-line Seyfert 1 Galaxies with JVLA
- QSO PG 1630+377 Lyman Edge Polarisation using Hubble

Education

Universidad de Granada

25 Nov 2022-present

Doctoral Programme in Physics and Space Sciences

Indian Institute of Science Education and Research Kolkata

1 Aug 2017–14 Jul 2022

Bachelor and Master of Science in Physical Sciences

Publications

- [1] G.-Y. Zhao, J. L. Gómez, A. Fuentes, et al., "Unraveling the Innermost Jet Structure of OJ 287 with the First GMVA + ALMA Observations," The Astrophysical Journal, vol. 932, no. 1, p. 72, Jun. 2022. DOI: 10.3847/1538-4357/ac6b9c. arXiv: 2205.00554 [astro-ph.HE].
- [2] E. Järvelä, **Dahale, R.**, L. Crepaldi, et al., "Unravelling the origin of extended radio emission in narrow-line Seyfert 1 galaxies with the JVLA," Astronomy & Astrophysics, vol. 658, A12, Feb. 2022. DOI: 10.1051/0004-6361/202141698. arXiv: 2109.07841 [astro-ph.GA].

Honors and Awards

"la Caixa" Doctoral INPhINIT Fellowship

1 Sep 2022 - 31 Aug 2025

Fundación "la Caixa" - Instituto de Astrofísica de Andalucía (IAA-CSIC)

- 35 fellowships (1000s of applications) are awarded to pursue PhD studies in research centres accredited with the Spanish Seal of Excellence Severo Ochoa in STEM disciplines.
- Duration: 3 years and Total grant: €122,592.

Extension to the JAE Intro 2021 Scholarship

Mar - Jun 2022

Consejo Superior de Investigaciones Científicas (CSIC), Spain

• Extension of 4 months with €2,400 is awarded to top 100 beneficiaries of the JAE Intro Scholarship

JAE Intro 2021 Scholarship

Oct 2021 - Feb 2022

Consejo Superior de Investigaciones Científicas (CSIC), Spain

- 250 scholarships (1000s of applications) offered to undergraduate students.
- Total grant: €3,000 for five months. Used for the Master Thesis at IAA-CSIC.

VIkram Sarabhai Innovation competitiON (VISION)

Jun - Dec 2019

Physical Research Laboratory, Ahmedabad, India

• Received grant of 300,000 INR ($\sim \le 3,500$) and got selected among the top 6 teams in India.

Radio Astronomy Winter School (RAWSC) 2018

Dec 2018

National Centre for Radio Astrophysics (NCRA), Pune, India

Inter University Centre for Astronomy and Astrophysics (IUCAA), Pune, India

• Among the top 30 students selected in India

INSPIRE Scholarship

Aug 2017 - Jul 2022

Department of Science and Technology (DST), India

• Offered to top 1% students in 12th grade exams, undertaking Bachelor and Masters level education in the Natural Sciences. The scholarship amounts to 400,000 INR ($\sim \leq 4,500$) for 5 years.

Contributed Talks

1. Accelerating Bayesian Imaging with Comrade.jl	15 Dec 2022
2022 EHT Winter (Virtual) Collaboration Meeting	Presentation Recording
2. Accelerating Bayesian Imaging with Comrade.jl	26 Oct 2022
Resolve Workshop 2022, MPIfR, Bonn, Germany	Presentation

Next Generation Event Horizon Telescope

Workshops & Conferences	
2022 EHT Winter (Virtual) Collaboration Meeting Event Horizon Telescope Collaboration	12 - 15 Dec 2022
Resolve Workshop 2022 MPIfR, Bonn, Germany	24 - 27 Oct 2022
European Radio Interferometry School 2022 JIVE & ASTRON, Dwingeloo, Netherlands	18 - 25 Sept 2022
European Astronomical Society Annual Meeting Valencia, Spain	27 Jun - 1 Jul 2022
Assembling the ngEHT Next Generation Event Horizon Telescope, Granada, Spain	22 - 25 Jun 2022
EHT 2022 Summer Collaboration Meeting Event Horizon Telescope Collaboration, Granada, Spain	19 - 22 Jun 2022
18th Synthesis Imaging Workshop (virtual) National Radio Astronomy Observatory (NRAO), USA	25 - 28 May 2022
From Vision to Instrument (virtual)	1 - 5 Nov 2021

Teaching

Spring 2021: PH1201: Electricity and Magnetism

Apr - Jul 2021

Level: First Year BS-MS, IISER Kolkata

Autumn 2020: PH1101: Mechanics I

Dec 2020 - Mar 2021

Level: First Year BS-MS, IISER Kolkata

Autumn 2020: PH3103: Mathematical Methods for Physics

Aug - Dec 2020

Level: Third Year BS-MS, IISER Kolkata

Other positions

Local Organizing Committee Member

22 - 25 Jun 2022

 $Assembling\ the\ ngEHT,\ Granada,\ Spain$

Local Organizing Committee Member

19 - 22 Jun 2022

EHT 2022 Summer Collaboration Meeting, Granada, Spain

Indian Institute of Science Education and Research Kolkata

Class Representative, Department of Physical Sciences

Aug 2019 - Dec 2020

Skills

 \mathbf{VLBI} : Comrade.jl, eht-imaging, \mathcal{AIPS} , ParselTongue, DIFMAP, CASA

Programming: Julia, Python Softwares: LAT_FX, Inkscape

Languages: C2: English, Hindi, Marathi (Native)

References

Dr. José L. Gómez

Research Scientist

Instituto de Astrofísica de Andalucía (IAA - CSIC)

Granada, Spain

Web: http://vlbigroup.iaa.es

Email: jlgomez@iaa.es

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