

Rohan Dahale

Website: www.rohandahale.com

Email : rdahale@iaa.es

ORCID : [0000-0001-6982-9034](https://orcid.org/0000-0001-6982-9034)

GitHub : [rohandahale](https://github.com/rohandahale)

Address:

Instituto de Astrofísica de Andalucía
Glorieta de la Astronomía s/n,
18008 Granada, Spain.

Research Interests

Imaging Supermassive Black holes and Relativistic Jets, millimeter-Very Long Baseline Interferometry (mm-VLBI), 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 “A Bayesian approach to imaging supermassive black holes and relativistic jets with 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

- [3] A. Fuentes, J. L. Gómez, J. M. Martí, (**including R. Dahale**), *et al.*, “Filamentary structures as the origin of blazar jet radio variability,” *Nature Astronomy*, vol. 7, pp. 1359–1367, Nov. 2023. DOI: [10.1038/s41550-023-02105-7](https://doi.org/10.1038/s41550-023-02105-7). arXiv: [2311.01861](https://arxiv.org/abs/2311.01861) [[astro-ph.HE](#)].
- [2] G.-Y. Zhao, J. L. Gómez, A. Fuentes, (**including R. Dahale**), *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](https://doi.org/10.3847/1538-4357/ac6b9c). arXiv: [2205.00554](https://arxiv.org/abs/2205.00554) [[astro-ph.HE](#)].
- [1] 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](https://doi.org/10.1051/0004-6361/202141698). arXiv: [2109.07841](https://arxiv.org/abs/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 (~ €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 (~ €4,500) for 5 years.

Invited Talks

[1] 2018 M87* Ring Ellipticity

12 Dec 2023

2023 EHT Virtual Collaboration Meeting

[Presentation](#)

Contributed Talks

[4] Measuring the Ring Ellipticity of M87* using 2018 the EHT data

27 Jun 2023

EHT Collaboration Meeting 2023 Summer, Taichung, Taiwan

[Presentation](#)

[3] A Bayesian Approach to Imaging Supermassive Black Holes and Relativistic Jets

17 May 2023

Doctoral Conferences (Jornadas de Doctorado), IAA-CSIC

[Presentation](#)

[2] Accelerating Bayesian Imaging with Comrade.jl

15 Dec 2022

2022 EHT Winter (Virtual) Collaboration Meeting

[Presentation](#)

[1] Accelerating Bayesian Imaging with Comrade.jl

26 Oct 2022

Resolve Workshop 2022, MPIfR, Bonn, Germany

[Presentation](#)

Workshops & Conferences

2023 EHT Virtual Collaboration Meeting

11 - 15 Dec 2023

Event Horizon Telescope Collaboration

EHT Collaboration Meeting 2023 Summer <i>Event Horizon Telescope Collaboration, Taichung, Taiwan</i>	26 - 30 June 2023
Doctoral INPhINIT Fellowship: 1st Year Annual Gathering <i>Fundación “la Caixa” — SIRIS Academic, CaixaForum Girona, Spain</i>	20 - 23 Feb 2023
2022 EHT Winter (Virtual) Collaboration Meeting <i>Event Horizon Telescope Collaboration</i>	12 - 15 Dec 2022
Resolve Workshop 2022 <i>MPIfR, Bonn, Germany</i>	24 - 27 Oct 2022
European Radio Interferometry School 2022 <i>JIVE & ASTRON, Dwingeloo, Netherlands</i>	18 - 25 Sept 2022
European Astronomical Society Annual Meeting <i>Valencia, Spain</i>	27 Jun - 1 Jul 2022
Assembling the ngEHT <i>Next Generation Event Horizon Telescope, Granada, Spain</i>	22 - 25 Jun 2022
EHT 2022 Summer Collaboration Meeting <i>Event Horizon Telescope Collaboration, Granada, Spain</i>	19 - 22 Jun 2022
18th Synthesis Imaging Workshop (virtual) <i>National Radio Astronomy Observatory (NRAO), USA</i>	25 - 28 May 2022
From Vision to Instrument (virtual) <i>Next Generation Event Horizon Telescope</i>	1 - 5 Nov 2021
Outreach <hr/>	
Official Press Release of the EHT for the 2018 M87* Paper I <i>M87* One Year Later: Proof of a persistent black hole shadow</i>	18 Jan 2024
Official Press Release of IAA-CSIC for the 2018 M87* Paper I <i>English version: M87* One Year Later: Proof of a persistent black hole shadow</i>	18 Jan 2024
Managing Social Media of VLBI Group at IAA-CSIC <i>X.com, Instagram, Threads</i>	May 2022 - present
Developer of the Website of the VLBI Group at IAA-CSIC <i>Maintaining the website here: Website</i>	May - present
Teaching <hr/>	
Spring 2021: PH1201: Electricity and Magnetism <i>Level: First Year BS-MS, IISER Kolkata</i>	Apr - Jul 2021
Autumn 2020: PH1101: Mechanics I <i>Level: First Year BS-MS, IISER Kolkata</i>	Dec 2020 - Mar 2021
Autumn 2020: PH3103: Mathematical Methods for Physics <i>Level: Third Year BS-MS, IISER Kolkata</i>	Aug - Dec 2020
Other positions <hr/>	
Local Organizing Committee Member <i>2023 EHT Virtual Collaboration Meeting</i>	11 - 15 Dec 2023

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

Class Representative, Department of Physical Sciences

Aug 2019 - Dec 2020

Indian Institute of Science Education and Research Kolkata

Skills

VLBI: Comrade.jl, eht-imaging

Programming: Julia, Python

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: jlgoomez@iaa.es