
CURRICULUM VITAE

Arunima Banerjee

Associate Professor

Indian Institute of Science Education & Research, Tirupati
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Yerpedu, Mandal, Durgiperi, Andhra Pradesh 517619
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Email: arunima.iisert@gmail.com

PARTICULARS

BIOGRAPHICAL DETAILS

- Date of Birth: 15th June, 1982
- Gender: Female
- Nationality: Indian

WORK EXPERIENCE

Associate Professor
Department of Physics
Indian Institute of Science Education & Research, Tirupati
Tirupati, India
August 2022 - Present

Assistant Professor
Department of Physics
Indian Institute of Science Education & Research, Tirupati
Tirupati, India
March 2017 - July 2022

DST INSPIRE Faculty Fellow
Inter University Centre for Astronomy & Astrophysics
Pune, India
October 2014 - March 2017

Postdoctoral Visiting Scientist
National Centre for Radio Astrophysics
Tata Institute of Fundamental Research
Pune, India
April 2013 - October 2014

Postdoctoral Fellow
National Centre for Radio Astrophysics
Tata Institute of Fundamental Research
Pune, India
April 2012 - March 2013

Research Associate
Department of Physics
Indian Institute of Science
Bangalore, India
August 2011 - March 2012

EDUCATION

Department of Physics Indian Institute of Science PhD in Astrophysics	Bangalore, India <i>March 2012</i>
Department of Physics Indian Institute of Science M. S. in Physics (<i>First class</i>)	Bangalore, India <i>June 2007</i>
Department of Physics St.Xaviers' College (University of Calcutta) B. Sc (Honours) in Physics (<i>First class</i>)	Kolkata, India <i>June 2004</i>
Gokhale Memorial Girls' High School Higher Secondary Examination (PCMS) (<i>First Division *</i>)	Kolkata, India <i>2001</i>
Bidya Bharati Girls' School Madhyamik Examination (<i>First Division *</i>)	Kolkata, India <i>1999</i>

RESEARCH INTERESTS

My broad area of research is *Astronomy & Astrophysics* focusing on modelling the structure, kinematics, formation and evolution of galaxies using (1) HI 21cm radio-synthesis observations and stellar photometry (2) N-body and hydro-dynamical simulations (3) Machine Learning and Bayesian Statistics

PhD Thesis: Vertical Structure of Disk Galaxies and their Dark Matter Halos
Thesis Supervisor: Chanda J. Jog, Indian Institute of Science, Bangalore

AWARDS & GRANTS

- **CSIR ASPIRE Research Grant** (2023 - 24)
- **Science & Engineering Research Board (SERB)-Core Research Grant (CRG)**(2024)
- **INSPIRE Faculty Award**, Department of Science & Technology, Government of India (2014, Session 1)
- Awarded **K. D. Abhyankar Best Thesis Presentation Award**, Annual Meeting of the Astronomical Society of India, Indian Institute of Science Education & Research, Mohali (2014)
- Awarded **DST-ITS²** to attend the conference *Role of Bars in Galaxy Evolution* held in University of Granada, Granada, Spain (April 2013)
- Awarded **Justice Oak Best Thesis Award**, Astronomical Society of India (2012)
- Awarded **Kumari L. A. Meera Memorial Medal for the best Ph.D thesis** (theoretical physics), Indian Institute of Science, Bangalore (2012)

²Department of Science & Technology - International Travel Scheme

- Awarded **DST-ITS** to attend the conference *Assembling the Puzzle of the Milky Way* held in Observatoire de Besancon, Le Grand-Bornand, France (April 2011)
- Qualified GATE (Graduate Aptitude Test in Engineering) in Physical Sciences (2008) conducted by *MHRD*³
- Awarded *UGC*⁴ **Research Fellowships in Science for meritorious students** (2007-2008)
- Qualified Joint *CSIR – UGC*⁵ Test for Eligibility for Lectureship (NET) in Physical Sciences (2007)
- Qualified Joint Entrance Screening Test (JEST) (2007)
- Qualified Joint Admission Test for MSc (JAM) (2004)
- Qualified Joint Entrance Screening Test (JEST) (2004)
- Awarded National Merit Certificate in Higher Secondary Examination (2001) from *WBCHSE*⁶ (2001)
- Awarded National Merit Certificate in Secondary Examination (1999) from *WBBSE*⁷ (1999)

COURSES TAUGHT

- Optics (BS-MS Semester 6): 2026
- Classical Mechanics II (BS-MS Semester 5): 2025
- Electrodynamics (BS-MS Semester 5): Monsoon 2022, 2023, 2024
- Gravitation & Cosmology (BS-MS Semester 8): Spring 2020, 2021, 2022, 2023, 2024, 2025
- Machine Learning (BS-MS Semester 5)-7: Monsoon 2019, 2020, 2021, 2022, 2023, 2024
- Deep Learning (BS-MS Semester 5-7): Spring 2021, 2022, 2023, 2024, 2025
- Classical Mechanics (BS-MS Semester 5): Monsoon 2017, 2018
- Statistical Mechanics I (BS-MS Semester 6): Spring 2018, 2019
- Mathematical Methods in Physics (BS-MS Semester 5): Monsoon 2019, 2020, 2021
- Advanced Physics Lab III (BS-MS Semester 4): Spring 2026
- Mechanics Lab (BS-MS Semester 1): Monsoon 2017, Spring 2019
- Modern Physics Lab (BS-MS Semester 4): Spring 2018

³Ministry of Human Resource Development, Government of India

⁴University Grants Commission, Government of India

⁵Council of Scientific and Industrial Research-University Grants Commission, Government of India

⁶West Bengal Council of Higher Secondary Education, West Bengal, India

⁷West Bengal Board of Secondary Education, West Bengal, India

LIST OF PUBLICATIONS

of Dr. Arunima Banerjee

IN REFEREED JOURNALS

(The first 20 publications are with IISER Tirupati affiliation)

1. Saha, Biju; Sarkar, Suman; **Banerjee, A.** 2026, "Identifying lopsidedness in spiral galaxies using a Deep Convolutional Neural Network", Accepted for publication in *Astronomy & Astrophysics*; arXiv:2505.19583
2. Nandi, Nilanjana; **Banerjee, A.** 2026, "The dynamical lineage of ultra-diffuse galaxies from TNG50-1", Accepted for publication in *Astronomy & Astrophysics*; arXiv:2506.22074
3. Mondal, Debasish; Nemmani, Anirudh S.; **Banerjee, A.** 2025, "H I 21-cm absorption spectra classification using machine learning", 2025, *MNRAS*, 544, 3456; arXiv:2511.01584
4. Aditya, K; **Banerjee, A.** 2025, "Evolution of Low Surface Brightness Ultrathin Galaxies: The Role of Dark Matter Halo and Bar Formation on Disk Thickness", 2025, *ApJ*, 992, 179; arXiv:2509.12966
5. Saha, Biju; Dutta, Subhadip; **Banerjee, A.** 2025, "Can Fractal Dimension Distinguish between Grand-design and Flocculent Spiral Arms?", 2025, *ApJ*, 991, 63; arXiv:2508.04411
6. Anagha A, G.; **Banerjee, A.** 2025, "Are purely gaseous bars in dwarf-irregulars a myth?", *Astrophysical Journal*, 983, 2; arXiv:2503.03229
7. Nandi, Nilanjana; **Banerjee, A.**; Narayanan, Ganesh 2025, "The dynamical lineage of isolated, HI-rich ultra-diffuse galaxies", *Astronomy & Astrophysics*, 693A, 207; arXiv:2310.08925
8. Narayanan, G., Anagha & **Banerjee, A.** 2024, "How do low surface brightness galaxies form spiral arms?" *Astrophysical Journal*, 973, 32, arXiv:2407.02916
9. Aditya, K., **Banerjee, A.**, Kamphuis, P., et al. 2023, "HI 21cm observations and dynamical modelling of the thinnest galaxy: FGC 2366", *Monthly Notices of the Royal Astronomical Society*, 2023, *Monthly Notices of the Royal Astronomical Society*, 526, 29; arXiv:2308.13312
10. Sarkar, S., Narayanan, G., and **Banerjee, A.** 2023, "Analyzing the cosmic web environment in the vicinity of grand-design and flocculent spirals with local geometric index", *Journal of Cosmology and Astroparticle Physics*, Issue 08, id.044, 24 pp.
11. Sarkar, S., Narayanan, G., **Banerjee, A.** and Prakash, P. 2023, "Identification of Grand-design and Flocculent spirals from SDSS using deep convolutional neural network" *Monthly Notices of the Royal Astronomical Society*, 518, 1022, arXiv:2205.08733
12. Narayanan, G. and **Banerjee, A.** 2022, "Are superthin galaxies low-surface-brightness galaxies seen edge-on? The star formation probe?" *Monthly Notices of the Royal Astronomical Society*, 514, 5126, arXiv:2104.04216
13. Aditya, K., Kamphuis, P., **Banerjee, A.** et al. 2022, "H I 21 cm observation and mass models of the extremely thin galaxy FGC 1440" *Monthly Notices of the Royal Astronomical Society*, 509, 4071 arXiv:2104.04216
14. Aditya, K. and **Banerjee, A.** et al. 2021, "How "cold" are the stellar discs of superthin galaxies?" *Monthly Notices of the Royal Astronomical Society*, 502, 5049 arXiv:2002.09198

15. Komanduri, A., Banerjee, I., **Banerjee, A.** and Sengupta, S. 2020, "Dynamical modelling of disc vertical structure in superthin galaxy 'UGC 7321' in braneworld gravity: an MCMC study" Monthly Notices of the Royal Astronomical Society, 499, 5690 arXiv:2004.05627
16. Prakash, P., **Banerjee, A.** and Perepu, P. K. 2020, "Determination of the relative inclination and the viewing angle of an interacting pair of galaxies using Convolutional Neural Networks" Monthly Notices of the Royal Astronomical Society, 497, 3323 arXiv:2002.01238
17. Jadhav Y., V & **Banerjee, A.** 2019, The specific angular momenta of superthin galaxies: Cue to its origin? 2019, MNRAS, 488, 547
18. Kurapati, S., **Banerjee, A.**, Chengalur, J. N.; Makarov, D., Borisov, S., Afanasiev, A., and Antipova, A. 2018, Mass modelling of a superthin galaxy, FGC 1540: MNRAS, 479, 5686
19. Hwang, J-S, Park, C. **Banerjee, A.** and Hwang, H. S. 2018, Evolution of Late-type Galaxies in a Cluster Environment: Effects of High-speed Multiple Encounters with Early-type Galaxies: ApJ, 856, 160
20. Garg, P. and **Banerjee, A.**, 2017, Origin of low surface brightness galaxies: A dynamical study, MNRAS, 472, 166
21. Mass Modeling of Superthin Galaxies **Banerjee, A.** & Bapat, D. 2017, MNRAS, 466, 3753
22. Modeling HI distribution and kinematics in the edge-on dwarf irregular galaxy KK250: Patra, N. N., **Banerjee, A.**, Chengalur, J. N. & Begum, A. 2014, MNRAS, 445, 1424
23. The slowly rotating bar in the dwarf irregular galaxy NGC 3741: **Banerjee, A.**, Patra, N. N., Chengalur, J. N. & Begum, A. 2013, MNRAS, 434, 1257
24. Why are some galaxy disks extremely thin? **Banerjee, A.** & Jog, C. J. 2013, MNRAS, 431, 582
25. Progressively more prolate dark matter halo in the outer Milky Way galaxy: **Banerjee, A.** & Jog, C. J. 2011. ApJ, 732, L8
26. Theoretical determination of HI vertical scale heights in the dwarf galaxies: DDO 154, Ho II, IC2574 & NGC 2366: **Banerjee A.**, Jog, C. J., Brinks, E., & Bagetakos, I. 2011, MNRAS, 415, 687
27. Dark matter dominance at all radii in the superthin galaxy UGC 7321 from HI data: **Banerjee, A.**, Matthews, L. D., & Jog, C. J. 2010, NewA, 15, 89
28. The flattened dark matter halo of M31 from the HI scaleheight distribution: **Banerjee, A.**, & Jog, C. J. 2008, ApJ, 685, 254
29. The origin of the steep vertical stellar distribution in the Galactic disk: **Banerjee, A.**, & Jog, C. J. 2007, ApJ, 662, 335

IN CONFERENCE PROCEEDINGS

30. "Footprints of the dark matter halo: from pattern speed to disk vertical structure": **Banerjee, A.**, Patra, N. N., Chengalur, J. N., Jog, C. J., Begum, A. 2014, ASI Conference Series: Edited by J. N. Chengalur Y. Gupta , 13, 307

31. Dark matter halo properties deduced from HI vertical scale heights: **Banerjee, A.**, Jog, C. J., & Matthews, L.D. 2009, ASPC, 407, 99

STUDENT SUPERVISION

Postdoctoral Fellows

1. Dr. Debasish Mondal (2023 -) (*CSIR Research Associate; Earlier SERB-CRG funded post-doctoral fellow*)
2. Dr. Suman Sarkar (2021 - 2022) (*Currently, Faculty Member in Physics, Biswa Bangla Biswabidyalay, Bolpur, West Bengal, India*)
3. Dr. Pavan K Perepu (2020)

Graduate Students

4. Ms. Saranya Jawaran (2023 - Present)
5. Mr. Biju Saha (2022 - Present) (*Prime Minister's Research Fellow (PMRF)*)
6. Ms. Nilanjana Nandi (2021 - Present) (*Prime Minister's Research Fellow (PMRF)*)
7. Ms. Anagha A. G. (2021 - Present)
8. Mr. Ganesh N. (2018 - 2024) (*Currently, Aerodynamics Engineer, Digantara Pvt. Ltd., Bangalore*)
9. Mr. K. Aditya (2017 - 2022) (*Currently, Postdoctoral Fellow, Raman Research Institute, Bangalore*)

Masters' Students

10. Ms. Anishka Sunil *IISER Tirupati BSMS 2021 Batch, 2025-26*
11. Ms. Rhuturani Parde *IISER Tirupati BSMS 2021 Batch, 2025-26*
12. Ms. Shruti Vivekanand Vibhute *IISER Tirupati BSMS 2021 Batch, 2025-26*
13. Mr. Soham Patwawardhan (*MS Student, St.Xavier's College, Mumbai, 2024-2025*)
14. Mr. Abhishek Jena (*MS Student, Central University of Karnataka, Raipur, 2024*)
15. Mr. Harish Kumar Burman (*MS Student, Pt.Ravishankar Shukla University, Raipur, 2023-*)
16. Mr. Abhinaba Saha (*BSMS Student, IISER Tirupati, 2023-*)
17. Mr. Anudeep Chivukula (*MS Thesis, Central University of Rajasthan, Spring 2023*)
18. Ms. Disha Bapat (*MS Thesis, Fergusson College, Pune, 2015 - 2016*)

Project Students

19. Ms. Nandana M. (January 2025)
20. Ms. Ashwathi V. (January 2025)
21. Mr. Subhadip Dutta (Monsoon 2023)
22. Ms. Anita Deka Baruah (Spring 2023)
23. Mr. Aditya Selvarajan (Spring 2023)
24. Mr. Gogulakrishna (Monsoon 2022)
25. Mr. Anirudh Nemmani (Monsoon 2022)
26. Mr. Akashdeep Karan (Summer 2017, Monsoon 2022, Spring 2023)
27. Mr. Arnab Lahiry (Spring 2022)
28. Mr. R. Anirudh (Spring 2022)
29. Ms. Yukta Ajay (Spring 2021, Summer 2021, Monsoon 2021)
30. Mr. Sanket M (Monsoon 2021)
31. Ms. Nikita Balodhi (Spring 2021)
32. Mr. P S Vishnuprasad (Spring 2021)
33. Mr. Sahyadri Krishna (Spring 2021)
34. Ms. Jayamol P (Monsoon 2017, Summer 2018)
35. Mr. Jisvin Sam (Spring 2020)
36. Mr. Ambareesh Srivastav (Spring 2019)
37. Mr. Arka Bhattacharya (Spring 2018)
38. Mr. Chaitanya Chawak (Summer 2021)
39. Ms. P Gayathri Vinod (Summer 2021)
40. Mr. Sandipani Ghosh (Summer 2021)
41. Mr. Akashdeep Karan (Summer 2021)
42. Mr. Lalit M (Summer 2021)
43. Mr. Deepjyoti Satpathy (Summer 2020)
44. Mr. Suyambulingam S.(Summer 2019, 2020)
45. Mr. Deepjyoti Satpathy(Summer 2019, 2020)
46. Mr. Akshay Kannan Sairam (Summer 2018)
47. Mr. Vikas Jadhav Y ((Summer 2017, 2018))

48. Mr. Ganesh N (*DST Inspire Faculty Fellowship funded, Monsoon 2017*)
49. Mr. Nikhil Hubballi (*IISER Intramural Fellowship funded, Summer 2017*)
50. Mr. Prem Prakash (*DST Inspire Faculty Fellowship funded, 2019 - 2020*)
51. Mr. Prerak Garg (Summer 2016)
52. Ms. Shalmalee Kapse (2014-2015)

TELESCOPE TIME ALLOCATED

- HI 21cm observation of superthin galaxies: K. Aditya & **Banerjee, A.** 2019 (Allocated 20 hours of observation time on Giant Meterwave Radio Telescope, Cycle 36, Narayangaon, India)
- HI 21cm observations of Gas-Rich Lenticulars: **Banerjee, A.** 2016 (Allocated 16 hours of observation time on Giant Meterwave Radio Telescope, Narayangaon, Cycle 30, India)
- Fueling and feedback in the vicinity of black holes: **Banerjee, A.**, Barway, S., Combes, F. & Kembhavi, A. 2015, (Allocated 7.5 hours of observation time on South African Large Telescope, South Africa)
- HI 21cm mapping of the edge-on spiral galaxy ESO270-G017: Benaglia, P., Saponara, J., Koribalski, B. S. & **Banerjee, A.** (Allocated 25 hours of observation time on Giant Meterwave Radio Telescope, Cycle 28, Narayangaon, India)
- HI 21cm observation of superthin galaxies: **Banerjee, A.**, Chengalur, J. N. & Patra, N. N. 2013 (Allocated 48 hours of observation time on Giant Meterwave Radio Telescope, Narayangaon, India)

ACADEMIC & ADMINISTRATIVE SERVICES RENDERED

Institute Level

- Chair, Physics (October 2024 - Present)
- Acting Chair, Physics (January 2023 - October 2023)
- Associate Chair, Physics (October 2023 - October 2024; 2021 - 2022)
- Member: Senate, IISER Tirupati [2022 - 2024]
- Chair/Member: Internal Complaints Committee [2025- Present; 2017 - 2024]
- Co-Chair: Committee of Students' Affairs [2021 - Present]
- Member: Library Committee [2023 - Present]
- Member: Human Ethics Committttee [2018 - Present]
- Member: Academic Committee [2022 - 2026]
- Member: Curriculum Committee [2017 - 2026]
- Member: Academic Ethics Committee [2017 - 2019]

- Member: Women's Cell [2019 - 2022]
- Faculty Co-ordinator: Ph.D, Integrated Ph.D and Postdoctoral Programme (Physics) [2017 - 2019]

External

- Editorial Board Member, Journal of Astronomy & Astrophysics, Indian Academy of Sciences (2022 - Present)
- Member, PMRF Annual Student Review Committee (2024 - 2026)
- Member, JRF Selection Committee, National Atmospheric Research Laboratory, Gadanki (2022 - 2026)
- Chair, Working Group in Gender Equity, Astronomical Society of India (2022 - 2025)
- Member: Selection Committee: Justice Oak Best Thesis Award given by Astronomical Society of India (2021)
- Member: Organizing Committee: JEST 2019

Peer review rendered for journals/book reviews/journal editorial work

- Celestial Mechanics & Dynamical Astronomy
- Astrophysical Journal
- Referee for Astronomy & Astrophysics
- Referee for Monthly Notices of the Royal Astronomical Society
- Referee for Astronomische Nachrichten
- Referee for observing proposals to the Giant Meterwave Radio Telescope
- Referee for observing proposals ASTROSAT

TALKS/POSTERS

TALKS

Galaxies and Dark Matter

- Astronomy & Astrophysics Workshop, IIT Tirupati, January 2026

The dynamical lineage of ultra-diffuse galaxies

- Raman Research Institute, Bangalore, May 2024

How do low surface brightness galaxies form spiral arms?

- BITS Pilani, Goa, October 2024 (*Invited*)

- Department of Physics, Indian Institute of Technology, September 2024 (*Invited*)
- Frontiers in Physics 2024, Department of Physics, University of Hyderabad September 2024 (*Invited*)
- Division of Physical Sciences, Indian Institute of Science Education and Research, Kolkata, June 2024
- Division of Physical Sciences, Indian Institute of Science Education and Research Pune, May 2024
- IUCAA, Pune May 2024
- Centre for Theoretical Sciences, Indian Institute of Technology, Kharagpur, May 2024
- Indian Institute of Astrophysics, Bangalore, May 2024
- Division of Physical Sciences, Indian Association for the Cultivation of Science, June 2023

Machine Learning in Astronomy & Astrophysics

- National Atmospheric Research Laboratory, Ganadanki, June 2024
- Refresher Course in Astronomy & Astrophysics, IUCAA, Pune, May 2023 (*Invited*)

Identification of Grand-design Flocculent spiral galaxies using Convolutional Neural Network

- Workshop on Machine Learning, Annual Meeting of the Astronomical Society of India, IIT Indore, February 2023 (*Invited*)

Morphological Classification of galaxies using Machine Learning

- Refresher course in Physics, Inter University Centre for Astronomy Astrophysics (IUCAA), June 2022

Dynamical Modelling of Interacting Galaxies using Machine Learning

- Department of Physics, Indian Institute of Science, May 2021
- Division of Physical Sciences, Indian Association for the Cultivation of Science (IACS), August 2020
- Inter University Centre for Astronomy Astrophysics (IUCAA), July 2020

Elements of Galactic Dynamics

- IUCAA-TLC Workshop for Teachers, Providence College for Women, Calicut University, Kerala (*Invited*)
- Department of Physics, Central University of Tamil Nadu (February 2019) (*Invited*)

How "cold" are superthin galaxies?

- IACS, Kolkata (July 2019)
- European Week of Astronomy & Space Science (EWASS 2019), Lyon, France. Session: Formation & Evolution of Bulgeless Galaxies (*Invited*)
- Department of Physics & Astrophysics, University of Delhi (February 2019)

The origin of low surface brightness galaxies: A dynamical study

- IACS, Kolkata (December 2018)
- IMSc, Chennai (September 2018)
- GEDS conference, IUCAA, Pune (January 2018)
- Meeting of the Astronomical Society of India, Osmania University, Hyderabad (February 2018)

Footprints of the Dark Matter Halo

- Indian Institute of Science Education & Research, Mohali, India (September 2014)
- Department of Physics & Astrophysics, Delhi University, India (September 2014)
- Special Astrophysical Observatory, Russian Academy of Sciences (SAO-RAS), Russia (September 2014)
- Department of Astronomy, Seoul National University, Seoul, South Korea (August 2014)
- Korea Astronomy & Space Science Institute, Daejeon, South Korea (August 2014)
- Astrophysics & Cosmology Division, School of Physics, Korea Institute of Advanced Study, Seoul, South Korea (August 2014)
- Department of Astronomy, Yonsei University, Seoul, South Korea (August 2014)

Dark Matter Halos of Spiral Galaxies

- JESCOL, Department of Physics, St.Xavier's College, Kolkata (February 2015) (*Invited*)
- The 6th KIAS Conference on Cosmology & Structure Formation, Seoul, South Korea (November 2014) (*Invited*)
- Workshop on Galaxies & Cosmology, NCRA-TIFR, Pune (July 2014) (*Invited*)
- Department of Physics, St.Xavier's College, Kolkata (October 2013)

Footprints of the Dark Matter halo: From pattern speed to disk vertical structure

- Astronomisches Rechen-Institut, University of Heidelberg, Heidelberg, Germany (June 2013)
- Astronomisches Institut der Ruhr-Universität Bochum, Bochum, Germany (June 2013)

- Max Planck Institute for Extraterrestrial Physics, Garching, Germany (June 2013)

Why are some galaxy disks extremely thin?

- Centres of Spiral Galaxies Workshop, IUCAA, Pune (January 2015)
- Max Planck Institute for Astronomy, Heidelberg, Germany (June 2013)
- Observatory of Geneva, Geneva, Switzerland (May 2013)
- Max Planck Institute for Astrophysics, Garching, Germany (May 2013)

Tremaine-Weinberg Method on HI disk

- The Role of Bars in Galaxy Evolution, University of Granada, Granada, Spain (May 2013)

The shapes of dark matter halos from HI thickness data: Signatures of non-universality?

- The 13th Nottingham-Birmingham Extragalactic Workshop: Dark Matter in Clusters, Groups & Galaxies, University of Nottingham, UK (September 2011)

Vertical Structure of Disk Galaxies and their Dark Matter Halos

- Indian Statistical Institute, Kolkata (December 2016)
- Indian Institute of Science Education & Research, Mohali (March 2014)
- Max Planck Institute for Astronomy, Heidelberg, Germany (June 2013)
- Tata Institute of Fundamental Research, Mumbai, India (October 2011)
- Inter University Centre for Astronomy & Astrophysics, Pune, India (October 2011)
- National Centre for Radio Astronomy, Pune, India (October 2011)
- Centre for Astrophysics Research, University of Hertfordshire, UK (September 2011)
- Jeremiah Horrocks Institute, University of Central Lancashire, UK (September 2011)
- Department of Physics & Astronomy, University of Leicester, UK (September 2011)
- Indian Institute of Astrophysics, Bangalore, India (August 2011)
- Raman Research Institute, Bangalore, India (August 2011)

Tracking the galactic dark matter halo by modeling the vertical HI scale height

- University Observatory Munich, Germany (May 2009)

The origin of the steep vertical stellar distribution in the Galactic disc

- Observatoire de Paris, Meudon, France (May 2009)

Dark Matter Halo properties of galaxies as deduced from observed HI scale-heights

- The Low Frequency Radio Universe(LFRU), NCRA, Pune, India (December 2008)
- A National Workshop Cosmology with the HI 21-cm Line, RRI, Bangalore, India (June 2015)

POSTERS

The specific angular momenta of superthin galaxies: Cue to their origin?: BonnGravity, Argelander Institute for Astronomy, Bonn, Germany (September 2019)

How "cold" are superthin galaxies?: The Metrewavelength Sky II, NCRA-TIFR, Pune, India (March 2019)

Footprints of the Dark Matter halo: From pattern speed to disk vertical structure

- The Metrewavelength Sky, NCRA-TIFR, Pune, India (December 2013)

Why are some galaxy disks extremely thin?

- The Physical Link between Galaxies and their Halos, MPA/MPE/ESO/Excellence Cluster Universe conference (June 2013)

Progressively More Prolate Dark Matter Halo in the Outer Galaxy as Traced by Flaring H I Gas

- Accepted for presentation in "Assembling the Puzzle of the Milky Way" held in Observatoire de Besancon, Le Grand-Bornand, France (April 2011)

Constraining the dark matter halo profile of the superthin galaxy UGC 7321:Implications of high gas velocity dispersion

- 27th meeting of ASI (Astronomical Society of India) at IIA, Bangalore, India (February 2009)

WORKSHOPS/CONFERENCES ATTENDED

-
- "Frontiers in Physics 2024", Department of Physics, University of Hyderabad September 2024
 - The ASI (Astronomical Society of India) meeting held in IISc, Bangalore, India (February 2024)

- The ASI (Astronomical Society of India) meeting held in IIT, Infcore, India (March 2023)
- "Beyond the Standard Model of Gravity & Particle Physics", Division of Physical Sciences, Indian Association for the Cultivation of Science, Kolkata, December 2022
- The functioning of galaxies: Challenges for Newtonian and Milgromian Dynamics, Bonn, Germany [September 2019]
- GEDS Workshop, IUCAA, Pune (January 2018)
- The 10th PHISCC Workshop, NCRA-Pune (February 2017)
- A National Workshop Cosmology with the HI 21-cm Line, RRI, Bangalore, India (June 2015)
- The 33rd ASI (Astronomical Society of India) meeting held in NCRA-TIFR, Pune, India (March 2015)
- Centres of Spiral Galaxies Workshop, IUCAA, Pune (January 2015)
- The 6th KIAS Conference on Cosmology & Structure Formation, Seoul, South Korea (November 2014)
- The 32nd ASI (Astronomical Society of India) meeting held in Indian Institute of Science Education & Research, Mohali, India (March 2014)
- The Metrewavelength Sky, NCRA-TIFR, Pune, India (December 2013)
- The Physical Link between Galaxies and their Halos, MPA/MPE/ESO/Excellence Cluster Universe conference (June 2013)
- The Role of Bars in Galaxy Evolution, University of Granada, Granada, Spain (May 2013)
- IIA Theoretical Astrophysics Group Mini Workshop on Cosmology and Galaxies (November 2011)
- The 13th Nottingham-Birmingham Extragalactic Workshop: Dark Matter in Clusters, Groups & Galaxies: University of Nottingham, UK (September 2011)
- Recent Observations in Star Formation: Observations & Theory: IIA, Bangalore, India (June 2011)
- The Chandrasekhar Centenary Conference: IIA, Bangalore, India (December 2010)
- The 27th ASI (Astronomical Society of India) meeting held in IIA, Bangalore, India (February 2009)
- The Low Frequency Radio Universe (LFRU) held in NCRA, Pune, India (December 2008)
- The 2nd IIA-Pennstate Astrostatistics School held in Vainu Bappu Observatory, Kavalur, India (August 2008)

RESEARCH VISITS

- Department of Physical Sciences, Indian Association for the Cultivation of Science (June 2019)
Host: Soumitra Sengupta
- Special Astrophysical Observatory, Russian Academy of Sciences (SAO RAS) (10th - 18th September 2014)
Hosts: Igor Karachentsev & Simon Pustilnik
- Astrophysics & Cosmology Division, School of Physics, Korea Institute of Advanced Study, Seoul, South Korea (2nd - 22nd August 2014)
Host: Changbom Park
- Excellence Cluster Universe, Garching, Munich, Germany (19th May - 29th June 2013)
Host: Andreas Burkert
- National Centre for Radio Astrophysics, Pune, India (11th - 15th October 2011)
Host: Jayaram Chengalur
- Jeremiah Horrocks Institute, University of Central Lancashire (20th - 23rd September 2011)
Host: Victor Debattista
- Munich University Observatory, Munich, Germany (30th April- 25th May 2009)
Host: Andreas Burkert

MEETINGS ORGANIZED

- Astronomy & Astrophysics Workshop, IIT Tirupati [January 2026] (co-sponsored by IISER Tirupati and IUCAA, Pune)
- 38th Meeting of the Astronomical Society of India (ASI), IISER Tirupati [February 2020] (Point of Contact, LOC)
- Data Analysis & Machine Learning (DAML) Workshop, IISER Tirupati [May 2019] (jointly with Prof. G. Ambika & Prof. R. Misra [IUCAA, Pune])

MEMBERSHIPS

- Member of the International Astronomical Union
- Member of the Astronomical Society of India (L2169)
- Visiting Associate, Inter University Centre for Astronomy & Astrophysics (IUCAA), Pune, India