# CURRICULUM VITAE

### Arunima Banerjee

Associate Professor & Associate Chair, Physics

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Editorial Board Member Journal of Astronomy & Astrophysics, Indian Academy of Sciences

# PARTICULARS

## **BIOGRAPHICAL DETAILS**

- Date of Birth:  $15^{th}$  June, 1982
- Nationality: Indian

### WORK EXPERIENCE

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,

Pune, India October 2014 - March 2017

Postdoctoral Visiting Scientist National Centre for Radio Astrophysics Tata Institute of Fundamental Research

Postdoctoral Fellow National Centre for Radio Astrophysics Tata Institute of Fundamental Research

Research Associate Department of Physics Indian Institute of Science Pune, India April 2013 - October 2014

Pune, India April 2012 - March 2013

Bangalore, India August 2011 - March 2012

### **EDUCATION**

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

### **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-ITS**<sup>2</sup> 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)

<sup>&</sup>lt;sup>2</sup>Department 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<sup>4</sup> 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<sup>6</sup> (2001)
- Awarded National Merit Certificate in Secondary Examination (1999) from  $WBBSE^7$  (1999)

## COURSES TAUGHT

- Electrodynamics: Monsoon 2022, 2023
- Gravitation & Cosmology: Spring 2020, 2021, 2022, 2023, 2024
- Data Science I: Monsoon 2019, 2020, 2021, 2022, 2023
- Data Science II: Spring 2021, 2022, 2023, 2024
- Classical Mechanics: Monsoon 2017, 2018
- Statistical Mechanics I: Spring 2018, 2019
- Mathematical Methods in Physics: Monsoon 2019, 2020, 2021
- Mechanics Lab: Monsoon 2017, Spring 2019
- Modern Physics Lab: Spring 2018

<sup>&</sup>lt;sup>3</sup>Ministry of Human Resource Development, Government of India

<sup>&</sup>lt;sup>4</sup>University Grants Commission, Government of India

<sup>&</sup>lt;sup>5</sup>Council of Scientific and Industrial Research-University Grants Commission, Government of India <sup>6</sup>West Bengal Council of Higher Secondary Education, West Bengal, India

<sup>&</sup>lt;sup>7</sup>West Bengal Board of Secondary Education, West Bengal, India

# LIST OF PUBLICATIONS of Dr. Arunima Banerjee

## IN REFEREED JOURNALS (*The first 12 publications are with IISER Tirupati affiliation*)

- 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
- 2. 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.
- Sarkar, S., Narayanan, G., Banerjee, A. and Prakash, P. 2023, "Identification of Granddesign and Flocculent spirals from SDSS using deep convolutional neural network" Monthly Notices of the Royal Astronomical Society, 518, 1022, arXiv:2205.08733
- 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
- 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
- 6. 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
- 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
- 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
- Jadhav Y., V & Banerjee, A. 2019, The specific angular momenta of superthin galaxies: Cue to its origin? 2019, MNRAS, 488, 547
- 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
- 11. 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
- Garg, P. and Banerjee, A., 2017, Origin of low surface brightness galaxies: A dynamical study, MNRAS, 472, 166
- 13. Mass Modeling of Superthin Galaxies Banerjee, A. & Bapat, D. 2017, MNRAS, 466, 3753

- 14. 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
- 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
- Why are some galaxy disks extremely thin? Banerjee, A. & Jog, C. J. 2013, MNRAS, 431, 582
- Progressively more prolate dark matter halo in the outer Milky Way galaxy: Banerjee, A. & Jog, C. J. 2011. ApJ, 732, L8
- Theoretical determination of H<sub>I</sub> 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
- 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
- The flattened dark matter halo of M31 from the HI scaleheight distribution: Banerjee, A., & Jog, C. J. 2008, ApJ, 685, 254
- The origin of the steep vertical stellar distribution in the Galactic disk: Banerjee, A., & Jog, C. J. 2007, ApJ, 662, 335

### IN CONFERENCE PROCEEDINGS

- "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
- 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 )(SERB-CRG funded postdoctoral fellow)
- Dr. Suman Sarkar (2021 2022) (Currently, National Postdoctoral Fellow (NPDF), Indian Institute of Technology, Kharagpur)
- 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 Present)
- 9. Mr. K. Aditya (2017 2022) (Currently, Postdoctoral Fellow, Indian Institute of Astrophysics, Bangalore)

### Masters' Students

- 10. Mr. Abhishek Jena (MS Student, Central University of Karnataka, Raipur, 2024)
- 11. Mr. Harish Kumar Burman (MS Student, Pt. Ravishankar Shukla University, Raipur, 2023-)
- 12. Mr. Abhinaba Saha (BSMS Student, IISER Tirupati, 2023-)
- 13. Mr. Anudeep Chivukula (MS Thesis, Central University of Rajasthan, Spring 2023)
- 14. Ms. Disha Bapat (MS Thesis, Fergusson College, Pune, 2015 2016)

### **Project Students**

- 15. Mr. Subhadip Dutta (Monsoon 2023)
- 16. Ms. Anita Deka Baruah (Spring 2023)
- 17. Mr. Aditya Selvarajan (Spring 2023)
- 18. Mr. Gogulakrishna (Monsoon 2022)
- 19. Mr. Anirudh Nemmani (Monsoon 2022)
- 20. Mr. Akashdeep Karan (Summer 2017, Monsoon 2022, Spring 2023)
- 21. Mr. Arnab Lahiry (Spring 2022)
- 22. Mr. R. Anirudh (Spring 2022)
- 23. Ms. Yukta Ajay (Spring 2021, Summer 2021, Monsoon 2021)

- 24. Mr. Sanket M (Monsoon 2021)
- 25. Ms. Nikita Balodhi (Spring 2021)
- 26. Mr. P S Vishnuprasad (Spring 2021)
- 27. Mr. Sahyadri Krishna (Spring 2021)
- 28. Ms. Jayamol P (Monsoon 2017, Summer 2018)
- 29. Mr. Jisvin Sam (Spring 2020)
- 30. Mr. Ambareesh Srivastav (Spring 2019)
- 31. Mr. Arka Bhattacharya (Spring 2018)
- 32. Mr. Chaitanya Chawak (Summer 2021)
- 33. Ms. P Gayathri Vinod (Summer 2021)
- 34. Mr. Sandipani Ghosh (Summer 2021)
- 35. Mr. Akashdeep Karan (Summer 2021)
- 36. Mr. Lalit M (Summer 2021)
- 37. Mr. Deepjyoti Satpathy (Summer 2020)
- 38. Mr. Suyambulingam S.(Summer 2019, 2020)
- 39. Mr. Deepjyoti Satpathy(Summer 2019, 2020)
- 40. Mr. Akshay Kannan Sairam (Summer 2018)
- 41. Mr. Vikas Jadhav Y ((Summer 2017, 2018))
- 42. Mr. Ganesh N (DST Inspire Faculty Fellowship funded, Monsoon 2017)
- 43. Mr. Nikhil Hubbali (IISER Intramural Fellowship funded, Summer 2017)
- 44. Mr. Prem Prakash (DST Inspire Faculty Fellowship funded, 2019 2020)
- 45. Mr. Prerak Garg (Summer 2016)
- 46. 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

- Member: Senate, IISER Tirupati [2022 2024]
- Co-Chair: Committee of Students' Affairs [2021 Present ]
- Member: Library Committee [2023 Present ]
- Member: Human Ethics Committee [2018 Present]
- Member: Internal Complaints Committee [2017 Present]
- Member: Academic Committee [2022 Present ]
- Member: Curriculum Committee [2017 Present]
- Member: Academic Ethics Committee [2017 2019]
- Member: Women's Cell [2019 2022]
- Faculty Co-ordinator (jointly with Dr. S. Sunil Kumar): 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)
- Chair, Working Group in Gender Equity, Astronomical Society of India (2022 Present)
- 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

### The dynamical lineage of ultra-diffuse galaxies

• Raman Research Institute, Bangalore, May 2024

### How do low surface brightness galaxies form spiral arms?

- 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, Daejon, 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 6<sup>th</sup> 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 nonuniversality?

• 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 scaleheights

- 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

- "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 10<sup>th</sup> PHISCC Workshop, NCRA-Pune (February 2017)
- A National Workshop Cosmology with the HI 21-cm Line, RRI, Bangalore, India (June 2015)
- The 33<sup>rd</sup> ASI (Astronomical Society of India) meeting held in NCRA-TIFR, Pune, India (March 2015)
- Centres of Spiral Galaxies Workshop, IUCAA, Pune (January 2015)
- The 6<sup>th</sup> KIAS Conference on Cosmology & Structure Formation, Seoul, South Korea (November 2014)
- The 32<sup>nd</sup> 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

- 38<sup>th</sup> 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