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Nayana A.J.
Postdoctoral Scholar
University of California, Berkeley.
nayana@berkeley.edu
nayan89deva@gmail.com
Phone No: +91 9545543404, +1 5108506954

Personal Information

- **Date of Birth:** 15 September 1989
- **Nationality:** Indian
- **Postal Address:** Office No: 349, Campbell Building, UC Berkeley, California, USA.

Employment

- **Postdoctoral Scholar** University of California, Berkeley, USA (September 2023, onwards).
- **DST INSPIRE Faculty** Indian Institute of Astrophysics, Bangalore, India (August 2021, August 2023).
- **Postdoctoral Fellow** Indian Institute of Astrophysics, Bangalore, India (July 2021 - August 2021).
- **Research Associate** in the Department of Physics, United Arab Emirates Univesrity, UAE (July 2019 - November 2020).

Education

2014 – 2020 **PhD in Astrophysics** at National centre for Radio Astrophysics; Tata Institute of Fundamental Research (Deemed University), Pune.
Thesis title: *Most energetic explosions and their environments.*
Thesis Advisor: **Prof. Poonam Chandra**

2013 – 2014 **Junior Research Fellow in physics** at Bhabha Atomic Research Centre, Mumbai.

2010 – 2012 **M.Sc in physics** at MES college Ponnai, University of calicut.

2007 – 2010 **B.Sc in physics** at MES college Ponnai, University of calicut.

Research Interests

- Energetics and environments of Galactic Novae.
- Radio emission from Fast Blue Optical Transients (FBOTs).
- Circumstellar interaction in core-collapse supernovae.
- Particle acceleration in TeV supernova remnants.
- Electro-magnetic counterparts of Gravitational wave events.
- Radio Afterglows in Gamma Ray Bursts.
- Dense molecular gas and star formation in the Large Magellanic Cloud (LMC).

Technical Skills

- **Astronomy Analysis Software:** AIPS, CASA, DS9, and KVIS.
- **Computer programming:** Python, Mathematica.
- **Productivity Applications:** gnuplot, LATEX, Vim, most common productivity packages for Linux.

Research Publications

My ADS Library: Click Here

In Referred Journals (Lead author papers)

1. "Lepto-hadronic Interpretation of 2021 RS Ophiuchi Nova Outburst"; Agnibha de Sarkar, **Nayana A.J.**; Nirupam Roy; Razzaque, Soebur; and G.C. Anupama. (ApJ 951:62, **2023** July 1)
   https://iopscience.iop.org/article/10.3847/1538-4357/acd6ed/pdf
2. "Radio evolution of a type IIb supernova SN 2016gkg"; **Nayana A.J.**; Poonam Chandra; Anoop Krishna; and G.C. Anupama. (ApJ 934:186N, **2022** August 1)
   https://iopscience.iop.org/article/10.3847/1538-4357/ac7c1e/pdf
3. "uGMRT observations of a Fast Blue Optical Transient, AT2018cow"; **Nayana A.J.** and Poonam Chandra; (ApJL 912:L9 (7pp) **2021**,May 2021)
   https://ui.adsabs.harvard.edu/abs/2021arXiv210306008N/abstract
4. "ALMA observations of HCO^+ and HCN emission in a massive star-forming region N 55 of the Large Magellanic Cloud."; **Nayana A.J.**; Naslim, N; Onishi, T, Kemper, F; Tokuda, K; Madden, S.C; Morata, O; Nasri, S ,and Galametz, M; (ApJ 902:140N, **2020** October 21.)
   https://ui.adsabs.harvard.edu/abs/2020ApJ...902..140N/abstract
5. "Radio view of a broad-line Type Ic supernova - ASASSN16fp", **Nayana A.J** & Poonam Chandra; MNRAS 494:84, **2020** March 13.
   https://ui.adsabs.harvard.edu/abs/2020MNRAS.494...84N/abstract
6. "Radio Observations of Type Ib Supernova Master OT J120451.50+265946.6 reveal inhomogeneous emitting region crossing through a dense shell", Poonam Chandra; **Nayana A.J.**; C.-T, Bjornsson; Peter Lundqvist; Subo Dong; Alak K. ray; Jose L. Prieto; and Benjamin J. Shappee; ApJ 877:79C, **2019** June 1.
   https://ui.adsabs.harvard.edu/abs/2019ApJ...877...79C/abstract
7. "Long-term behavior of a Type IIP Supernova SN 2004dj in the radio bands", **Nayana A.J.**; Poonam Chandra and Alak K. Ray; ApJ 863:163 (13pp), **2018** August 20.
   https://ui.adsabs.harvard.edu/abs/2018arXiv180800283J/abstract
8. "325 and 610 MHz Radio Counterparts of SNR G353.6−0.7 a.k.a HESS J1731−347", **Nayana A.J.**; Chandra, Poonam; Roy, Subhashis; Green, David A; Acero, Fabio; Lemoine-Goumard, Marianne; Marcowith, Alexandre; Ray, Alak K, and Renaud, Matthieu; MNRAS 467(1): 155-163, **2017** January 11.
   https://ui.adsabs.harvard.edu/abs/2017MNRAS.467..155N/abstract

In Referred Journals (Co-author papers)

1. "Minutes-duration Optical Flares with Supernova Luminosities"; Anna Y. Q. Ho; Daniel A. Perley; Ping Chen; Steve Schulze; Vik Dhillon; Harsh Kumar and co-authors including **Nayana A.J.**; (Nature, **2023** November 15)
   https://www.nature.com/articles/s41586-023-06673-6

2. "AT2019wxt: An ultra-stripped supernova candidate discovered in electromagnetic follow-up of a gravitational wave trigger"; Hinna Shivkumar, Amruta D. Jaodand, Arvind Balasubramanian, Christoffer Fremling and co-authors including **Nayana A.J.**; (ApJ 952:86, **2023** July 20).
   https://iopscience.iop.org/article/10.3847/1538-4357/acd5d5/pdf

3. "Bridging between Type IIb and Ib Supernovae: SN IIb 2022crv with a Very Thin Hydrogen Envelope"; Anjasha Gangopadhyay; Keiichi Maeda; Avinash Singh; **Nayana A. J.**; Tatsuya Nakaoka and co-authors (ApJ 957:100, **2023** November 10).
   https://iopscience.iop.org/article/10.3847/1538-4357/acd5d5/pdf

Research Publications (continued)

4 "Far-ultraviolet to Near-infrared Observations of SN 2023ixf: A High-energy Explosion Engulfed in Complex Circumstellar Material"; Rishabh Singh Teja; Avinash Singh; Judhajeet Basu; G. C. Anupama; D. K. Sahu; and co-authors including **Nayana A. J.**; (ApJ 955:L12, **2023** September 1).
https://iopscience.iop.org/article/10.3847/2041-8213/acef20/pdf

5 "Optical discovery of a relativistic jet from the tidal disruption of a star by a supermassive black hole"; Igor Andreoni; Michael W. Coughlin; Daniel A. Perley; Yuhan Yao; Wenbin Lu, S; Bradley Cenko and co-authors including **Nayana A.J.**; (Nature, **2022** November 30)
https://www.nature.com/articles/s41586-022-05465-8%20%20

6 "The X-ray and Radio Loud Fast Blue Optical Transient AT2020mrf: Implications for an Emerging Class of Engine-Driven Massive Star Explosions"; Yuhan Yao; Anna Y. Q. Ho; Pavel Medvedev; **Nayana A. J.**; Daniel A. Perley; S. R. Kulkarni; Poonam Chandra; Sergey Sazonov; Marat Gilfanov; Georgii Khorunzhev; David K. Khatami; and Rashid Sunyaev; (ApJ 934:104Y, **2022** August 1).
https://iopscience.iop.org/article/10.3847/1538-4357/ac7a41/pdf

7 "SN 2020jfo: A short plateau Type II supernova from a low mass progenitor"; Rishabh Singh Teja, Avinash Singh, D.K. Sahu, G.C. Anupama, Brajesh Kumar, and **Nayana A.J**; (ApJ 930:34T, **2022** May 1) https://iopscience.iop.org/article/10.3847/1538-4357/ac610b/pdf

8 "SN 2020sck: deflagration in a carbon-oxygen white dwarf"; Anirban Dutta; Dutta, Anirban; D.K. Sahu; G. C. Anupama; Simran Joharle; Brajesh Kumar; **Nayana A J**; Avinash Singh; Harsh Kumar; Varun Bhalerao; and Sudhansu Barway; (ApJ 925:217; **2022** Feb 1)
https://iopscience.iop.org/article/10.3847/1538-4357/ac366f

9 "*A Mildly Relativistic Outflow from the Energetic, Fast-rising Blue Optical Transient CSS161010 in a Dwarf Galaxy", Coppejans, D.L; Margutti, R; Terreran, G; **Nayana A.J.**; Coughlin, E.R.; Laskar, T; Alexander, K.D.; Bietenholz, M; Caprioli, D; Chandra, P.; Drout, M.R.; Frederiks, D; Frohmaler, C et al.; ApJL 895:L23; **2020** May 26.
https://ui.adsabs.harvard.edu/abs/2020ApJ...895L..23C/abstract

10 "The Panchromatic Afterglow of GW170817: The full uniform dataset, modeling, comparison with previous results and implications.", Makhathini, S; Mooley, K.P; Brightman, Murray; Hotokezaka, K; **Nayana A.J.**; Intema, Huib T; Dobie, Dougal; Lenc, E; Perley, Daniel A; Fremling, Christoffer et al; (ApJ 922:154M; **2021** Dec 1).
https://ui.adsabs.harvard.edu/abs/2021ApJ...922..154M/abstract

11 "A strong jet signature in the late-time light curve of GW170817", K.P. Mooley; D.A. Frail; D. Dobie; E. Lenc; A. Corsi; K. DE; **A.J. Nayana**; S. Makhathini; I. Heywood; T. Murphy; D. L. Kaplan; P. Chandra; O. Smirnov; E. Nakar; G. Hallinan; F. Camilo; R. Fender; S. Goedhart; P. Groot; M. M. Kasliwal; S. R. Kulkarni and P.A. Woudt; ApJL 868:L11 (8 pp), **2018** Nov 20.
https://ui.adsabs.harvard.edu/abs/2018ApJ...868L..11M/abstract

Conference Proceedings

1 "Low frequency radio view of a fast-blue optical transient - AT2018cow", **Nayana A.J.** and Chandra, Poonam; Proceedings of the International Astronomical Union symposium No 361, "Massive stars near and Far"; 8-13 May **2022**.
(in press)

2 "Low frequency radio counterparts of HESS J1731−347 a.k.a SNR G353.6−0.7", **Nayana A.J.**; Chandra, Poonam; Proceedings of the International Astronomical Union: Volume 12; Issue S331, pp 201-205; **2017**.
https://ui.adsabs.harvard.edu/abs/2017IAUS..331..201N/abstract

Research Publications (continued)

Telegrams and Circulars

1. "uGMRT observations of recurrent nova - U Sco", **Nayana A.J.**; G.C. Anupama, Dipankar Banerjee, Nirupam Roy, K.P. Singh, Sonith L.S., 2022, ATel 15449.
2. "uGMRT detection of Galactic Nova - V1405 Cas", **Nayana A.J.**; G.C. Anupama, Dipankar Banerjee, Nirupam Roy, K.P. Singh, Sonith L.S., 2022, ATel 15383.
3. "uGMRT observations of the 2021 outburst of RS Ophiuchi", **Nayana A.J.**; G.C. Anupama, Dipankar Banerjee, Nirupam Roy, K.P. Singh, Sonith L.S., 2022, ATel 14899.
4. "uGMRT radio non-detection of the TDE AT2020zso.", Rupak Roy; **Nayana A.J.**; Poonam Chandra, 2021, ATel 14828.
5. "uGMRT radio upper limits on hydrogen-poor super-luminous supernova SN 2017ens.", Chandra, Poonam; Bera, Apurba; Biswas, Ayan; Mondal, Surajit; and **Nayana, A.J.**, 2021, ATel 14448.
6. "Possible uGMRT detection of ZTF20abtxwfx.", **Nayana, A. J.**; Chandra, P. 2020, ATel 14049.
7. "GMRT observations of Type Ic supernova SN 2018ebt.", **Nayana, A. J.**; Chandra, P. 2018, ATel 12069.
8. "Low frequency detection of AT2018cow with the GMRT.", **Nayana, A. J.**; Chandra, P. 2018, ATel 11950.
9. "GMRT radio detection of GRB 180720B.", Chandra, P; **Nayana, A. J;** Dipankar Bhattacharya (IUCAA); S. Bradley Cenko (NASA) and Alessandra Corsi (Texas-Tech) 2018, GCN 23073.
10. "GMRT observations of Type Ic-BL supernova SN 2018cow", **Nayana, A. J.**; Chandra, P; Anna Ho (Caltech); Mansi Kasliwal (Caltech), Varun Bhalerao (IIT-Mumbai); S. R. Kulkarni (Caltech). 2018, ATel 11794.
11. "GMRT observations of Type IIP supernova SN 2018acj", **Nayana, A. J.**; Chandra, P. 2018, ATel 11483.
12. "GMRT observations of a type IIn supernova SN 2018zd", **Nayana, A. J.**; Chandra, P. 2018, ATel 11411.
13. "GMRT observations of a type IIP supernova SN 2018pn", **Nayana, A. J.**; Chandra, P. 2018, ATel 11352.
14. "GMRT observations of a type II supernova SN 2018gj", **Nayana, A. J.**; Chandra, P. 2018, ATel 11351.
15. "GMRT observations of a type Ic supernova SN 2018ec", **Nayana, A. J.**; Chandra, P. 2018, ATel 11350.
16. "GMRT upper limit on GRB 171205A", Chandra, P; **Nayana, A.J**; Dipankar Bhattacharya (IUCAA), S. Bradley Cenko (NASA) and Alessandra Corsi (Texas Tech University) 2017, GCN 22222.
17. "GMRT observations of a type II supernova SN 2017hpi", **Nayana, A. J.**; Chandra, P. 2017, ATel 11016.
18. "GMRT radio upper limits on a type IIn supernova SN 2017hcc", **Nayana, A. J.**; Chandra, P. 2017, ATel 11015.
19. "GMRT radio detection of a type II supernova SN 2017eaw", **Nayana, A. J.**; Chandra, P. 2017, ATel 10534.
20. "Low frequency GMRT observations of supernova SN 2017eaw", **Nayana, A. J.**; Chandra, P. 2017, ATel 10388.
21. "Radio upper limit on the GRB 141121A with the GMRT", **Nayana, A. J.**; Chandra, P. 2015, GCN 17284.
22. "GMRT radio detection of Type Ib supernova MASTER OT J120451.50+265946.6", Chandra, Poonam; **Nayana, A. J.**; Ray, Alak; Yadav, Naveen; Chakraborti, Sayan 2014, ATel 6755.
23. "Possible radio detection of GRB 140903A with the GMRT", **Nayana, A. J.**; Chandra, P. 2014, GCN 16815.
24. "Radio upper limit on the GRB 140808A with the GMRT", Chandra, P.; **Nayana, A. J.** 2014, GCN 16715.
25. "Radio upper limits on the GRB 140703A with the GMRT", **Nayana, A. J.**; Chandra, P. 2014, GCN 16591.
26. "GMRT radio detection of GRB 151027A", **Nayana, A. J.**; Chandra, P. 2015, GCN 18608.

Research Publications (continued)

27 "GMRT radio detection of a Type IIb supernova SN 2016gkg", **Nayana, A. J.**; Chandra, P. 2016, ATel 9761.

28 "GMRT radio detection of Type Ib supernova PSNJ14102342-4318437", **Nayana, A. J.**; Chandra, P. 2016, ATel 9202.

29 "GMRT radio detection of broad lined Type Ic supernova ASASSN-16fp", **Nayana, A. J.**; Chandra, P. 2016, ATel 9201.

30 "GMRT Observations of supernova ASASSN-16fp", **Nayana, A. J.**; Chandra, P. 2016, ATel 9128.

31 "Radio upper limit on the GRB 161011A with the GMRT.", **Nayana, A. J.**; Chand, V.; Chandra, P.; Rao, A. R. 2016, GCN 20105.

32 "Possible radio detection of GRB 160910A with the GMRT.", **Nayana, A. J.**; Chandra, P. 2016, GCN 19966.

33 "Possible radio detection of GRB160703A with the GMRT.", **Nayana, A. J.**; Chandra, P.; Rao, A. R.; Bhattacharya, D.; Bhalerao, V. 2016, GCN 19849.

34 "Possible radio detection of GRB160623A with the GMRT.", **Nayana, A. J.**; Chandra, P.; Rao, A. R.; Bhattacharya, D.; Bhalerao, V. 2016, GCN 19848.

35 "GMRT observations of SN 2016bkv", **Nayana, A. J.**; Chandra, P. 2016, ATel 8901.

36 "GRB 160131A: second epoch observations with the GMRT.", Chandra, P. ; **Nayana, A. J.**; 2016, GCN 19010.

37 "Low frequency GMRT observations of GRB 160131A.", Chandra, P. ; **Nayana, A. J.**; 2016, GCN 19009.

38 "610 MHz detection of GRB 151027A with the GMRT.", Chandra, P. ; **Nayana, A. J.**; 2015, GCN 18620.

39 GMRT radio detection of Type Ib supernova MASTER OT J120451.50+265946.6.", Chandra, P. ; **Nayana, A. J.**; Ray, Alak; Yadav, Naveen; Chakraborti, Sayan.

Major Telescope Time Awards

Principal Investigator of

- uGMRT observations of one of the brightest radio novae - V1405 Cas in its 2021 outburst, cycle 42 (12 hrs).
- uGMRT ToO proposal to observe Galactic novae, cycle 42 (8 hrs).
- JVLA observations of SN 2014C, 22A−141, (1.5 hrs).
- uGMRT follow up observations of a sample of intermediate age supernovae, cycle 42 (36 hrs).
- uGMRT observations of recurrent nova RS Ophiuchi in its 2021 outburst, cycle 42 (12 hrs).
- uGMRT ToO observations of fast rising blue optical transients (FBOTs), cycle 40, 41, and 42 (26 hrs).
- upgraded Giant Metrewave Radio Telescope (uGMRT) proposal to observe a fast rising blue optical transient (FBOT) AT 2018cow, cycle 38, 37, 36 and 35 (62 hrs).
- uGMRT proposal on follow up observations of six radio-bright supernovae, cycle 38, 37, 36, 35, 34, 33, and 32 (306 hrs).
- uGMRT proposal to unveil the shocked neutral hydrogen associated with the X-ray bright SNR RXJ1713.7−3946, cycle 37 (8 hrs).
- uGMRT observations of a TeV SNR, SN 1006, cycle 37 and 36 (21 hrs).
- GMRT Target of Opportunity (ToO) proposal to find radio emission from core-collapse supernovae, cycle 34 (30 hrs).
- uGMRT proposal on HESS J1731−347 in band 550-900 MHz, cycle 33 (8 hrs).
- ToO proposal to find radio emission from core-collapse supernovae, cycle 33 (50 hrs).
- GMRT proposal on searching for radio emission from Type II supernovae, cycle 32 (18 hrs).

Major Telescope Time Awards (continued)

- GMRT proposal on supernova SN 2004DJ, cycle 31 (11 hrs).
- GMRT proposal on 3 radio Supernovae, cycle 31 (34 hrs).
- GMRT proposal on Type II Supernovae, cycle 31 (24 hrs).
- uGMRT proposal on HESS J1731-347, cycle 31 (8 hrs).
- GMRT proposal on Type II Supernovae, cycle 30 (36 hrs).
- Very Large Array (VLA) proposal on HESS J1731-247, Semester 2017A (4 hrs).
- VLA proposal on Asassn16fp, Semester 2017A (1.5 hrs).
- GMRT Director's Discretionary Time (DDT) proposal on GRB 161011A , DDTB248 (6 hrs).
- GMRT DDT proposal on GRB 160910A, DDTB245 (6 hrs).
- GMRT DDT proposal on GRB 141121A, DDTB150 (6 hrs).
- GMRT DDT proposal on GRB 140903A, DDTB141 (6 hrs).
- GMRT DDT proposal on Sn 2016gkg, DDTB246 & DDTB256, (14 hrs).
- GMRT DDT proposal on Asassn-16fp, DDTB233, (9 hrs).
- GMRT DDT proposal on GRB140703A, DDTB133, (4 hrs).

Co-Investigator of

- Follow-up observations of three Gamma ray Bursts (GRBs); GRB 171205A, GRB 190114C, and GRB 190829A at uGMRT frequencies, cycle 38 (16 hrs).
- Long-term uGMRT follow-up observations of the Tidal Disruption Event (TDE) flair AT 2019azh, cycle 40, 38 and 37 (38 hrs).
- Probing the energetics and environments of the radio counterparts of gravitational waves with the uGMRT, cycle 37 and 36 (72 hrs).
- Understanding young supernovae interacting with their progenitor winds with the aid of low-frequency observations - a ToO proposal, cycle 37 (36 hrs).
- Follow-up observations of GRB 171205A with the uGMRT, cycle 37, 36, 35, and 34 (66 hrs).
- Probing the radio emission from TeV SNRs with the uGMRT, cycle 37 (9 hrs).
- uGMRT observations of GRB 190114C - a TeV GRB detected with MAGIC, cycle 37 and 36 (30 hrs).
- uGMRT follow-up observations of neutron star merger events at low frequency bands, cycle 35 (8 hrs).
- ToO observation for Gamma-ray bursts at uGMRT frequencies, cycle 34 and 33 (48 hrs).
- Characterising the late time nature of a tidal disruption event Sw 1644+57 at low frequencies with the GMRT, cycle 34 and 33 (17 hrs).
- Request for monitoring of radio afterglow of GRB 171205A at uGMRT frequencies, cycle 34 (24 hrs).
- ALMA proposal to study the Final Evolution of Massive Stars toward Supernovae, proposal ID 2017.1.01411, priority grade A*, cycle 5.
- GMRT proposal to study radio-bright GRB 161219B, cycle 32 (30 hrs).
- GMRT proposal to study TeV supernova remnant candidates HESS J1912+101 and HESS J1614−518, cycle 32 (18 hrs).
- GMRT proposal to study the unprecedented metamorphosis of SN 2014C, cycle 29 and 28 (32 hrs)

Academic Awards and Grants

- Accepted Proposal for India Japan cooperative science programme (DST-JSPS); 2022−2024 (Co-principal Investigator).
- DST INSPIRE Faculty Fellowship (2021).

Academic Awards and Grants (continued)

- Third prize for the presentation: Young Physicist Colloquium 2018, SINP, Kolkata.
- Best Poster Award: Astronomical Society of India Meeting (ASI 2018) in the disciple "Stars ISM and the Galaxy", Hyderabad.
- IAU (International Astronomical Union) grant to attend IAU symposium 331 in La Reunion Island, France (2016).
- Best Oral presentation Award: National Space Science Symposium (NSSS 2016), Thiruvananthapuram.
- NCRA-TIFR scholarship towards the degree of Doctor of Philosophy (2014).
- Junior Research Fellowship was offered from the Indian Institute of Astrophysics (2014)*(declined)*.
- Junior Research Fellowship was offered from Inter-University Centre for Astronomy and Astrophysics (IUCAA) (2014) *(declined)*.
- Junior Research Fellowship from Bhabha Atomic Research Centre (2013).
- Universities Grant Commission (UGC) research grant (2013).

Professional Service

- Member of the International Astronomical Union (IAU), 2022 onwards.
- Member of the Astronomical Society of India (ASI), 2021 onwards.
- Member of the Science Communication, Public Outreach and Education (SCOPE) committee, Indian Institute of Astrophysics, 2021 onwards.
- Reviewer of the Giant Metrewave Radio Telescope proposals, 2021 onwards.

Mentoring

- Supervised Anindri Laha (St Joseph's College, Bangalore) for BSc term paper.
- Supervised Allen Gigi (St Joseph's College, Bangalore) for the MSc project.
- Supervised Anoop Krishna (NSS College, Ottapalam) for an MSc project.
- Supervised Utkarsh Jain (Bennet University, Noida) as part of the IIA visiting students' program.
- Supervised Vijay Chawan (NIT, Rourkela) as part of the IIA visiting students' program.

Conferences Workshops and Talks

Invited Talks

- Astronomy seminar at the department of Physics, Cochin University of Science and Technology, India, 19 July, 2022.
- National conference on "Astrophysical jets and observational facilities: National perspective", online meeting, ARIES Nainital, 5-9 April 2021.

Oral Presentation

- Astronomical society of India (ASI) meeting, IIT Roorkie, 25—29 March 2022.
- Astronomy group meeting talk at Indian Institute of Technology (IIT) Mumbai, 08 June 2020.
- Workshop on Gamma-Ray Bursts and Gamma-Ray Astrophysics, American University of Sharjah, Sharjah, UAE, 27 October 2018.
- Astronomy Seminar at UAE University, Al-Ain UAE, 18 October 2018.
- Astronomy Seminar at Newyork University Abudhabi, UAE, 17 October 2018.
- Young Physicist Colloquium 2018, SINP, Kolkata, India, (Oral presentation), 23-24 August 2018.

Conferences Workshops and Talks (continued)

- Astronomy Seminar at Laboratoire Univers & Particules Montpellier (LUPM), Montpellier, France, June 2018.
- Astronomy Seminar at Ruhr University, Bochum, Germany, June 2018.
- Lunch talk at Kapteyn Astronomical Institute, University of Groningen, Netherlands, June 2018.
- Shocking Supernovae: surrounding interactions and unusual events conference, Stockholm University, Sweden, 28 May - 1 June 2018.
- Talk in the astronomy group meeting at Newyork University, Abudhabi, 17 December 2017.
- Regional Astronomers Meeting on Astronomy Research Opportunities and Challenges - IV, WMO college, Muttil, Wayanad, December 2017.
- Recent Trends in the Study of Compact Objects - Theory and Observation (RETCO - III) meeting, Indian Institute of Space Science & Technology, Thiruvananthapuram, 5-7 June 2017.
- Astronomical Society of India (ASI) meeting, Birla Institute of Scientific Research, Jaipur, 6-10 March 2017.
- International Astronomical Union Symposium 331 (IAUS 331), La Reunion Island, France, 20-24 February 2017.
- National Space Science Symposium (NSSS), Thiruvananthapuram, 9-12 February, 2016.

Poster Presentation

- "Radio observations and modeling of a type IIb supernova SN 2016gkg"; conference on "VLASS in the Multiwavelength Spotlight", Socorro, 7-10 September, 2022 (virtual participation).
- "Low-frequency radio view of a fast-blue optical transient -AT2018cow"; IAU Symposium No. 361, Massive Stars Near and Far, Ireland, 8-13 May, 2022.
- "RADIO OBSERVATIONS OF TYPE IB SUPERNOVA MASTER OT J120451.50+265946.6", Shocking Supernovae: surrounding interactions and unusual events conference, Stockholm University, Sweden, 28 May-1 June, 2018.
- "Low-frequency radio observations of a TeV SNR HESS J1731−347"; Astronomical Society of India (ASI) meeting, Osmania University, Hyderabad, 5-9 February, 2018.

Participation

- International Young Leaders Forum (IYLF) 2022, Virtual meeting, 28 January 2022.
- Chandra Interactive Analysis of Observation (CIAO) workshop, NCRA-TIFR, Pune, 2017.
- Participated in the workshop on ASTROSAT, IUCAA Pune, 2016.
- Participated in Radio Astronomy School, NCRA-TIFR, Pune, 2015.
- participated in the workshop on Galaxies and Cosmology, NCRA-TIFR, Pune, 2014.

Media Coverage

- **FBOT AT 2018cow work**
  "The cow in the sky", **The Mathrubhoomi**, 17 May 2021.
  https://archives.mathrubhumi.com/technology/science/at2018cow-ncratifr-astrophysics-fast-blue-optical-transient-fbot-1.5671322
  "uGMRT reveals for the first time the patchy environment of a rare cosmic explosion", **EurekAlert**, 3 May 2021.
  https://eurekalert.org/pub_releases/2021-05/tiof-urf050321.php
  "uGMRT enables study of environment around rare transient object 215 million light years away", **The Indian Express**, 1 May 2021.
  https://indianexpress.com/article/technology/science/ugmrt-enables-study-of-environment-around-rare-transient-object-215-million-light-years-away-7297021/
  "GMRT captures facets of a rare cosmic explosion", **The Times of India** 1 May 2021.
  https://timesofindia.indiatimes.com/city/pune/gmrt-captures-facets-of-a-rare-cosmic-explosion/articleshow/82333958.cms
  "Astronomers puzzled by the cow in the sky", **The HINDU**, 1 July 2018.
- **FBOT CSS161010 work**
  "GMRT helps detect fastest transient object with hydrogen", **The Indian Express**, 27 May 2020.
  https://indianexpress.com/article/cities/pune/gmrt-helps-detect-fastest-transient-object-with-hydrogen-6428667/
  "Pune radio telescope helps discover new class of powerful astronomical explosions", **Hindustan times**, 27 May 2020.
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