

Sarrvesh Seethapuram Sridhar

Personal information

Date of birth September 15, 1989 (31 years old)
Place of birth Chennai (India)
Citizenship Indian
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Education & academic positions held

Present **Postdoctoral researcher**,
Max Planck Institute for Radio Astronomy, Germany.

2018 – 2020 **LOFAR Telescope Scientist**,
ASTRON, The Netherlands.

2018 **Ph.D. Astronomy**,
University of Groningen, The Netherlands,
Thesis title: Non-thermal emission and magnetic fields in nearby galaxies: A low-frequency radio continuum perspective.
Thesis advisors: Dr. George Heald and Prof. Dr. J.M. (Thijs) van der Hulst.
Graduation date: 29 October 2018.

2013 **M.Sc. Physics and Astronomy**,
Chalmers University of Technology, Gothenburg, Sweden,
Thesis title: Modelling the Gravitationally Lensed Quasar PKS 1830-211.
Thesis advisors: Dr. Cathy Horellou and Dr. Sebastien Muller.

2010 **Bachelor in Electronics and Communications Engineering**,
Panimalar Engineering College, Anna University, Chennai, India.

Computer skills

Programming C/CUDA C, Python, Docker/Singularity, MySQL, MATLAB
Web apps Django/React framework, Flask/Dash framework
Tools LOFAR calibration software, CASA, Miriad, AIPS/ParselTongue
Typography L^AT_EX, Sphinx

Internships & research visits

2016/17 **Extended research visit (6 months)**,
Commonwealth Scientific and Industrial Research Organisation (CSIRO), Perth, Australia.

Aug 2012 **Collisional Penrose Process Near Rotating Black Holes**,
Nicolaus Copernicus Astronomical Center (CAMK), Warsaw, Poland,
Advisor: Prof. Dr. Marek A. Abramowicz.

Sep 2012–
Dec 2012 **Redshift Space Distortion as a Cosmological Probe**,
Nicolaus Copernicus Astronomical Center (CAMK), Warsaw, Poland,
Advisor: Dr. Michał Chodorowski.

Publications

- Under review **Low radio frequency observation of the nearby spiral galaxy NGC 2403**, *Sridhar et al*, To be submitted to A&A.
- Under review **CHANG-ES XXIII: Influence of a cosmic-ray driven wind in NGC 5775**, *Heald, Heesen, Sridhar et al*, Under review with MNRAS.
- Under review **Pearls on a string in the void. Radio detection of spiral galaxies in a cosmological void**, *Sridhar et al*, Under review with A&A Letters.
- Under review **Multifrequency radio continuum observations of the Pinwheel galaxy (M 101)**, *Sridhar et al*, Under review with A&A.
21. **The significance of low frequency interferometric observations for the GPS pulsar flux estimation: the case of J1740+1000**, *Rozko et al*, ApJ.
 20. **Interferometric Imaging with LOFAR Remote Baselines of the Fine Structures of a Solar Type IIIb Radio Burst**, *Zhang, Zucca, Sridhar et al*, A&A.
 19. **Low-frequency observations of the Giant Radio Galaxy NGC 6251**, *Cantwell et al*, A&A, eprint arXiv:2004.11104.
 18. **The LOFAR view of NGC 3998, a sputtering AGN**, *Sridhar et al*, A&A, eprint arXiv:1912.04812.
 17. **Warped diffuse radio halo around the quiescent spiral edge-on galaxy NGC 4565**, *Heesen et al*, A&A.
 16. **The POLarised GLEAM Survey (POGS) I: First Results from a Low-Frequency Radio Linear Polarisation Survey of the Southern Sky**, *Riseley et al*, PASA.
 15. **LOFAR MSSS: On flattening of low-frequency radio continuum spectra of nearby galaxies**, *Chyzy et al*, A&A.
 14. **The LOFAR Two-metre Sky Survey II. First Data Release**, *Shimwell et al*, A&A.
 13. **cuFFS: A GPU-accelerated code for Fast Faraday Rotation Measure Synthesis**, *Sridhar et al*, Astronomy & Computing.
 12. **Reliable detection and characterization of low-frequency polarized sources in the LOFAR M51 field**, *Neld et al*, A&A.
 11. **Investigation of the cosmic ray population and magnetic field strength in the halo of NGC 891**, *Mulcahy et al*, A&A, eprint arXiv:1804.00752.
 10. **LOFAR MSSS: The scaling relation between AGN cavity power and radio luminosity at low radio frequencies**, *Kokotanekov et al*, A&A, eprint arXiv:1706.00225.
 9. **What drives galactic magnetism?**, *Chyzy, Sridhar et al*, A&A, eprint arXiv:1705.07187.
 8. **Discovery of a 2.56 Mpc Giant Radio Galaxy associated with a disturbed galaxy group**, *Clarke et al*, A&A, eprint arXiv:1702.01571.
 7. **The LOFAR Two-metre Sky Survey – I. Survey Description and Preliminary Data Release**, *Shimwell et al*, A&A, eprint arXiv:1611.02700.
 6. **Faraday Tomography of the Local Interstellar Medium with LOFAR: I. Galactic Foregrounds Towards IC342**, *Van Eck et al*, A&A, eprint arXiv:1612.00710.
 5. **LOFAR Facet Calibration**, *van Weeren et al (2016)*, ApJS, eprint arXiv:1601.05422.
 4. **LOFAR, VLA, and Chandra Observations of the Toothbrush Galaxy Cluster**, *van Weeren et al (2016)*, ApJ, eprint arXiv:1601.06029.
 3. **A plethora of diffuse steep spectrum radio sources in Abell 2034 revealed by LOFAR**, *Shimwell et al (2016)*, MNRAS, eprint arXiv:1603.06591.

2. **LOFAR 150 MHz observations of the Boötes field: Catalogue and Source Counts**, *Williams et al (2016)*, MNRAS, eprint arXiv:1605.01531.
1. **Diversity in extinction laws of Type Ia supernovae measured between 0.2 and 2 μm** , *Amanullah et al (2015)*, MNRAS, eprint arXiv:1504.02101.

Proceedings

- 2015 **Magnetic field on a wide range of scales in star-forming galaxies**,
George Heald, Anna Williams, Sarrvesh S. Sridhar,
 Proceedings of the conference "The many facets of extragalactic radio surveys: towards new scientific challenges", PoS(EXTRA-RADSUR2015)011.

Seminars & conference presentations

- Dec 2019 **Talk on magnetising the universe with dwarf galaxies**,
Conference "Science At Low Frequencies", Arizona, USA.
- Oct 2019 **Colloquium/seminar**,
Observatoire Astronomique, University of Strasbourg, Strasbourg, France.
- Sep 2019 **Colloquium/seminar**, *Onsala Space Observatory*, Onsala, Sweden.
- Apr 2019 **Colloquium/seminar**, *Max Planck Institute for Astrophysics (MPA)*,
 Garching, Germany.
- Mar 2019 **Colloquium/seminar**, *Observatoire de la Côte d'Azur*, Nice, France.
- Jan 2019 **Colloquium/seminar**, *Radboud University*, Nijmegen, Netherlands.
- Jan 2019 **Colloquium/seminar**, *Centre de Recherche Astrophysique de Lyon (CRAL)*,
 Lyon, France.
- June 2017 **Talk on low frequency observations of nearby dwarf galaxies**,
Conference "Nearby Galaxies at Low Frequencies - Processes and Probes",
 Gothenburg, Sweden.
- Nov 2016 **Talk on low frequency observations of nearby galaxies**,
Conference "The First Pietro Baracchi Conference", Perth, Australia.
- June 2016 **Invited talk on Applying facet calibration to LOFAR data**,
Conference "Galactic and Extragalactic magnetic fields from data",
 Bochum, Germany.
- June 2015 **Low frequency observations of the Pinwheel galaxy (M101)**,
Conference "LOFAR Science 2015", Assen, The Netherlands.
- Oct 2014 **Magnetic field structures in the Pinwheel galaxy (M101/NGC 5457)**,
Conference "Cosmic Magnetic Fields", Krakow, Poland.

Teaching experience

- July 2019 **Development in Africa with Radio Astronomy (DARA)**,
University of Zambia, Lusaka, Zambia,
 One of the two lecturers at a two-week long Introduction to Radio Interferometry course.
- June 2018 **Development in Africa with Radio Astronomy (DARA)**,
Eduardo Mondlane University, Maputo, Mozambique,
 One of the two lecturers at a two-week long Introduction to Radio Interferometry course.
- Oct 2017 **Seventh European Radio Interferometry School 2017**,
ASTRON, The Netherlands,
 Assisted school participants with LOFAR calibration and imaging.

- Sep 2016 **Fourth LOFAR Data Processing School 2016**,
ASTRON, The Netherlands,
 Assisted school participants with LOFAR calibration and imaging.
- Apr.–Jun. 2015 **Introduction to Programming and Computational Methods**,
Kapteyn Institute, The Netherlands,
 Teaching assistant for a Bachelor's course.
- 2014/2015 **Statistical Signal Processing**,
Kapteyn Institute, The Netherlands,
 Teaching assistant for a Master's course.
- Apr.–Jun. 2014 **Physics of Galaxies**,
Kapteyn Institute, The Netherlands,
 Teaching assistant for a Bachelor's course.

Grants & awards

- 2020 **Henri Poincaré Junior Program**,
Awarded €2000.00 to co-supervise a summer student along with Dr. Chiara Ferrari at Côte d'Azur Observatory in Nice, France.
- 2019 **Leids Kerkhoven-Bosscha Fonds (LKBF) travel grant**,
Awarded €750.00 to attend the Science At Low Frequencies meeting in Phoenix, USA.
- 2018 **RadioNet support for meeting participation**,
Awarded €200.00 to attend the LOFAR Magnetism Key Science Project meeting in Krakow, Poland.
- 2018 **Leids Kerkhoven-Bosscha Fonds (LKBF) travel grant**,
Awarded €650.00 to attend The Power of Faraday Tomography conference held in Miyazaki, Japan.
- 2017 **Leids Kerkhoven-Bosscha Fonds (LKBF) travel grant**,
Awarded €800.00 to attend the Science at Low Frequencies IV conference in Sydney, Australia.
- 2017 **Leids Kerkhoven-Bosscha Fonds (LKBF) travel grant**,
Awarded €650.00 to visit CSIRO Astronomy and Space Science (CSIRO/CASS) in Perth, Australia.
- 2017 **Leids Kerkhoven-Bosscha Fonds (LKBF) travel grant**,
Awarded €400.00 to attend the conference on The Broad Impact of Low Frequency Observing in Bologna, Italy.
- 2016 **Leids Kerkhoven-Bosscha Fonds (LKBF) travel grant**,
Awarded €1400.00 to visit CSIRO Astronomy and Space Science (CSIRO/CASS) in Perth, Australia.
- 2015 **Leids Kerkhoven-Bosscha Fonds (LKBF) travel grant**,
Awarded €800.00 to attend the Cosmic Magnetic Fields meeting in Stockholm, Sweden.
- 2014 **Best Abstract Contest**,
One of the three abstracts chosen as part of the Best Abstract Contest at the Cosmic Magnetic Fields conference held in Krakow, Poland.
- 2014 **Leids Kerkhoven-Bosscha Fonds (LKBF) travel grant**,
Awarded €800.00 to attend the 14th Synthesis Imaging Workshop in New Mexico, USA.

Outreach & engagement

- 2014 – 2016 **Volunteer at Blaauw Observatory & Kapteyn Institute**,
University of Groningen, The Netherlands.

2007 – 2011 **Volunteer at various outreach events,**
Tamil Nadu Astronomy Association (TANASTRO), Chennai, India.

Schools & workshops attended

- Oct 2016 **Publishing with Impact workshop 2016,**
CSIRO, Perth, Australia.
- Nov 2014 **Third LOFAR Data Processing School 2014,**
ASTRON, The Netherlands.
- Aug 2014 **Scientific Writing for Young Astronomers (SWYA 2014),**
Course organized by Astronomy & Astrophysics.
- Jul 2014 **Workshop on Galaxies and Cosmology,**
National Center for Radio Astrophysics (NCRA), Pune, India.
- May 2014 **14th Synthesis Imaging Workshop,**
New Mexico Institute of Mining and Technology, Socorro, New Mexico.
- Jul 2013 **Galaxy Formation and Evolution in a Cosmological Context,**
Summer School at Laboratoire d'Astrophysique de Marseille (LAM), France.
- Jun 2013 **Summer School on "Molecules in Space",**
Onsala Space Observatory, Sweden.
- Jun 2012 **Nordic Millimetre and Optical/NIR Astronomy Summer School 2012,**
Observational Cosmology and the Formation and Evolution of Galaxies,
Onsala Space Observatory, Onsala, Sweden.

Collaborations

1. LOFAR Magnetism Key Science Project (MKSP)
2. LOFAR Survey Key Science Project (SKSP)
3. MeerKAT MIGHTEE-POL working group
4. ASKAP POSSUM working group

Non-academic work experience

- Dec 2010– **Software Engineer,**
Aug 2011 *HCL Technologies India Pvt. Ltd., Chennai, India.*
- Description Design and Development of the Graphical User Interface for Cisco's Wireless LAN Controller using C, emweb, and HTML.
- Sep 2010– **Junior Visual Aid Specialist,**
Nov 2010 *Visual Graphics Computing Services (McKinsey&Company), Chennai, India.*
- Description Creating graphical presentations out of the managerial texts provided by clients.