

# Abubakr Ibrahim

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## Education

- Oct 2020 - Oct 2024 **PhD, Astrophysics.**  
Institute of Space Science (ICE), Autonomous University of Barcelona (UAB)  
Thesis title: Search for transient events and pulsars in multi-frequency data  
Advisor: Prof. Nanda Rea (ICE-SCIC, IEEC) and Dr. Francesco Coti Zelati (ICE-CSIC, IEEC)
- Feb 2017 - Dec 2019 **Master of Science (M.Sc), Astrophysics and Space Science (NASSP).**  
University of Cape Town, Astronomy Department.  
Thesis title: Dispersion measure variations in pulsar observations with LOFAR.  
Advisors: Dr. Maciej Serylak (SARAO) and Prof. Shazrene Mohamed (SAAO)
- Jan 2016 - Dec 2016 **Honours of Science (B.Sc.H), Astrophysics and Space Science (NASSP).**  
University of Cape Town, Astronomy Department.  
Thesis title: Binary black hole mergers - Gravitational waves and horizon dynamics  
Advisor: Prof. Denis Pollney, Rhodes University, South Africa.
- Aug 2008 - Jan 2012 **Bachelor of Science (B.Sc), Astronomy and Meteorology.**  
Omdurman Islamic University (OIU), Department of Astronomy and Meteorology, Sudan.  
Advisor: Prof. Mohamed Habib Elkanzi, Omdurman Islamic University (OIU), Sudan.

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## Work Experience

- Nov 2019 - Jun 2020 **Lecturer, Omdurman Islamic University, Department of Astronomy and Meteorology, Sudan.**  
Teaching Astronomical Application, General Astrophysics for the second and fifth-year students.
- Feb 2014 – Jan 2016 **Teaching Assistant, Omdurman Islamic University, Department of Astronomy and Meteorology, Sudan.**  
Teaching astronomical and meteorological glossary course and the practical part of Geographic Information System, and Remote Sensing and Photogrammetry courses for second and third year students.
- Sep 2012 – Feb 2014 **Tutor, Omdurman Islamic University, Department of Astronomy and Meteorology, Sudan.**  
Teaching the practical part of the Geographic Information System and Remote Sensing and Photogrammetry courses for second and third year students.

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## Memberships of Scientific Societies

- 2023 – Present General manager of Photon Scientific Centre for Natural Sciences and Metaphysics (Photon SCNSM: <https://photon-center.my.canva.site/>), Sudan
- Dec 2021 – Present Full Member of the African Astronomical Society (AfAS: <http://www.africanastronomicalsociety.org/>)

2021 – Present Admin and Moderator at Sudanese Researchers Foundation (SRF: <https://sudaneseresearchers.org/who-we-are/>), Sudan

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## Publications

- Apr 2024 Ibrahim, A. Y., et al. (2024) "An X-Ray and Radio View of the 2022 Reactivation of the Magnetar SGR J1935+2154" Published In: The Astrophysical Journal, 965:87 (12pp), 2024 April 10,. DOI: <https://doi.org/10.3847/1538-4357/ad293b>
- Jan 2023 Ibrahim, A. Y., et al. (2023) "Deep X-Ray and Radio Observations of the First Outburst of the Young Magnetar Swift J1818.0–1607." Published In: The Astrophysical Journal, 943:20 (14pp), 2023 January 20, DOI: <https://doi.org/10.3847/1538-4357/aca528>
- Apr 2024 R. Sathyaprakash, et al. (2024) "Long-term Study of the 2020 Magnetar-like Outburst of the Young Pulsar PSR J1846-0258 in Kes 75" Published In: The Astrophysical Journal, 976:56 (15pp), 2024 November 20, DOI: <https://doi.org/10.3847/1538-4357/ad8226>
- May 2021 Borghese, Alice, et al. "The X-ray evolution and geometry of the 2018 outburst of XTE J1810–197." Monthly Notices of the Royal Astronomical Society 504.4 (2021): 5244-5257.

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## Skills

- DATA REDUCTION AND ANALYSIS OF OBSERVATIONS FROM VLA, ASKAP AND LOFAR RADIO TELESCOPES
- DATA REDUCTION AND ANALYSIS OF HIGH ENERGY TELESCOPES E.G. XMM-NEWTON, NICER, SWIFT, NUSTAR
- PYTHON, BASH SCRIPTING
- GIS (ARC-GIS), REMOTE SENSING (ERDAS IMAGING), OPENCV (BASIC), GDAL (FAMILIAR)
- L<sup>A</sup>T<sub>E</sub>X, GIT, LINUX, MICROSOFT OFFICE

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## Participation at Conferences and Workshops.

- June 2024 The X-ray Mysteries of Neutron Stars and White Dwarfs ESAC, Oral presentation, Madrid, Spain
- June 2023 The X-Ray Universe 2023 Conference, Oral presentation, Greece, Athens
- May 2023 The Transient Universe 2023 school, Cargese, France
- Nov 2022 Exploring the Hot and Energetic Universe: the third scientific conference dedicated to the Athena X-ray Observatory", Barcelona, Spain
- July 2022 Conference: EAS2022 annual meeting, Valencia, Spain
- May 2022 PHAROS 2022, University La Sapienza, Rome, Italy
- June 2021 IPTA 2021 Science Week & School/Workshop
- May 2021 European Astronomical Society Annual Meeting
- March 2021 SKA Science Conference (A precursor view of the SKA Sky)
- Nov 2018 2018 Postgraduate Bursary Conference.
- Dec 2017 Pulsars and FRBs search software in the era of real-time surveys. South African Astronomical Observatory, Cape Town, South Africa.

South African Radio Astronomy Observatory. Poster presentation, Cape Town, South Africa.

24 Aug 2017 Postgraduate Pulsar Workshop, CSIRO - SKA SA. Remote observing session of pulsars with PARKES telescope.

Hosted at the SKA SA offices, Cape Town, South Africa.

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## Awards

2017 – 2018 Master scholarship, National Astrophysics and Space Science Program (NASSP), UCT.

2016 Honours scholarship, National Astrophysics and Space Science Program (NASSP), UCT.

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## Outreach

2023 – present Member of Magnet alliance outreach program at the Institute of Space Sciences (ICE-CSIC)  
<https://www.ice.csic.es/news/outreach-initiatives/2-uncategorised/127-magnet-initiative>

Sep 2022 Nit de la Recerca event

2017 – 2020 Open nights and star gazing, public events at the South African Astronomical Observatory. Answering questions from the public and showing them objects of astronomical interest using the McClean telescope (61 cm) and other small telescopes.

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## Languages

**Arabic: Native Speaker**

**English: Fluent**

**Spanish: Basic**

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## Links

My profile

<https://www.ice.csic.es/erc-magnesia/group-members/abubakr-ibrahim/>

A full version of my MSc thesis can be viewed from

<https://drive.google.com/file/d/1lvFR7pd76x03huC3HJEG1iVhgSWFNyU6/view?usp=sharing>

As well as my B.Sc(Honours) thesis can be viewed from

<https://drive.google.com/file/d/15EwuXnaZf1Cvj2dmD-yTlTbV0fXBwg8d/view?usp=sharing>

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## Referees

**Prof. Nanda Rea**

**CSIC Staff Scientist**

**Institute of Space Sciences (ICE-CSIC, IEEC)**

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**Barcelona, Spain**

**Mobile:** +34 60 899 4385

**Email:** [rea@ice.csic.es](mailto:rea@ice.csic.es)

**Dr. Francesco Coti Zelati**

**CSIC Staff Scientist**

**Institute of Space Sciences (ICE-CSIC, IEEC)**

**Barcelona, Spain**

**Mobile:** +393401016655

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