

# The Artistic Side of an Astrophysicist: Exploring My Creative Universe

Co-learnium 13 Nov 2025

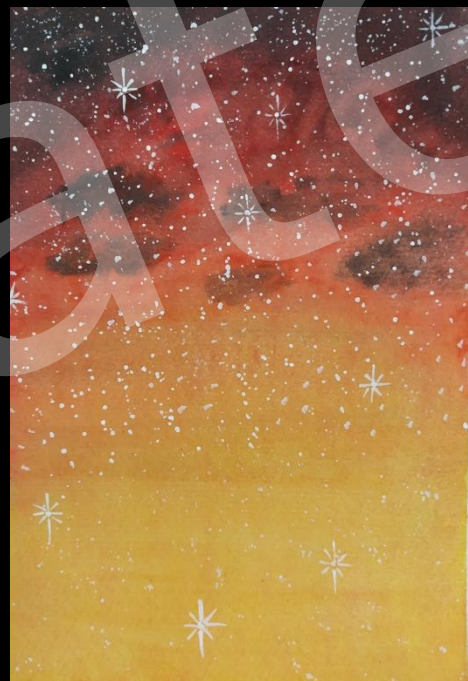
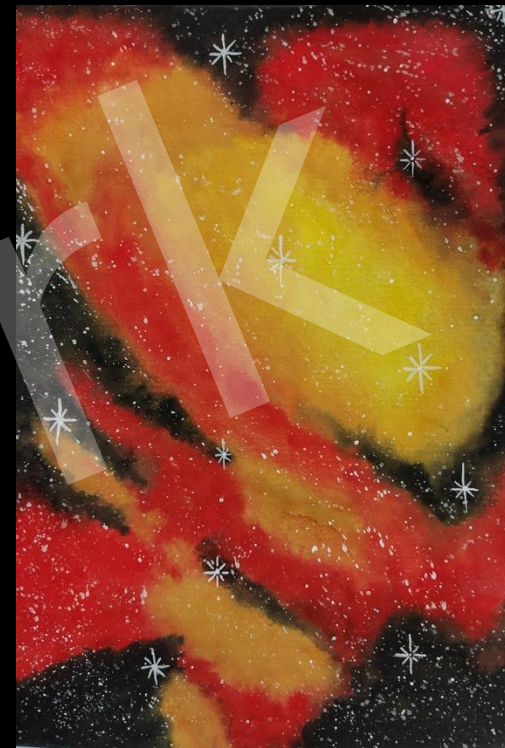
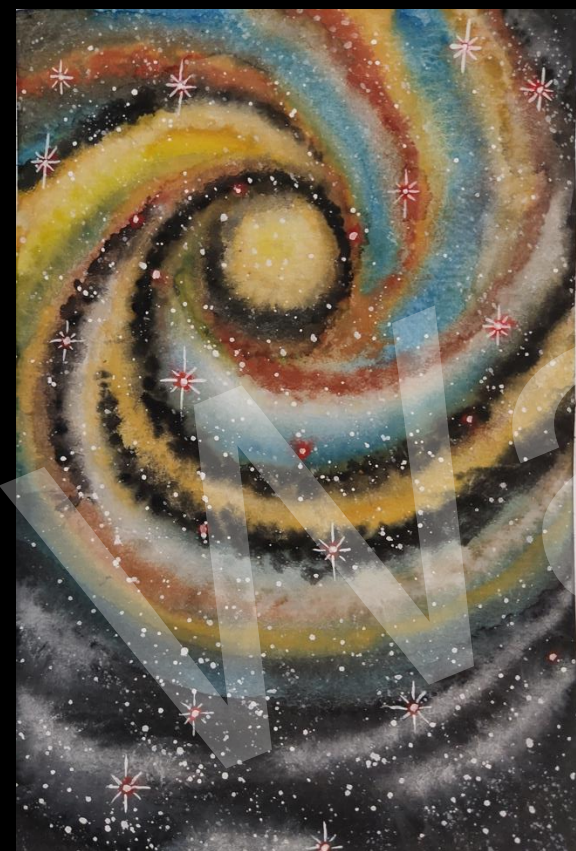
Dilpreet Kaur

# Before I Begin

- I'm a **self-taught artist**, not a professional.
- I may not know all the **technical details** of each art form.
- Art is my **creative outlet outside astronomy**.
- My work blends **science, imagination, and curiosity**.
- I'm here to **share my perspective** and keep learning.

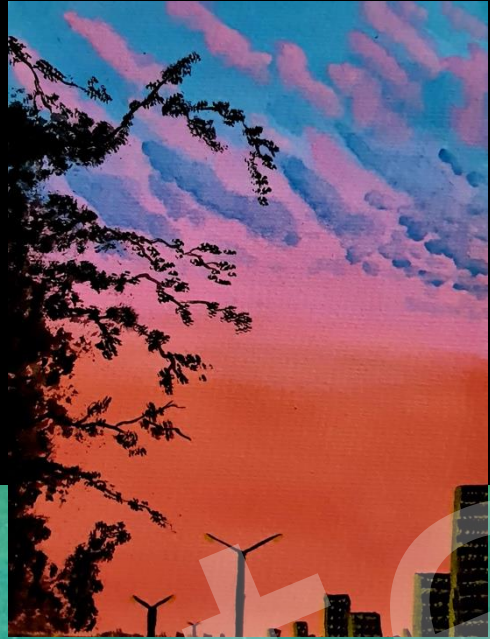


# Astronomy inspired

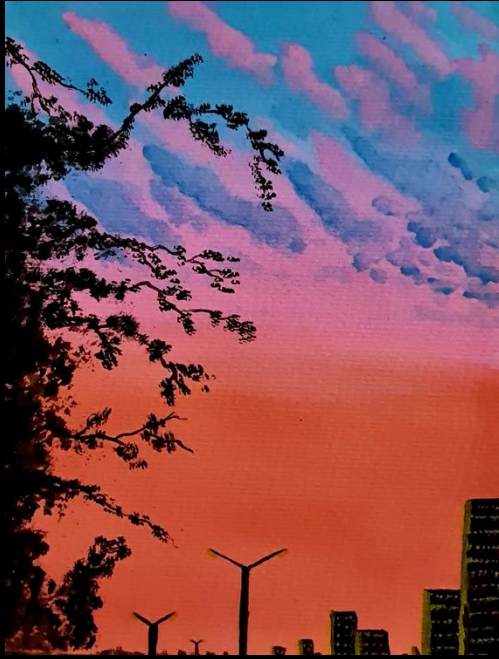




# Landscaping and others

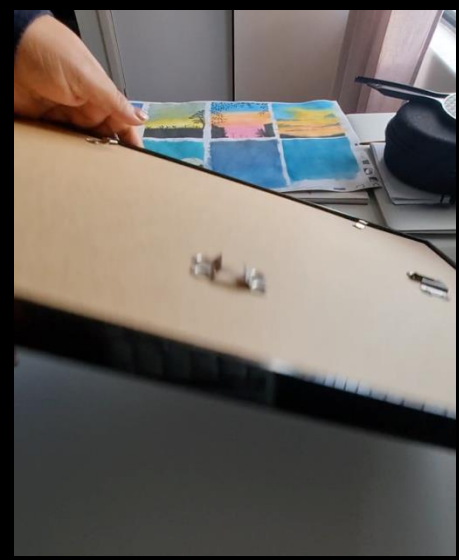






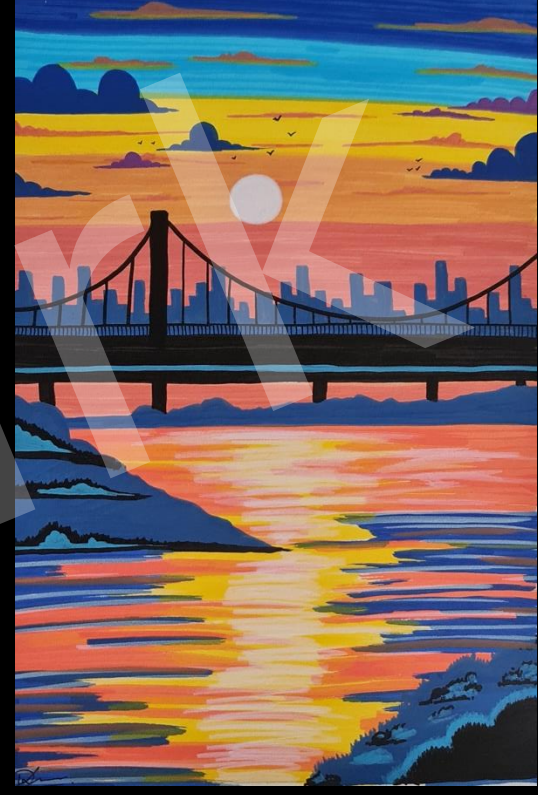
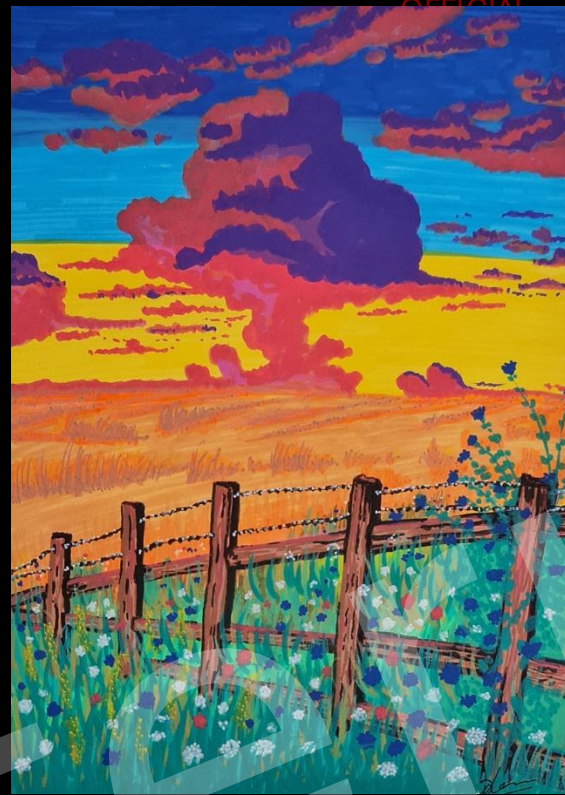


# Mandala art



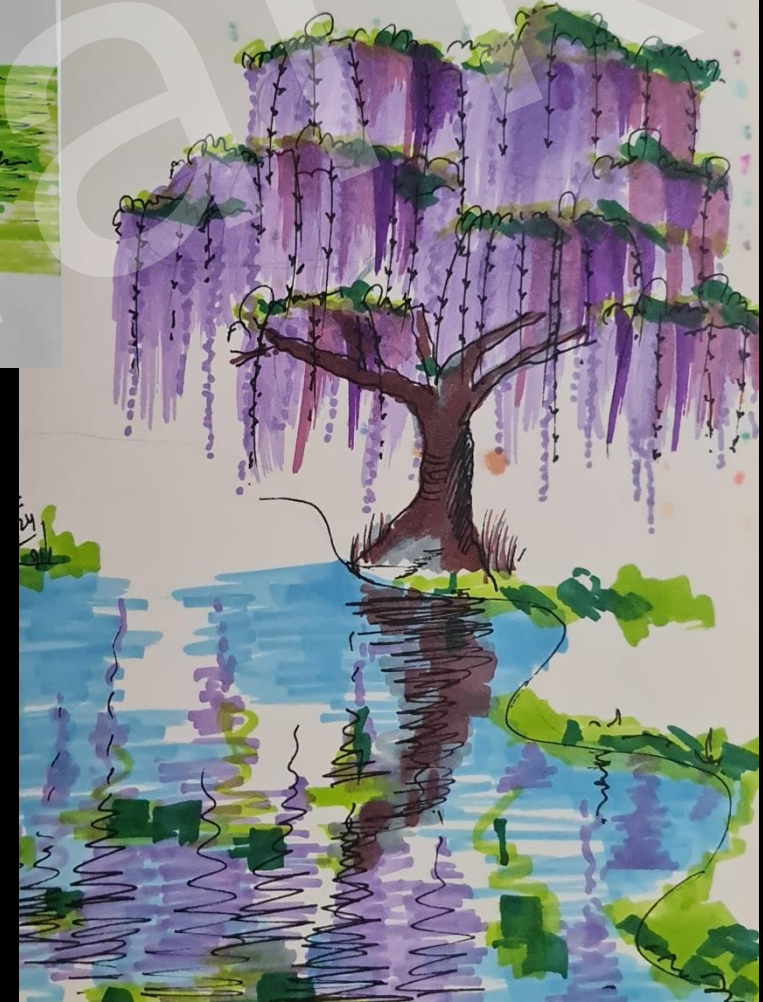
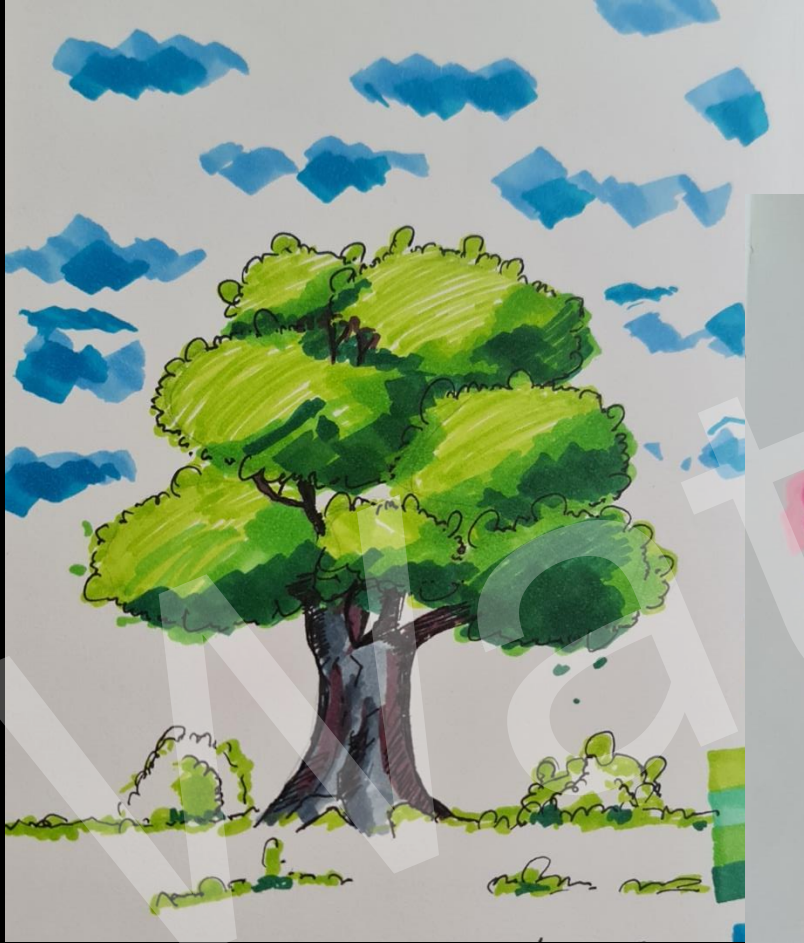


# Acrylic sketch





# Practicing Ghibli





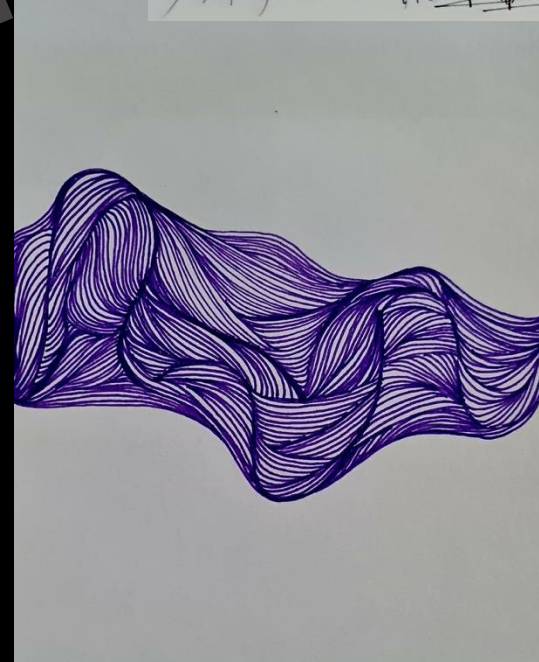
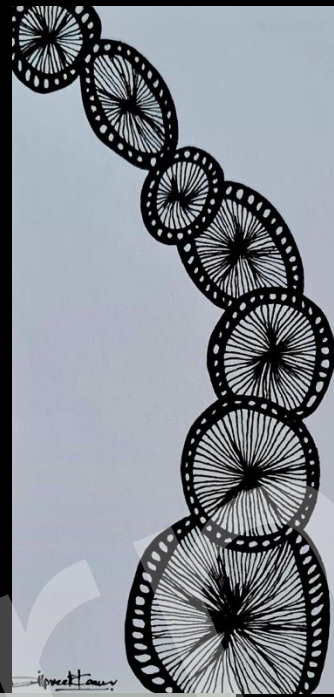
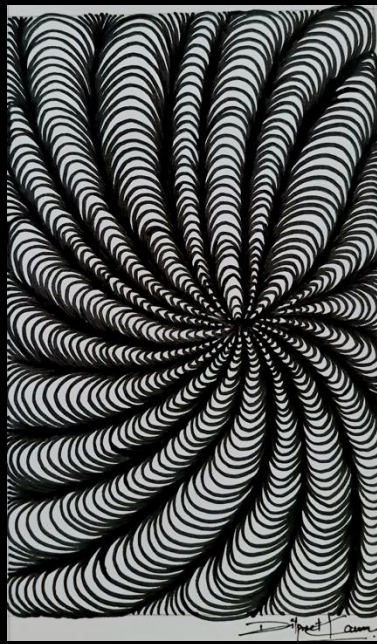


# Random sketching





# Doodling and sketching





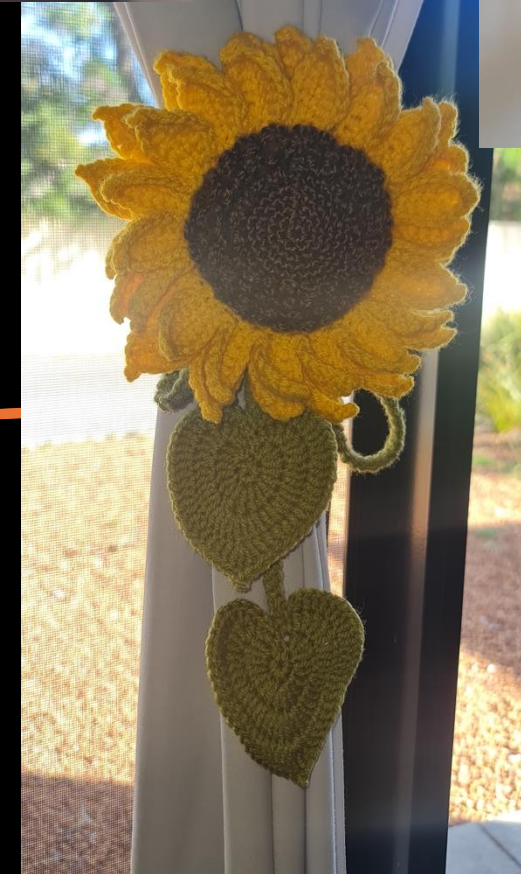


# Bookmarks



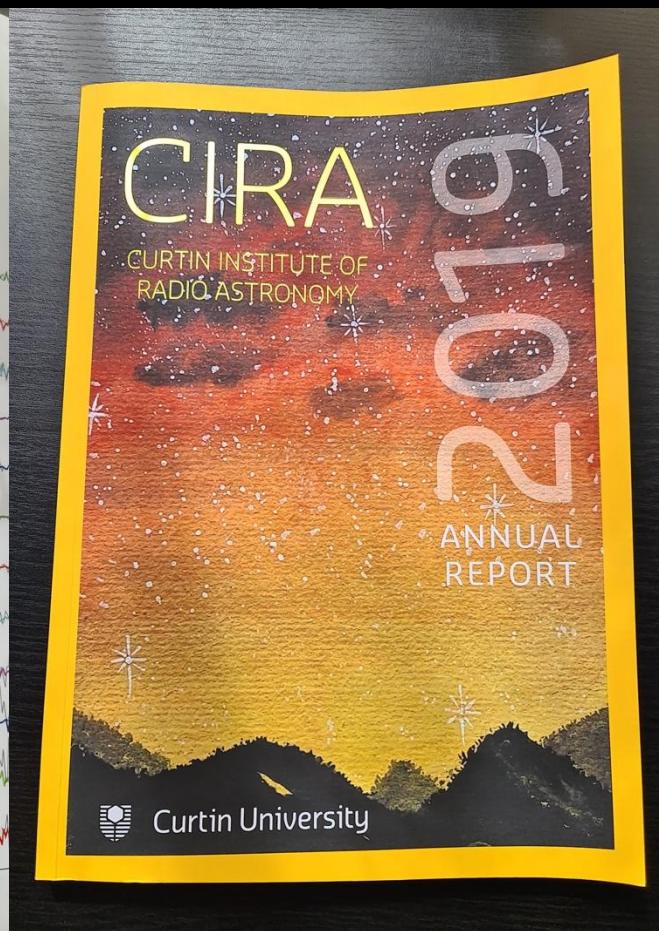
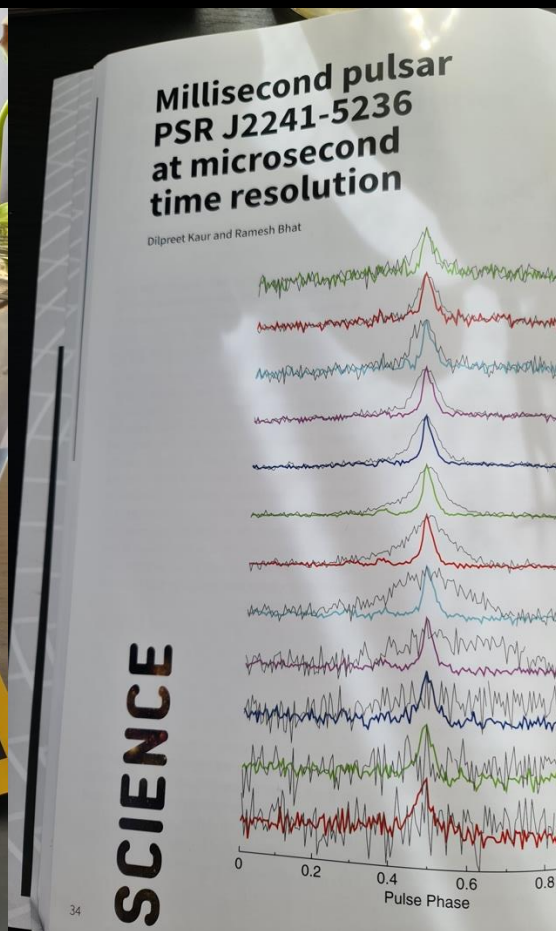
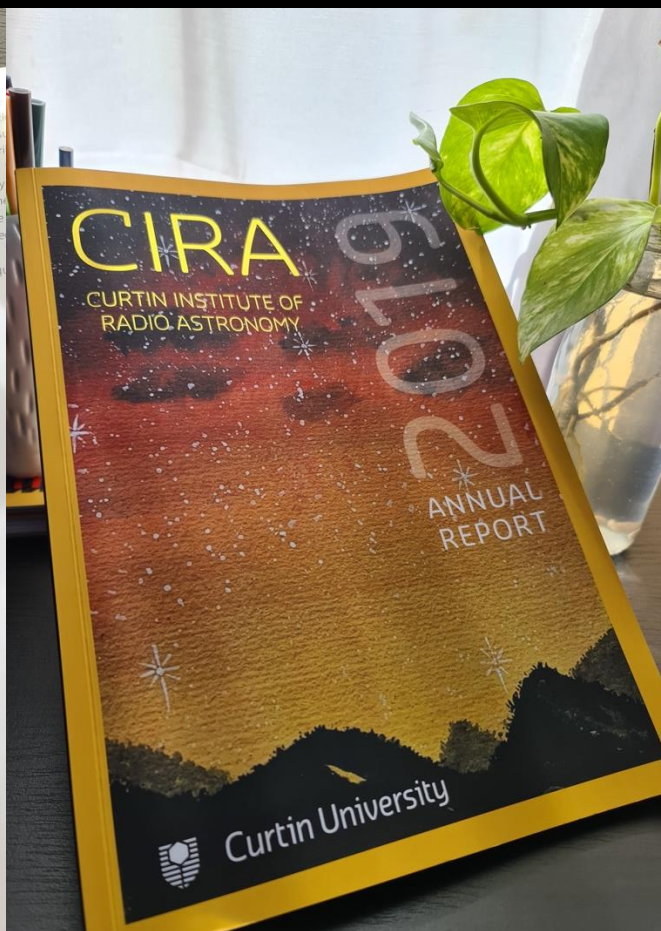
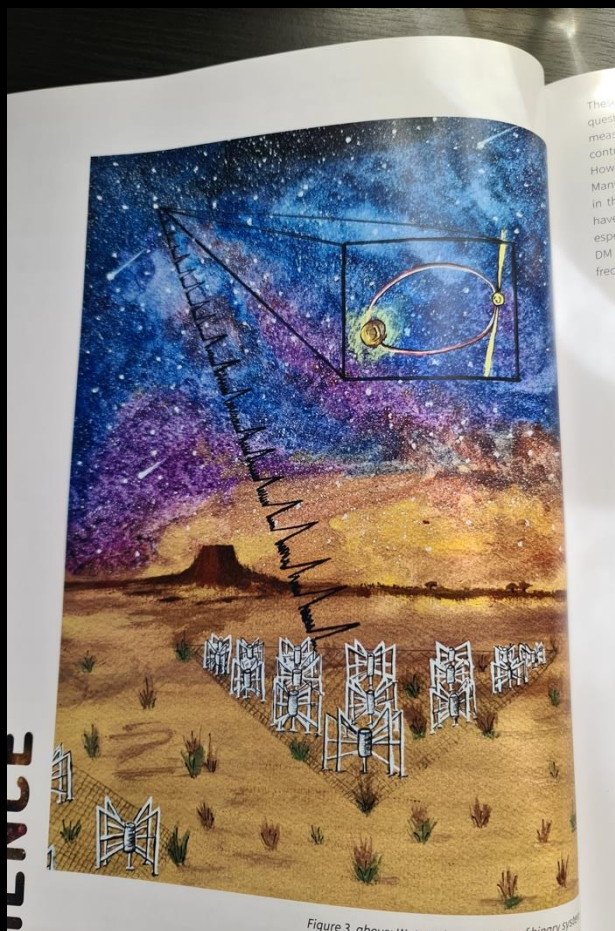


# Crocheting



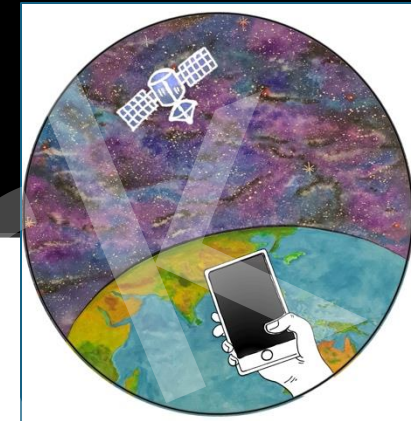


# CIRA magazine





# SKAO contact magazine, media release and Citizen science logo



Pathfinders

## Issue 8

### First pulsar discovery for the Murchison Widefield Array

BY ICRAR

The Murchison Widefield Array (MWA), one of the SKA precursors in Australia, has discovered a new pulsar – a dense and rapidly spinning neutron star sending radio waves into the cosmos – promised to be the first of many by the team behind the work.

Nick Swainston, a PhD student at the Curtin University node of the International Centre for Radio Astronomy Research (ICRAR), made the discovery while processing data collected as part of an ongoing pulsar survey. The research has been published in [a paper in The Astrophysical Journal Letters](#).

"Pulsars are born as a result of supernovae – when a massive star explodes and dies, it can leave behind a collapsed core known as a neutron star," he said, adding that pulsars spin rapidly and emit electromagnetic radiation from their magnetic poles.

"Every time that emission sweeps across our line of sight, we see a pulse – that's why we call them pulsars. You can imagine it like a giant cosmic lighthouse."

ICRAR-Curtin astronomer Dr Ramesh Bhat said that despite the MWA not being designed with pulsar searches in mind, through software ingenuity and processing on supercomputers their team has been able to gear up the MWA for pulsar science, including large surveys, leading to this first success.

"Not only is this pulsar special because it's the MWA's first, it's also incredibly faint – 98 per cent of pulsars of its type tend to be brighter than this one," he said. "We made this finding using about one per cent of the large volume of data collected for the pulsar survey, so we've only scratched the surface. When we do this project at full-scale, we expect to find hundreds of pulsars in the coming years."

Once the new pulsar was discovered, the team quickly swung into action and obtained follow up observations using two SKA pathfinders: the Parkes radio telescope in Australia and the uGMRT in India.

MWA Director Prof. Steven Tingay said the discovery hints at a large population of pulsars awaiting discovery in the Southern Hemisphere.

"This finding is really exciting because the data processing is incredibly challenging, and the results show the potential for us to discover many more pulsars with the MWA and the low-frequency part of the SKA."

"The study of pulsars is one of the headline areas of science for the SKA telescopes, so it is great that our team is at the forefront of this work," he said.



ABOVE: An artist's impression of one of 256 tiles of the Murchison Widefield Array radio telescope observing a pulsar – a dense and rapidly spinning neutron star sending radio waves into the cosmos.  
CREDIT: Dilpreet Kaur / ICRAR / Curtin University.



Dilpreet Kaur  
13/05/22



# Calendars





# Decor

