ICRAR

International Centre for Radio Astronomy Research

UWA Master of Physics 2021

Astronomy and Astrophysics

Introductory Session

Curtin University

THE UNIVERSITY OF WESTERN AUSTRALIA

Government of Western Australia
Department of the Premier and Cabinet
Office of Science

International Centre for Radio Astronomy Research

WELCOME

Curtin University

THE UNIVERSITY OF WESTERN AUSTRALIA

Government of Western Australia
Department of the Premier and Cabinet
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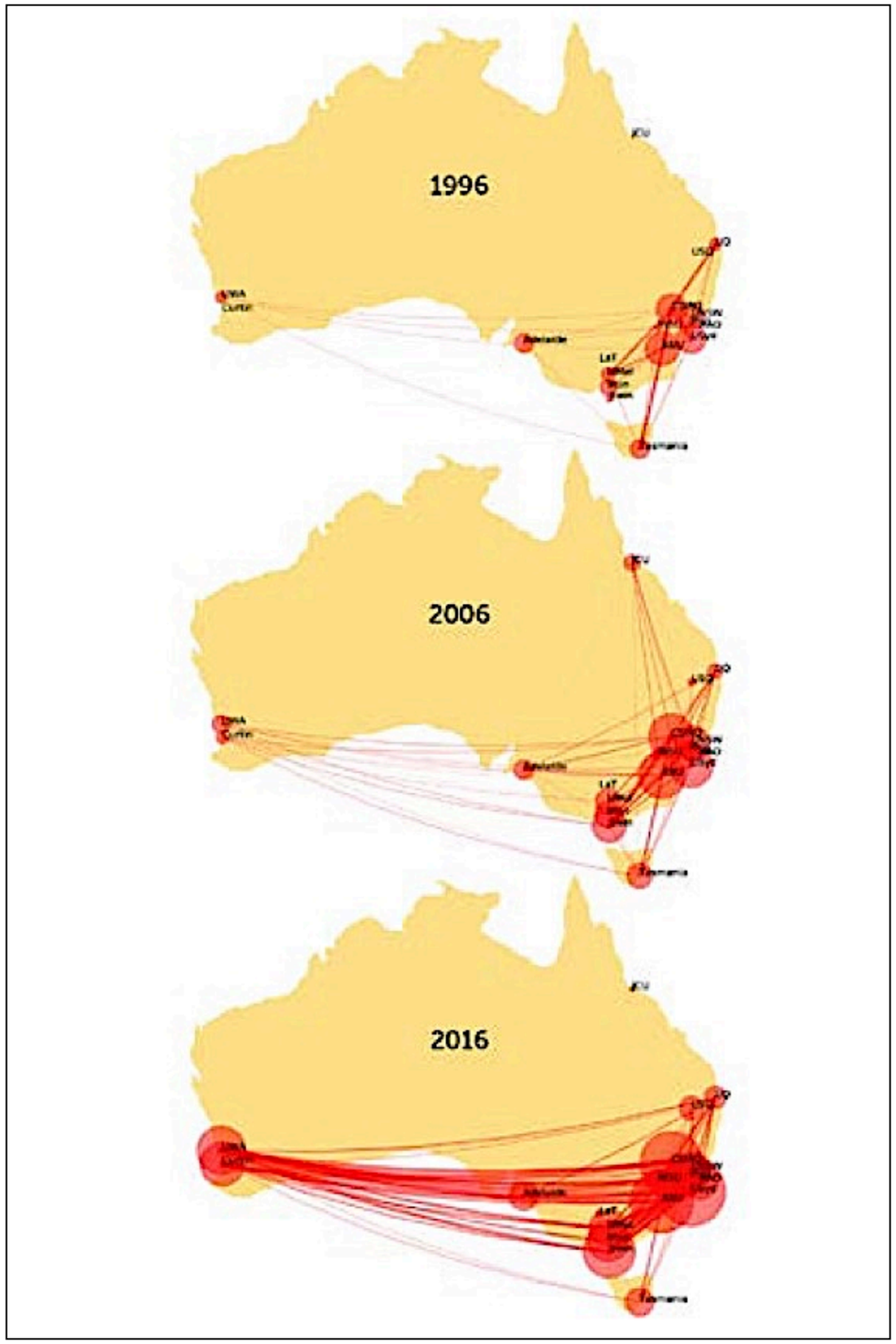
Astronomy and Astrophysics in WA



Significant growth in the last 10-15 years

Nearly 1/3 of the whole Australian astronomical community now based in WA

ICRAR International Centre for Radio Astronomy Research

CSIRO

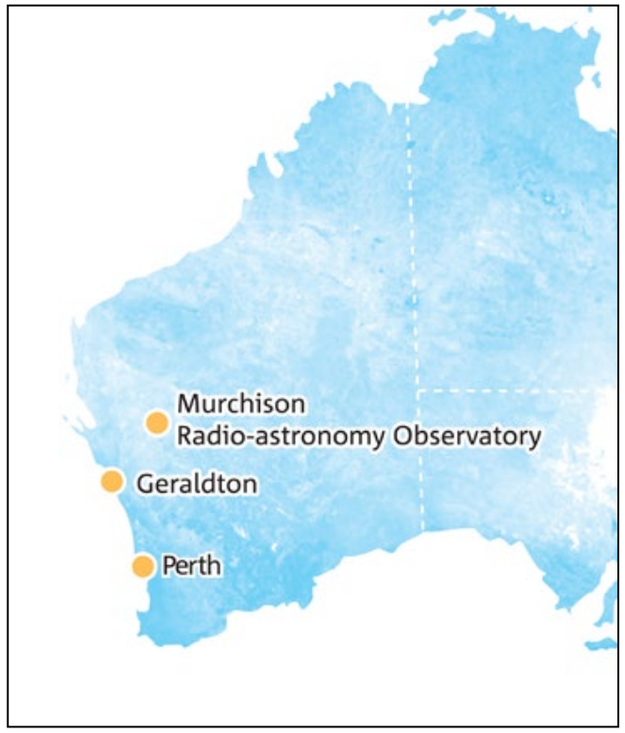
Curtin University

UWA PERTH · AUSTRALIA

The Square Kilometre Array

The most powerful radio telescope in the world… to be built in WA

Construction to start in 2021!



AUSTRALIA AFFIRMS ROLE IN WORLD'S LARGEST TELESCOPE

SHARE ARTICLE: TWITTER FACEBOOK

September 29, 2020

TAGS

MRO

MURCHISON RADIO-ASTRONOMY OBSERVATORY

RATIFICATION

SKA

SKA AUSTRALIA

Australia is another step closer to helping create the world's largest radio telescope, which will allow further exploration of the universe while creating jobs in Western Australia and growing the economy.

Australia has today ratified the Square Kilometre Array (SKA) Observatory Convention.

Under the Convention, WA will host 130,000 antennas and South Africa the 200 dishes – together making the telescope that will allow astronomers to view the cosmos in more detail than ever before.

Minister for Industry, Science and Technology Karen Andrews said over

His Excellency, General the Honourable David Hurley AC DSC (Retd) authorising Australia's ratification of the SKA Observatory Convention

ICRAR @ICRAR · 22h

The @SKA_telescope is one of the reasons we exist and we're so proud to contribute! Lots of amazing astronomers at our @uwanews and @CurtinUni nodes, funded by @WAGovernment.

UWA @uwanews · Sep 30

Australia's leading astronomers, including #UWA experts, will be at the forefront of astronomical discoveries following an endorsement to build and operate one of the largest science facilities on the planet. uwa.edu.au/news/article/2...

Astronomy and Astrophysics at UWA

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The International Centre for Radio Astronomy Research (ICRAR)

Astronomy and Astrophysics at UWA

The International Centre for Radio Astronomy Research (ICRAR)

School of Physics, Mathematics and Computing

Astronomy and Astrophysics at UWA

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Galaxy Formation and Evolution

Local Universe
Distant Universe
Theory and Computational Astronomy

Data Intensive Astronomy

Astro-photonics

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Gravitational Wave Astronomy

Gravitational Wave Instrumentation

Multi-Messenger and high-energy astrophysics

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Multi-Messenger and high-energy astrophysics

Together they scored 5 in the last Research Assessment exercise by the Australian Research Council: the highest possible score equivalent to “Well above world standard”

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Multi-Messenger and high-energy astrophysics

Nodes of the 2 Australian Research Council Centres for Excellence in Astronomy and Astrophysics (>60 M$ investment combined)

ASTRO 3D

OzGrav
ARC Centre of Excellence for Gravitational Wave Discovery

Master of Physics (Astronomy and Astrophysics) at UWA

In depth astro-related course-work and research projects

The only astro-focused Master in WA

Galaxies and Galactic Dynamics
Radiative Processes and Interstellar Medium
Radio and Optical Observational Techniques
Astronomy and Gravitational Wave Instrumentation
Cosmology and Galaxy Formation
Astro-statistics and Computational Astronomy

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Expansion started in 2018 and keeps going…
Towards a Graduate School of Astronomy and Astrophysics in the next few years

Master of Physics (Astronomy and Astrophysics) at ICRAR

Beyond coursework and research

ICRAR's supportive research environment

ICRAR organises a range of activities at both Curtin and UWA to bring staff and students together and encourage collaboration across disciplines.

Athena SWAN Bronze Award (SAGE)
Curtin University

Silver Pleiades Award - Recognising Commitment to Advancing Women in Astronomy
ICRAR-UWA

Research group meetings

Research groups conduct their own team meetings to discuss research projects and bring the team together for updates.

Wellbeing workshops

Wellbeing and resilience events are held for both staff and students.

Friday morning tea

Held every Friday at ICRAR-UWA, this social and informative morning tea often showcases international food. As part of our commitment to cultural inclusion, the ICRAR-Curtin development committee also runs occasional morning teas to mark specific cultural events.

Professional Development

Researchers and students are offered a wide range of professional development opportunities including training in communication skills for those looking to develop media skills, presentation skills and use of social media to communicate their research.

ICRAR-Con

A three-day retreat for all staff and students held in the first week of September, including a mix of talks and social activities. Previous events have been held at Seashells Resort Mandurah and Rottnest Island.

Plot of the week

Every Friday at ICRAR-UWA students get together to discuss research results and ask questions.

Induction

With the majority of people recruited internationally, staff and students are assisted with relocation support, temporary accommodation and a detailed induction.

Weekly seminars

Held on Tuesdays and Thursdays at child-friendly times at both ICRAR-Curtin and ICRAR-UWA. Talks are given by visitors, local staff or experts from other institutions, and are open to the public.

Student presentation day

All ICRAR staff and students are invited to come together once a year for talks from PhD and Masters students. A separate presentation day is held for summer interns.

Journal club

Weekly journal clubs are held at ICRAR-Curtin and at ICRAR-UWA. These provide an opportunity for researchers to come together and discuss journal articles.

Visitors

ICRAR welcomes more than 200 national and international collaborators every year.

All Hands meetings

All Hands meetings update staff and students on important matters, and enable them to meet members of ICRAR's Board.

./Error1'

StdErr

A weekly forum at ICRAR-Curtin for staff and students to get together to discuss tips, tricks, and issues in the computing space. STDERR is language agnostic and driven by the needs of the group which change throughout the year.

Staff committees

A development committee, based at ICRAR-Curtin, and a diversity, equality and inclusion committee, based at ICRAR-UWA, meet monthly to improve staff wellbeing. The committees' remits include race, gender, inclusivity, unconscious bias and development.

Radio galaxy morning tea

Radio galaxy morning tea is held at 10am each Thursday, rotating between ICRAR-Curtin, ICRAR-UWA and CSIRO-Perth. The aim of this morning tea is to facilitate an informal discussion on the latest research in radio astronomy and/or galaxy evolution science. This cross-institutional discussion group helps foster further research collaboration between the three institutes.

Write club

Every Monday at ICRAR-UWA and every Wednesday at ICRAR-Curtin, this provides a few hours of dedicated time to get together and write.

Visiting fellowship for senior women in astronomy

A three-month fellowship that sees a senior female researcher share her journey with other women in astronomy. The recipient imparts stories and specific strategies to young students and staff, to help more women reach higher levels in academia.

Astro morning tea

Every Wednesday at ICRAR-UWA. This weekly one-hour hit of interesting scientific information is also used to highlight funding opportunities and student work.

SAGE member
UWA

de Laeter Colloquium

This monthly colloquium series aims to enhance collaboration between the two ICRAR nodes, CSIRO and high-profile centres of astronomical research around the world.

Shared spaces

Both ICRAR-Curtin and ICRAR-UWA have tearoom facilities and outdoor spaces.

Bronze Pleiades Award - Recognising Commitment to Advancing Women in Astronomy
ICRAR-Curtin

Helio by Gemma Evans, Jesse Phillips from Noun Project. All other icons Noun Project

Today's Program

10:10 – **Master of Physics (Astronomy and Astrophysics) -** enrolment/course work/etc. – Matthew Young

10:30 – Break - ICRAR Friday Morning Tea (2nd Floor)

11:00 – **Insights from former UWA Master students**

11:10 - **Overview Talks about Master Research Opportunities**

Local Universe – Barbara Catinella

Distant Universe – Luke Davies

Theory and Computational Astronomy – Chris Power

Multi-messenger and high-energy astrophysics – Bruce Gendre

Gravitational Wave Discovery – Fiona Panter

12:10 – Lunch (pizza) and meet and greet with potential supervisors (2nd Floor)