

Curtin Institute of Radio Astronomy

Graduate Research Projects 2011

CIRA, the Curtin branch of ICRAR (www.icrar.org), are looking for talented, hard working, motivated students to work on Honours, Masters and PhD projects. Below is a selection of projects on offer in 2011. Descriptions of these projects are at www.astronomy.curtin.edu.au/research/future.cfm. For more information or other projects, please contact the researchers.

Astrophysics



Prof. Steven Tingay – S.Tingay@curtin.edu.au

- Detection of the global Epoch of Reionisation signal *cosupervised with Dr Wayth (PhD)*
- A search for binary black holes in active galactic nuclei (PhD)
- Studies of young radio galaxies and the evolution of radio galaxies (PhD)



Dr. Hayley Bignall – H.Bignall@curtin.edu.au

- Are scintillating quasars intrinsically special? Multiwavelength studies of MASIV Survey sources (Hons/Masters)
- Analysis of radio astronomical data on gamma-ray loud AGN (Hons/Masters/PhD)
- The Dynamic Radio Sky: Science and simulations for the ASKAP VAST Survey *co-supervised with Dr. Macquart (PhD)*



Dr. Jean-Pierre Macquart –

J.Macquart@curtin.edu.au

- Investigating the black hole at Galactic Centre (Masters/PhD)
- The link between γ -ray and radio emission in AGN (Masters/PhD)
- The physics of bright transient emission (PhD)
- Probing the ionised intergalactic medium (PhD)
- Imaging extremely bright emission from relativistic jets using the interstellar telescope (PhD)



Dr. Cormac Reynolds –

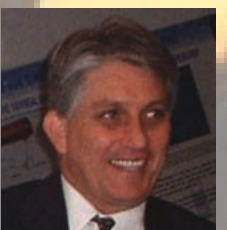
C.Reynolds@curtin.edu.au

- High resolution aperture synthesis imaging of intraday variable sources (Hons/Masters)



Dr. Randall Wayth – R.Wayth@curtin.edu.au

- Theoretical expectations for the number of gravitationally lensed radio lobes using SkyMapper (Hons/Masters)
- The structure of galactic dark matter haloes using gravitational lensing (PhD)
- Discovery of new optical gravitational lenses using Skymapper *cosupervised with ANU and Melbourne (PhD)*



Dr. Jamie Biggs – james@biggs-hill.com

- Photometry of SS2883 *cosupervised with staff from Perth Observatory (Hons)*

Dr. Aidan Hotan – A.Hotan@curtin.edu.au

- Public engagement with astrophysics via cloud computing (Hons)
- Low-frequency studies of pulsars with 2PIP and the MWA *cosupervised with Dr. Ord (PhD)*



Dr. James Miller-Jones –

James.Miller-Jones@curtin.edu.au

- Investigating the radio/X-ray coupling in accreting millisecond X-ray pulsars (Hons/Masters)
- The Disc-jet connection in accreting stellar-mass compact objects (Masters/PhD)



Engineering

Prof. Peter Hall – P.Hall@curtin.edu.au

- Low-power radio astronomy receivers for aperture arrays (Hons/Masters)
- Power solutions for the Square Kilometre Array (SKA) (Masters/PhD)
- Active antennas for sparse arrays (PhD)
- Real-time capture and processing of cosmic radio transients (PhD)



Dr. Franz Schlagenhauser –

F.Schlagenhauser@curtin.edu.au

- Comparison of radiated emission measurements according to CISPR 16 and MIL-STD 461 (Hons)
- Design and optimization of a model reverberation chamber for electromagnetic emission measurements (Hons/Masters)



Dr. Shantanu Padhi – S.Padhi@curtin.edu.au

- A broad band antenna for the Square Kilometre Array (SKA) (Masters/PhD)
- A differential LNA integrated antenna for sparse aperture arrays (Masters/PhD)

SCHOLARSHIPS DEADLINE IS

OCTOBER 29th 2010

Curtin PhD scholarship holders typically also obtain top-up scholarships of \$5 000 - \$10 000 p.a.

For information about scholarships available, see

<http://scholarships.curtin.edu.au>.

Curtin University of Technology
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