Conference Program

*Invited talks/panels marked with **
Program is in AEDT — Australian Eastern Daylight Time

Monday, 5 December

8:00 – 9:00 am	**Registration**
9:00 – 9:10 am	Welcome remarks
9:10 – 9:50 am	Opening talk: How gravitational wave astronomy is stimulating development in other fields, Yuri Levin *
9:50 – 10:10 am	Combining Gravitational Waves and EM constraints on binary evolution, Jan Eldridge *
10:10 – 10:30am	NS EOS with GWs, Paul Lasky *
10:30 – 11:00 am	**Coffee break**
11:00 – 11:30 am	Search and parameter estimation pipelines and future improvements, Teja Nerella *
11:30 – 12:00 pm	Poster Lightning Talks No.1
12:00 – 2:00 pm	**Lunch break**
2:00 – 2:15 pm	Do black holes play overtones? Vishal Baibhav
2:15 – 2:30 pm	Highlights from MeerKAT observations of pulsars, Matthew Bailes
2:30 – 2:45 pm	Systematic uncertainties of bright standard sirens, Hsin-Yu Chen
2:45 – 3:00 pm	Search for Gravitational Waves from Vector Ultralight Bosons, Dana Jones
3:00 – 3:30 pm	Key results from ground-based gravitational-wave detectors, Greg Ashton *
3:30 – 4:00 pm	**Coffee break**

4:00 – 4:30 pm	Population modelling: phenomenological choices, model misspecification, Salvatore Vitale *
4:30 – 4:45 pm	Towards high-precision gravitational-wave astronomy, Vivien Raymond
4:45 – 5:00 pm	Searching for Intermittent Gravitational-wave Backgrounds, Arianna Renzini
5:00 pm	**Adjourn**

Tuesday, 6 December

9:00 – 9:20 am	Cosmology with GWs, Tamara Davis *
9:20 – 9:50 am	GRB+GW overview, Resmi Lekshmi *
9:50 – 10:30 am	**Panel discussion** of jet launching mechanism, jet structure, shock breakout: Davide Lazzati, Gavin Lamb, Agnieszka Janiuk, Kunihito Ioka * | Moderator: Kate Alexander*
10:30 – 11:00 am	**Coffee break**
11:00 – 11:15 am	A non-parametric tour of the compact binary population, Tom Callister
11:15 – 11:30 am	Fast parameter estimation using intuitive understanding of gravitational-wave signals, Stephen Fairhurst
11:30 – 12:00 pm	Poster Lightning Talks No 2
12:00 – 2:00 pm	**Lunch break**
2:00 – 2:15 pm	Defining eccentricity for gravitational wave astronomy, Md Arif Shaikh
2:15 – 2:30 pm	Lost in translation: decoding the eccentric biographies of black hole binaries, Isobel Romero-Shaw
2:30 – 2:45 pm	Modeling the Dynamics of Compact Objects in Globular Clusters, Kyle Kremer
2:45 – 3:00 pm	The Uncertain Formation Channels of Gravitational Wave Sources, Floor Broekgaarden

3:00 – 3:15 pm	Formation mechanisms of GW190521-like and GW190412-like events from Population III binary stars, Ataru Tanikawa
3:15 – 3:30 pm	Crucial Insights on NS Merger Counterpart Diversity from Observations of GRBs, Jillian Rastinejad
3:30 – 4:00 pm	**Coffee break**
4:00 – 4:20 pm	PTA results, Ryan Shannon *
4:20 – 4:40 pm	Common envelope evolution, Mike Lau *
4:40 – 5:00 pm	Stellar Winds, Andreas Sander *
5:00 pm	**Adjourn**

Wednesday, 7 December

9:00 – 9:20 am	Tools to facilitate EM follow-up, Andy Howell *
9:20 – 10:00 am	**Panel discussion** of instruments for following up future GW detections: Katie Auchettl, Susanna Vergani, Andrew Levan, Kate Alexander * | Moderator: Iair Arcavi *
10:00 – 10:15 am	Coming soon: GW follow-up with Vera Rubin Observatory, Igor Andreoni
10:15 – 10:30 am	Modeling Cocoon Emission: The Final Electromagnetic Counterparts to Gravitational Waves, Kunihito Ioka
10:30 – 11:00 am	**Coffee break**
11:00 – 11:40 am	**Panel discussion** on the interpretation of results, handling different pipelines, populations & exceptional events: Ryan Magee, Isobel Romero-Shaw, Javier Roulet, Alex Nitz * |Moderator: Mike Zevin*
11:40 – 11:55 am	Multi-messenger observations of binary neutron star mergers in the O4 run, Alberto Colombo
11:55 – 12:10 pm	Disks, spikes, and clouds: distinguishing between environmental effects around binary black holes, Philippa Cole

12:10 – 12:25 pm	A global p-astro for gravitational-waves: consistently combining information from multiple search pipelines, Sharan Banagiri
12:25 – 12:40 pm	The LIGO-Virgo O3 run and the multi-messenger observations, Rosa Poggiani
12:40 – 1:00 pm	Poster Lightning Talks No 3
1:00 pm	**Adjourn**

Thursday, 8 December

9:00 – 9:15 am	Probing the Milky Way gamma-ray excess with continuous gravitational waves in O3 LIGO–Virgo data, Ornella Juliana Piccinni
9:15 – 9:30 am	Probing mental health in academia in the field of multi-messenger astrophysics, Kamiel Janssens
9:30 – 9:45 am	Population properties and multimessenger prospects of neutron star-black hole mergers following GWTC-3, Sylvia Biscoveanu
9:45 – 10:00 am	Binary stellar evolution using the flurry of Galactic compact binaries detected by LISA, Lucy McNeill
10:00 – 10:15 am	A new formalism for common-envelope phases of massive stars, Ryosuke Hirai
10:15 – 10:30 am	The stable mass transfer channel in light of the lowest mass binary black holes (no need for common envelopes or a neutron star-black hole mass gap), Lieke van Son
10:30 -11:00 am	**Coffee break**
11:00 – 11:30 am	Kilonova Theory, Kyohei Kawaguchi *
11:30 – 12:00 pm	Kilonova Observations, Maria Drout *
12:00 – 2:00 pm	**Lunch break**
2:00 – 2:40 pm	**Panel discussion** on how to handle large alert streams, Aaron Tohuvavohu, Griffin Hosseinzadeh, Anais Moller, Simon O'Toole* | Moderator: Iair Arcavi *

2:40 – 3:00 pm	Metallicity specific star formation history: theory and observations, Chiaki Kobayashi *
3:00 – 3:15 pm	Lessons learned from the evolution of non-thermal emission from GW170817, Aprajita Hajela
3:15 – 3:30 pm	Unveiling gamma-ray burst jet properties with radio observations, James Leung
3:30 – 4:00 pm	**Coffee break**
4:00 – 4:30 pm	NS merger simulations, Daniel Siegel *
4:30 – 4:45 pm	BRIGHT: A Legacy Sample of Short GRB Hosts with Implications for Neutron Star Merger Evolution and GW Follow-Up, Anya Nugent
4:45 – 5:00 pm	Non-LTE analysis of Helium and Strontium line signatures in kilonovae, Yuta Tarumi
5:00 pm	**Adjourn**
6:00 – 7:00 pm	**Poster viewing and pre-drinks**
7:00 pm	**Conference dinner** **Keynote talk:** First Nations astronomy with Kirsten Banks

Friday, 9 December

9:00 – 9:20 am	Current / near future ground-based detectors, David Ottaway *
9:20 – 9:40 am	Longer-term future ground-based detectors (3G), Bram Slagmolen *
9:40 – 10:00 am	Tests of GR with GWs, Anuradha Gupta *
10:00 – 10:15 am	Will pulsar timing arrays observe the Hellings-Downs correlation curve? Bruce Allen
10:15 – 10:30 am	On the effectiveness of null TDI channels as instrument noise monitors in LISA, Martina Muratore
10:30 – 11:00 am	**Coffee break**

11:00 – 11:15 am	Low-latency and optimal sky localization of binary neutron star mergers for LIGO- Virgo-KAGRA's fourth observing run, Rory Smith
11:15 – 11: 30 am	Application of the Hilbert-Huang transform for analyzing gravitational waves in a core-collapse supernova, Hirotaka Takahashi
11:30 – 11:45 am	Binary black hole mergers in young, globular, and nuclear star clusters, Marco Dall'Amico
11:45 – 12:00 pm	Circumbinary Disk Torques as a function of Binary Eccentricity and Mass Ratio, Magdalena Siwek
12:00 – 2:00 pm	**Lunch break**
2:00 – 2:20 pm	Core collapse & supernova kicks, Bernhard Müller *
2:20 – 2:40 pm	Inferring supernova kicks from Gaia, DNSs and XRBs, Jeff Andrews *
2:40 – 3:00 pm	Nuclear astrophysics with GWs, Sanjay Reddy *
3:00 – 3:15 pm	Measurement of precession in a black-hole binary, Mark Hannam
3:15 – 3:30 pm	Efficient neural network emulation of complex physical models for gamma-ray burst afterglows, Oliver Boersma
3:30 – 4:00 pm	**Coffee break**
4:00 – 4:15 pm	Evidence for subdominant multipole moments and precession in merging black hole binaries from GWTC-3, Charlie Hoy
4:15 – 4:30 pm	Methods to verify a nHz Gravitational-wave background detection, Patrick Meyers
4:30 – 4:45pm	Do X-ray binaries end up as LIGO/Virgo sources? Iwona Kotko
4:45 – 5:00 pm	Model exploration in gravitational-wave astronomy with the maximum population likelihood, Ethan Payne
5:00 pm	**Adjourn**