

Tuesday 4 December

Time	Activity	Presenter
9.00 – 10.00am	Coffee and Tea	
10.00 – 10.15am	Welcome	
10.15 – 11.30am	Topical session: Quantum phononics and nanomechanics Chair: Warwick Bowen	
10.15 – 10.45am	Towards a quantum acoustic processor	Amir Safavi-Naeini, Stanford
10.45 – 11.00am	Single mode phononics on silicon nitride	Erick Romero, UQ
11.00 – 11.30am	Resonant optomechanics with a vibrating carbon nanotube	Natalia Ares, Oxford
11.30 – 1.30pm	Lunch and poster session	
1.30 – 3.00pm	Topical session: Fundamentals and space Chair: Daniel Shaddock	
1.30 – 2.00pm	Breakthrough starshot: Optomechanics for interstellar travel	Rob Ward, ANU
2.00 – 2.30pm	Gravity is not a pairwise local classical channel	Magdalena Zych, UQ
2.30 – 3.00pm	Phonons, photons and spins at low temperatures and to test fundamental physics	Mike Tobar, UWA
3.00 – 3.45pm	Afternoon Tea	
3.45 – 5.00pm	Topical session: Pushing the limits of gravitational wave detection Chair: Rob Ward	
3.45 – 4.15pm	Tackling quantum noise in future gravitational-wave detectors	Georgia Mansell, LIGO
4.15 – 4.30pm	Reduction of quantum radiation pressure noise via squeezed light injection	Min Jet Yap, ANU
4.30 – 5.00pm	Micromechanical pendulums for optomechanics and improved gravitational wave detectors	David Blair, UWA
5.30 – late	Dinner/drinks at the Peach Pit (at own cost) 148 The Esplanade, Scarborough	



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OPTOMECHANICS INCUBATOR

4-5 DECEMBER 2018, RENDEZVOUS SCARBOROUGH, WESTERN AUSTRALIA
BRINGING TOGETHER THE AUSTRALIAN OPTOMECHANICS COMMUNITY



Wednesday 5 December

Time	Activity	Presenter
8.00 – 9.00am	Coffee and Tea	
9.00 – 10.30am	Topical session: Levitated and superfluid optomechanics Chair: Warwick Bowen	
9.00 – 9.30am	Cavity optomechanics in a levitated helium drop	Florian Marquardt, MPL
9.30 – 9.45am	Optomechanics in two dimensional superfluid helium	Chris Baker, UQ
9.45 – 10.15am	Levitated optomechanics with incoherent light	Peter Barker, UCL
10.15– 10.30am	Harnessing atomic forces for the optical manipulation of mesoscopic objects	Cyril Laplane, MQ
10.30 – 11.00am	Morning Tea	
11.00 – 12.00noon	Topical session: Quantum measurement and control Chair: Glen Harris	
11.00 – 11.30am	Quantum measurement and control of an ultracoherent mechanical resonator	Albert Schliesser, NBI
11.30 – 12.00noon	Entanglement of two or more mechanical oscillators	Matthew Woolley, UNSW
12.00 – 2.00pm	Lunch and poster session	
2.00 – 3.15pm	Topical session: Quantum interfaces Chair: Matt Woolley	
2.00 – 2.30pm	A quantum interface between light, sound and superconducting qubits	Yiwen Chu, Yale
2.30 – 3.00pm	Nonreciprocal state transfer and amplification via optomechanical interfaces	Lin Tian, UC Merced
3.00 – 3.15pm	Interfacing optical whispering gallery modes with magnetic fields and electronics	Beibei Li, UQ
3.15 – 4.00pm	Afternoon Tea	
4.00 – 5.00pm	Topical session: Optomechanics with atoms and ions Chair: Lin Tian	
4.00 – 4.30pm	Coupling and decoupling spins and quantum coherent modes of motion by quantum control	Mike Biercuk, USyd
4.30 – 5.00pm	Generating nonclassical states of motion using spontaneous emission	Jason Twamley, MQ
5.00 – 5.15pm	Closing remarks	



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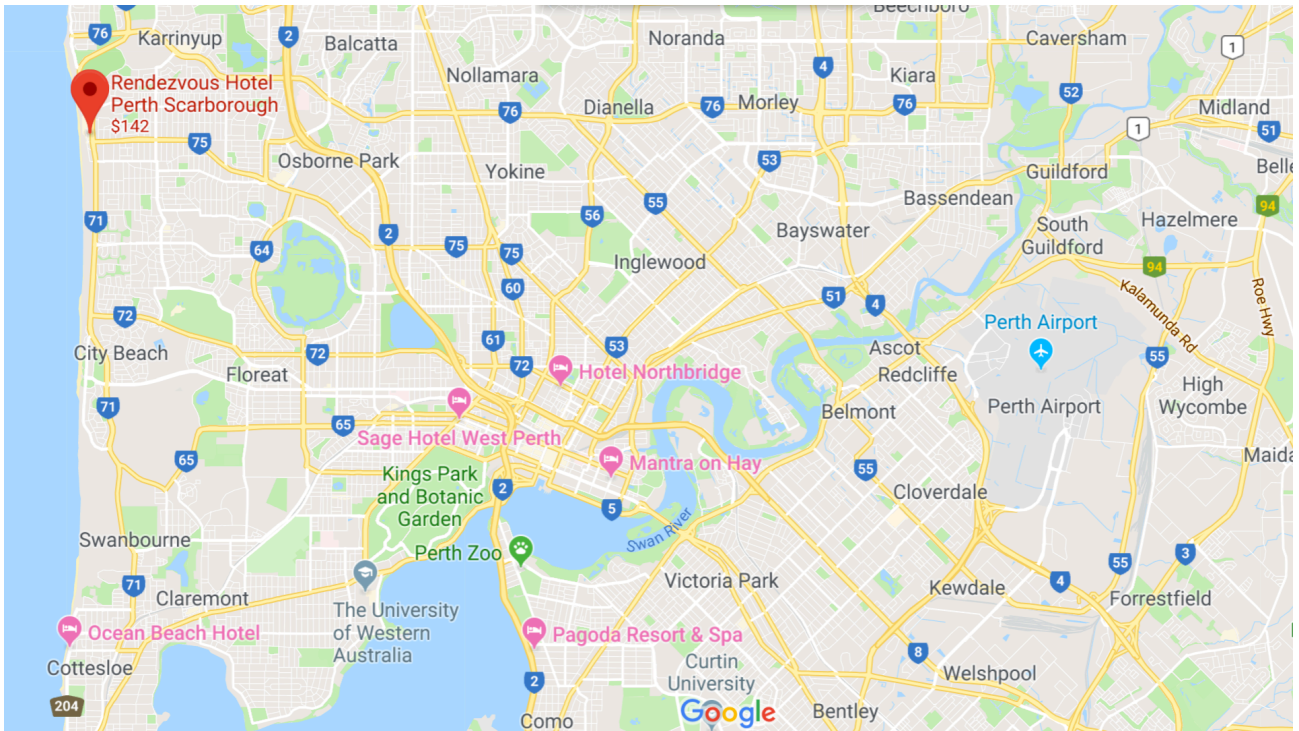
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Workshop venue

Preston Room, Rendezvous Hotel
148 The Esplanade, Scarborough, Perth
Western Australia



Dinner/drinks, Tuesday 4 Dec (own cost)

The Peach Pit, The Esplanade, Scarborough

