VSSUP 2012

week 1

	Monday | June 25th	Tuesday | June 26th	Wednesday | June 27th	Thursday | June 28th	Friday | June 29th
9:00	**Tapio Simula** Basic BEC theory I	**Tapio Simula** Basic BEC theory II	**Tapio Simula** Vorticity in superfluids I	**Tapio Simula** Vorticity in superfluids II	**Hui Hu / Xia-Ji Liu** Spin-orbit interactions with ultra-cold atoms II
10:00	**Hui Hu / Xia-Ji Liu** BCS mean field theory	**Andrei Sidorov** Laser cooling of atoms I	**Maarten Hoogerland** Atom-laser interactions and optical lattices III	**Andrei Sidorov** Bosonic Josephson junctions II	**Simon Haine** Basic quantum field theory for atoms III
11:00			Morning Tea		
11:30	**Joachim Brand** Physics of ultracold Bose gases in one-dimensional and ring traps I	**Joachim Brand** Physics of ultracold Bose gases in one-dimensional and ring traps II	**Joachim Brand** Variational quantum dynamics I	**Joachim Brand** Variational quantum dynamics II	Tutorial, problem-solving
12:30			Lunch		
14:00	**Ken Baldwin** Atom optics with metastable Helium	**Ken Baldwin** Quantum statistics, coherence, and correlations	**Andrei Sidorov** Laser cooling of atoms II	**Simon Haine** Basic quantum field theory for atoms I	Free Afternoon
15:00			Afternoon Tea		
15:30	**Ken Baldwin** Metastable Helium BEC	**Ken Baldwin** Coherence and correlation experiments at ANU	**Hui Hu / Xia-Ji Liu** Virial expansion for a strongly correlated Fermi gas	**Hui Hu / Xia-Ji Liu** Spin-orbit coupling with ultra-cold atoms I	
16:30	**Maarten Hoogerland** Atom-laser interactions and optical lattices I	**Maarten Hoogerland** Atom-laser interactions and optical lattices II	**Andrei Sidorov** Bosonic Josephson junctions I	**Simon Haine** Basic quantum field theory for atoms II	
17:30					

VSSUP 2012

week 2

	Monday | July 2nd	Tuesday | July 3rd	Wednesday | July 4th	Thursday | July 5th	Friday | July 6th
9:00	**Andy Martin** Emulation of condensed matter I	**Andy Martin** Emulation of condensed matter II	**Andy Martin** Emulation of condensed matter III	**Andy Martin** Emulation of condensed matter IV	Lab tours Talk about PhD projects interest Free talking time
10:00	**Warwick Bowen** Cavity optomechanics in the quantum regime	**John Close** Precision inertial measurements with atom interferometers	**Michael Egorov** Dimensional reduction with single and multi-component BEC I	**Michael Egorov** Dimensional reduction with single and multi-component BEC II	
11:00			Morning Tea		
11:30	**Warwick Bowen** Cavity optomechanics: applications	**John Close** Fundamental tests with atom interferometry	**Chaohong Li** Quantum metrology with ultracold atoms I	**Chaohong Li** Quantum metrology with ultracold atoms II	
12:30			Lunch		Summer School Lunch
14:00	**Chris Vale** Overview of Fermi gases	**Chris Vale** Interacting Fermi gases	**Chris Vale** BEC-BCS crossover	Tutorial, problem-solving	Free Afternoon
15:00			Afternoon Tea		
15:30	**Margaret Reid** Quantum entanglement and nonlocality I	**Margaret Reid** Quantum entanglement and nonlocality II	**Margaret Reid** Quantum entanglement and nonlocality III	**Margaret Reid** Quantum entanglement and nonlocality IV	
16:30	**Peter Drummond** Gaussian phase-space representations I	**Peter Drummond** Gaussian phase-space representations II	**Peter Drummond** Gaussian phase-space representations III	**Peter Drummond** Gaussian phase-space representations IV	
17:30					