2\textsuperscript{nd} Annual Dodd-Walls Symposium  
Dunedin 2008  
Programme

\textbf{Monday 11\textsuperscript{th} February}

\textbf{8.15-8.45:} Conference hall available for putting up posters

\textbf{Session 1:} Chair: John Harvey  
8.45-9.00: Formal opening by Geoff White (DVC Research)

9.00-9.30: Crispin Gardiner:  
\textit{The Dodd Walls Centre: Vision and Strategy}

9.30-10.00 Allister Ferguson:  
\textit{Optically pumped semiconductor disk lasers}

10.00-10.20 Scott Parkins:  
\textit{Cavity QED with Microtoroidal Resonators.}

10.20-10.40 Ashton Bradley:  
\textit{Spontaneous vortex formation in Bose-Einstein condensation}

\textbf{10:40 – 11.00 Morning tea}

\textbf{Session 2:}  
11.00-12.00 Posters

\textbf{12.00 – 1.00 Lunch}

\textbf{Session 3:} Chair: Crispin Gardiner  
1.00-1.30 Hans Bachor:  
\textit{News from ACQAO: Entangling photons and Atoms}

1.30-1.50 Cather Simpson:  
\textit{Diphosphenes. A new photonic switch?}

1.50-2.10 Jevon Longdell  
\textit{Cavity QED with rare earths: what can you do with a weak oscillator}

2.10-2.30 Lars Madsen  
\textit{Torsional control using laser induced alignment}

2.30-2.50 Mikkel Anderson:  
\textit{An Atomic Interferometer}

\textbf{2.50 – 3.20 Afternoon tea}

\textbf{3.30 – 7.00 Excursion followed by Symposium Dinner (7pm, Etruscos).}
Tuesday 12th February

Session 4: Chair: Andrew Wilson

8.30-9.00 Robert Clark: Current status and future prospects for QIP in Si:P MOS architectures incorporating single atom spintronics

9.00-9.20 Howard Carmichael: Quantum Optics in Auckland: Theory for Lasers, Atoms and Ions

9.20-9.40 Rainer Leonhardt: New lens design for Thz imaging

9.40-10.00 Stuart Murdoch: Fiber parametric oscillators and amplifiers

10.00 – 10.30 Morning tea

Session 5: Chair: Howard Carmichael

10.30-11.00 Andrew Doherty: Measurement-based quantum computation and phase transitions in many-body spin systems: is there a phase of matter that is universal for quantum computation?

11.00-11.20 David Hutchinson: Effects of disorder in ultra-cold atomic gases

11.20-11.40 Maarten Hoogerland: Delta kicked rotor experiments with an all-optical BEC

11.40-12.00 Joachim Brand: Correlated quantum states of Bosons in a ring trap

12.00 – 1.00 Lunch

Session 6: Chair: Rob Ballagh

1.00-1.30 Ben Eggleton: Frontiers in photonics

1.30-1.50 Warwick Bowen: Quantum opto-mechanical systems based on integrated optical microcavities

1.50-2.10 Jochen Schroeder: Ultrafast mode-locked Raman fibre laser

2.10-2.40 Blair Blakie: The ultra-cold Bose pancake.

2.40-3.00 Afternoon Tea
Session 7: Chair: Cather Simpson

3.00-3.50 John Harvey and Andrew Wilson: *Photonics, Ultracold molecules, and start-up companies*

3.50-4.00 Concluding remarks – John Harvey

4.00-4.30 *Afternoon tea available*

4.00 – 6.00 *Steering Group meeting (by invitation)* (Tea available)

6.30 Dinner at St Margaret’s

**Poster Presentations**

Alice Bezett, University of Otago
*Collective Excitations of a finite temperature Bose Gas*

Andy Yen Hsin Chen, University of Auckland
*Time-resolved all fiber fluorescence spectroscopy system*

Thomas Earnst, Massey University
*Trapping of matter-wave solitons*

Dr Tzahi Grunzweig, University of Otago
*Perturbation dependent loss of hyperfine coherence in atom-optics billiards*

Laura Harvey, Southern Photonics, Auckland
*Microstructured Polymer Optical Fibres*

Mr Sung-Hoon Im, University of Auckland
*Experimental demonstration of similariton pulse compression in a comb-like dispersion decreasing fibre amplifier*

Sairam Iyer, University of Auckland
*All-fiber Optical Coherence Tomography system*

Ina Kinski, University of Otago
*Quantum Scattering of Distinguishable Bosons using an Ultracold Atom Collider*

Dr Vladimir Kruglov, University of Auckland
*Parabolic and quasi-parabolic two components coupled propagating regimes in optical amplifiers*

Sam (Yat Hei) Lo, University of Auckland
*Aspherical lenses for THz spectroscopy*

Jonathan Mackory, University of Auckland
*Controlled Photon Emission in Cavity QED*
Peter McDowall, University of Otago  
*Stabilization of a diode laser*

Terry McRae, University of Otago  
*Microtoroid Fabrication and Applications*

Wynton Moore, University of Otago  
*Classical Field Method for a Fermi Gas*

Sarah Morrison, University of Auckland  
*Entanglement in Dissipative Collective Spin Systems*

Changsuk Noh, University of Auckland  
*Optical Coherence: More fact than Fiction*

Murray Olsen, ACQAO, University of Queensland  
*CV tripartite entanglement from coupled nonlinearities*

Richard Provo, University of Auckland  
*Bragg Scattering in Optical Fibres*

Nishanthan Rabeendran, University of Canterbury  
*PR-1: A ring laser gyroscope for investigations of building dynamics*

Jochen Schroeder, University of Auckland  
*Direct measurement of fast high-contrast intensity noise of a cascaded Raman fibre laser*

Jian Wei Tay, University of Otago  
*The Classical Resolution limit of Optical Tweezers*

Emese Toth, University of Otago  
*Correlations between ultra-cold bosons in an optical lattice*

Arif Ullah, University of Auckland  
*Delta Kicked Rotor Experiments and the Path towards Loschmidt Cooling*

John Wang, University of Auckland  
*Strong signal suppression due to the combined action of Raman and parametric gain in a fiber parametric amplifier*

Bryan Wild, University of Otago  
*The Dynamics of Vortices in Bose-Einstein Condensates at Finite Temperature*

Tod Wright, University of Otago  
*Heating of a BEC by mechanical perturbation*

Yiqing Xu, University of Auckland  
*Photonic crystal fibre optical parametric oscillator*
Notes:

Posters may be put up from 8.15-8.45 on Monday morning in the conference hall.

Please check in on Day One (Monday) between 10.40-1.00 to confirm meal and excursion bookings and arrange for invoicing and transport.

We will invoice for amounts owing (e.g. room upgrades, partner accommodation, extra night’s accommodation, excursion).

Wireless is available (outside session times):
The ESSID (network name) is dwcmeeting. The network is encrypted using WEP and the key in hexadecimal format is: 00112233445566778899AABBCC

Check-out time is 10.00 AM for St Margaret’s and the Executive Residence. Storage is available for luggage at both places.