

# Microscopy New Zealand 2015 Conference schedule

## Sunday February 1<sup>st</sup>

2.00pm	Exhibitor access for setup (Information Services Building aka ISB Link )
6.00pm	Exhibition area closed
7.00pm	<b>Informal pub meet up</b> (Back bar of The Terrace, 6 The Octagon)

## Monday February 2<sup>nd</sup>

7.00am	Exhibitor access for setup (ISB Link)	
7.30am	Check-in desk open (ISB Link)	
<b>8.45am</b>	<b>Welcome</b> (Burns 1 Lecture Theatre)	
9.00am	<b>Richard Blaikie</b> Seeing Small: 1,000 Years of Optical Magnifications	
10.00am	<i>Morning Tea in exhibition area (ISB Link) – Exhibition opens</i>	
10.30am	<b>Werner Kühlbrandt</b> The resolution revolution in cryo-EM	
11.30am	<b>Joanne Etheridge</b> Solving Nanostructures - new methods and applications	
12.30pm	Lunch in exhibition area (ISB Link)	
1.30pm	<b>John Drennan</b> Microscopy and the design of materials for extreme environments	
2.30pm	<b>Michael Walsh (Winner of the ProSciTech Australian 2014 Trans-Tasman Bursary)</b> Symmetry Breaking and Silver in Gold Nanorod Growth	
2.50pm	<b>Rick Webb</b> Serial Blockface Scanning Electron Microscopy	
3.10pm	<i>Afternoon tea in exhibition area kindly sponsored by Thomson Scientific Instruments Pty Ltd (ISB Link)</i>	
<b>Session</b>	<b>Biological / CryoTEM</b> (Burns 1)	<b>Materials</b> (Burns 2)
3.40pm	<b>Mihnea Bostina</b> Cryo-electron microscopy of viruses	<b>Patrick Conor</b> Hooke's Fiery Sparks
4.00pm	<b>Janet Vonck</b> Protein structure determination by cryo-electron microscopy	<b>Ruth Knibbe</b> Electron holography of high temperature superconductors – experiences and learnings
4.20pm	<b>Mazdak Radjainia</b> Cryo-EM in the antipodes	<b>Janice Lord</b> Old is new: Using Polarised Light Microscopy to identify plant fibres in Māori textile artefacts
4.40pm	<b>Greg McMullan</b> Thon rings and beam induced Brownian motion in amorphous ice	<b>Patrick Coner</b> Deterioration of tungsten carbide tools caused by machining nickel-based superalloy
5.00pm		<b>Andrew Masters</b> The Nikon LApps illumination system and its applications
5.30pm	Welcoming trade exhibition & poster reception kindly sponsored by FEI	
7.30pm	<i>Exhibition closes</i>	

## Tuesday February 3<sup>rd</sup>

8.15am	Check-in desk open	
9.00am	<b>Paul Verkade</b> Correlative Light Electron Microscopy: 1 + 1 = 3	
10.00am	<i>Morning Tea in exhibition area (ISB Link)</i>	
10.30am	<b>Robert Parton</b> Multiscale microscopy to study membrane microdomains	
11.30am	<b>Rick Webb</b> New Methods for Freeze Substitution	
12.30pm	<i>Lunch in exhibition area (ISB Link)</i>	
<b>Session</b>	<b>Materials</b> (Burns 1)	<b>Biological + Students</b> (Burns 2)
1.30pm	<b>Patrick Coner</b> Micromilling cobalt-based biocompatible materials with tungsten carbide dental tools	<b>Denis Simonov</b> Membrane vesicles released from Uropathogenic Escherichia coli deliver RNA cargo to human bladder cells
1.50pm	<b>John Drennan</b> The challenge with ZnO and the long term conservation of oil paintings of the 20th Century	<b>Hanisah Azhari</b> Modifying the surface of cubosomes with blood-brain barrier targeting ligands strongly influences its nanostructure
2.10pm	<b>Lucy Forde</b> Traceable Particle Measurements with SEM	<b>Jessy Kong</b> Time-lapse imaging of the dynamics of UV-induce cell death to the epithelium of the rat lens

2.30pm	<b>Alec LaGrow</b> Aberration Corrected STEM Investigation of Shape Controlled Ultrasmall Nanoparticles	<b>Renata Rychtarikova</b> 3D reconstruction of light-diffracting organelles of an unlabelled live cell from bright-field photon transmission microscopy – Peeling PSFs
2.50pm	<b>Kamran Khajehpour</b> Give your Microscope a Hand	<b>Tetsuo Oikawa</b> Advanced specimen-Stage Navigation System for Correlative Light/Transmission Electron Microscopy (CLEM) and Limitless Panorama (LLP) Imaging
3.10pm	<i>Afternoon tea in exhibition area kindly sponsored by NewSpec (ISB Link)</i>	
<b>Session</b>	<b>Biological (Burns 1)</b>	<b>Materials + Students (Burns 2)</b>
3.40pm	<b>David Collings</b> Cell wall development in the orchid <i>Miltoniopsis</i> investigated by confocal microscopy	<b>Aaron Lister</b> 3D Reconstruction of Geothermal Calcite Veins Using a Correlative Microscopic Approach: EBSD, EDX Chemical Analysis and Other Machines That Go Ping
4.00pm	<b>Alan Dickson</b> From corrugated board to cambium: sectioning by resin block grinding and polishing.	<b>Shaun Mucalo</b> Spatial grain size distribution characterisation in austenite using EBSD
4.20pm	<b>Ian Hallett</b> Kiwifruit skins: diversity and variability in the fruit's natural packaging	<b>Amy McLeod</b> High Temperature Materials and Microstructural Characterization
4.40pm	<b>Lloyd Donaldson</b> Enzyme-substrate interactions in pre-treated woody biomass for biofuels applications	<b>Meiken Falke</b> Quantitative EDS with focus on the nanometer scale for combinations of light and heavy elements
5.00pm	<b>Paul Sutherland</b> Pathways of infection of kiwifruit vines by the bacteria <i>Pseudomonas syringae</i> pv. <i>actinidiae</i> (Psa) and structural features of tolerant genotypes	<b>Aaron Beardsley</b> EBSD Analysis of CSL Grain Boundaries in Grain Boundary Engineered 800H Stainless Steel
5.20pm	<b>David Collings</b> Characterisation of Nuclear Pore-Anchoring Proteins in <i>Arabidopsis thaliana</i>	<b>TBA</b>
6.00pm	<i>Exhibition closed</i>	
6.45pm	<i>Conference Dinner @ The Savoy kindly supported by JEOL in celebration of their 50<sup>th</sup> anniversary (50 Princes Street, Dunedin city centre)</i>	

### Wednesday February 4<sup>th</sup>

8.15am	<i>Check-in desk open</i>
9.00am	<b>Azdiar Gazder</b> The crystallographic analysis of carbide-free bainites in transformation-induced plasticity steels
10.00am	<i>Morning Tea in exhibition area (ISB Link)</i>
10.30am	<b>David Prior</b> Microscopy of extraordinary ice
11.00am	<b>Anders Gustafsson</b> Cathodoluminescence, a forgotten mode of electron microscopy
11.20am	<b>MNZ AGM</b>
12.00pm	<i>Lunch in exhibition area (ISB Link)</i>
1.00pm	<b>Ruth Empson</b> Facilitating Dynamic Live Cell Imaging in New Zealand
1.20pm	<b>Katja Czielesky</b> Mapping the GnRH neuronal network in optically transparent brains
1.40pm	<b>Ruth Napper</b> The effect of a PN6 binge exposure to ethanol on the CA1 pyramidal cell dendritic spiny dendrites: A serial section TEM study
2.00pm	<b>Dorothy Oorschot</b> A stereological transmission electron microscopic study: Marked differences in the number and type of synapses innervating the somata and primary dendrites of three neuronal subtypes in the rat brain
2.20pm	<b>Jens Nyengaard</b> Design-unbiased stereology with spatial rotator and minicolumnarity
3.00pm	<i>Afternoon tea in exhibition area kindly sponsored by ProSciTech Ltd. (ISB Link)</i>
3.30pm	<b>Kamran Khajehpour</b> Xenon Plasma FIB vs Conventional Gallium FIB
3.40pm	<b>John Drennan</b> The Australian Microscopy and Microanalysis Research Facility (AMMRF): a 10 year perspective
4.10pm	<b>National Imaging Strategy Discussion Panel</b>
5.10pm	<b>Closing address by MNZ President Milo Kral</b>
5.30pm	<b>Conference closed</b>

### Thursday February 5<sup>th</sup> - Workshops

9.00am	All day workshops in session: <ul style="list-style-type: none"><li>• Single Particle Reconstruction</li><li>• Correlative Light Electron Microscopy</li><li>• Electron Backscatter Diffraction</li><li>• Image Analysis</li><li>• Atomic Force Microscopy</li><li>• Atomic Resolution Imaging of Materials</li></ul>
10.30am	Morning Tea
11.00am	Workshops
12.30pm	Lunch
1.30pm	Workshops
3.00pm	Afternoon tea
3.30pm	Workshops
5.00pm	Workshops close
	Informal dinner arrangements

### Friday February 6<sup>th</sup> - Workshops

9.00am	All day workshops in session: <ul style="list-style-type: none"><li>• Single Particle Reconstruction</li><li>• Correlative Light Electron Microscopy</li><li>• Stereology</li></ul>
10.30am	Morning Tea
11.00am	Workshops
12.30pm	Lunch
1.30pm	Workshops
3.00pm	Afternoon tea
3.30pm	Workshops
5.00pm	Workshops close
	Informal dinner arrangements

### Saturday February 7<sup>th</sup> & Sunday February 8<sup>th</sup> – Workshop

- Stereology Workshop continues