

# Microscopy New Zealand Conference 2024 - Full Schedule

## Day 1: Monday 2nd December 2024

Time	Location	Workshops
10am - 12pm, 2 - 4pm	AgResearch Ahuwhenua room	<b>Morning Sessions</b> Image analysis: FIJI for Beginners. Sponsored by Plant & Food Research (includes lunch)
9am - 5pm	University of Canterbury, Engineering lecture theatre E5	Scanning Electron Microscopy: Master class theory and practice. Sponsored by AXT (includes lunch)
		<b>Afternoon sessions</b>
1pm - 3pm	Lincoln University Waimarie Whare Auaha meeting room	Fluorescence life-time imaging confocal microscopy (includes lunch)
		<b>General</b>
3pm	Lincoln University, Waimarie foyer	Setup trade displays (closes 5pm)  Conference staff on hand and registration desk opens
7pm - 9pm	Lincoln University, Waimarie foyer	<b>Welcome Reception</b>

## Day 2: Tuesday 3rd December 2024

Time	Location	
<b>8:15am</b>	Lincoln University Waimarie foyer	<b>Registration desk opens</b>
<b>8:45am</b>	Lincoln University Waimarie Inaka	<b>Welcome with a Karakia (Dr. Duane Harland and Dr. Alice Eruera)</b>
<b>9am - 10:40am</b>	Lincoln University Waimarie Inaka	<b>Morning: Session 1</b>
	9am - 10:00am	Morning: Session 1: Chemical imaging using infrared microscopy at the Australian Synchrotron (Dr. Pimm Vongsvivut): Sponsored by MNZ Inc.
	10:00am - 10:20am	Decoding hair fibre genesis: 3D mitotic cycle exploration through volume electron microscopy (Mr. Nickhil Jadav)
	10:20am - 10:40am	Accelerating cryoEM structure determination with SBGrid (Dr. Shaun Rawson)
<b>10:40am - 11:00am</b>	Lincoln University Waimarie foyer	<b>Morning tea</b>

*NOTE: no food or drinks allowed in the Inaka lecture room*

**11:00am - 12:30pm** Lincoln University Waimarie Inaka **Morning: Session 2**

11:00am - 11:50am Morning: Session 2: Researching human fertility, ethical and technical challenges (Dr. Karen Reader): Sponsored by Evident

11:50am - 12:10PM Wellington Bioimaging Group: enhancing regional imaging support and collaboration. (Dr. Alfonso Schmidt).

12:10PM - 12:30PM An investigation into the internal structure of sheep wool hair fibre (Ms. Georgia Rutter)

**12:30pm - 1:30pm** Lincoln University Waimarie foyer **Lunch**

*NOTE: no food or drinks allowed in the Inaka lecture room*

**1:30pm -3pm** Lincoln University Waimarie Inaka **Afternoon: Session 3**

1:30pm - 2:20pm Afternoon: Session 3: Peering inside pathogens; Using cryoEM to image features inside of viruses (Dr. Alice Eruera): Sponsored by JEOL

2:20pm - 2:40pm Microstructure decomposition of biological samples using propagation-based dark-field x-ray imaging. (Jeremy Stockdill)

2:40pm-3:00pm The long and winding road, story of Adelaide Microscopy at the University of Adelaide (Mr. Angus Netting)

**3pm - 3:30pm** Lincoln University Waimarie foyer **Afternoon tea**

*NOTE: no food or drinks allowed in the Inaka lecture room*

**3:30pm - 5:00pm** Lincoln University Waimarie Inaka **Afternoon: Session 4 - "Trade Secrets", sponsored by Microscopy New Zealand Inc.**

3:30pm - 3:45pm *Thermo Fisher Scientific*

3:45pm - 3:55pm *Evident*

3:55pm - 4:05pm *JEOL*

4:05pm - 4:15pm *AXT*

4:15pm - 4:25pm *Bio-Strategy*

**4:45pm** Lincoln University Waimarie Inaka Poster session, - 2 minute talks. then poster setup time.

**6:00pm** Lincoln University Waimarie foyer Trades and Vendor evening

### Day 3: Wednesday 4th December 2024

<b>9am - 10:40am</b>	Lincoln University Waimarie Inaka	<b>Morning: Session 5</b>
	9am - 10:00am	Morning: Session 5: 50 years behind the microscope (Drs. Allan Mitchell and Ian Hallett): Sponsored by MNZ Inc.
	10:00am - 10:20am	Using SEM as a tool to understand the basis of insect communication with their surrounding world (Dr. Lee-Anne Manning)
	10:20am - 10:40am	A Tale of Two Tails: Unveiling the Architecture of Two Contractile Phage Tails (Dr. Mihnea Bostina)
<b>10:40am - 11:00am</b>	Lincoln University Waimarie foyer	<b>Morning tea</b>
		<i>NOTE: no food or drinks allowed in the Inaka lecture room</i>
<b>11:00am - 12:40pm</b>	Lincoln University Waimarie Inaka	<b>Morning: Session 6</b>
	11:00am - 11:40am	X-ray photoelectron spectroscopy (XPS): from basic principles, to selected case studies and new capabilities at the University of Canterbury (Dr. Vladimir Golovko)
	11:40am - 12:00pm	Developing a deep learning tool for generalised volume electron microscopy samples segmentation. (Yuyao (Daniel) Huang)
	12:00pm - 12:20pm	mtDNA Release in MEFs: Investigating Mitochondrial Herniation with FIB Milling and Cryo-Electron Tomography (Dr. Sailakshmi Velamoor)
	12:20pm - 12:40pm	Large-scale TEM-MAPS: navigating the complex ultrastructure of biological systems (Dr. Marina Richena)
<b>12:40pm - 2:30pm</b>	Lincoln University Waimarie foyer	<b>Lunch and poster session</b>
		<i>NOTE: no food or drinks allowed in the Inaka lecture room</i>
<b>2:30pm - 4:15pm</b>	Lincoln University Waimarie Inaka	<b>Afternoon: Session 7</b>
	2:30pm - 3:20pm	Afternoon: Session 7: Keynote, imaging over biological scales using optical microscopy (Dr. Paul McMillan)
	3:15pm - 3:45pm	The Centre for Electron Microscopy and Materials Science (CEMMS) at The University of Auckland – Review of NZ's latest SEM, FIB-SEM and Nanoindentation Instruments. (Dr. Steven Matthews)
	3:45pm - 4:05pm	Genome Uncoating of Seneca Valley Virus (Ms. Rosheny Kumaran)

4:05pm-4:25pm *Title TBC - brain science (Dr. Anna Mitchell)*

**6pm** The Laboratory, 17 West Belt, Lincoln 7608 **Evening Dinner sponsored by Thermo Fisher Scientific**

**Day 4: Thursday 5th December 2024**

**9:40am - 10:30am** Lincoln University Waimarie Inaka **Morning: Session 8**

9:40am - 10:30am Morning: Session 8: Quantifying the nanoworld: measuring mechanical properties with high-resolution AFM (Dr. Elena Taran)

**10:30am - 10:45am** Lincoln University Waimarie foyer **Morning tea**

*NOTE: no food or drinks allowed in the Inaka lecture room*

**10:45am - 11:30am** Lincoln University Waimarie Inaka **Session 8 continued**

10:45am - 11:05am Illuminating the response of tumour suppressor p16INK4a to oxidation in human cells. (Alex Botha)

11:05am - 11:35am Spectroscopy coupled microscopy applied to speciation of air particulate matter (Dr. Cherie Tollemache)

**11:35am** Lincoln University Waimarie Inaka **End of Conference Announcements (and prizes)**

**12:00pm** Lincoln University Waimarie Inaka **MicroscopyNZ AGM**

**2:00-4:00** Lincoln University TBC Workshop: Training topaz models for improved particle picking in single particle cryoEM

**Day 5: Friday 6th December 2024**

<b>Time</b>	<b>Location</b>	<b>Workshops</b>
		<b>Morning Sessions</b>
10am - 12pm	Lincoln University Waimarie foyer	Advancing fluorescence microscopy using real-time computational clearing: Leica Thunder. Sponsored by Bio-Strategy - Part of DKSH Group
10am - 12pm, 2 - 4pm	AgResearch, Ahuwhenua room	Image analysis: FIJI for Quantification. Sponsored by Plant & Food Research (includes lunch)
10am - 4pm	University of Canterbury, Engineering lecture theatre E5	Atomic force microscopy correlated infrared spectroscopy. Sponsored by Coherent Scientific. (includes lunch)