



AMMRF @ The University of Queensland

## The Centre for Microscopy and Microanalysis (CMM)

*The Centre for Microscopy and Microanalysis is an interdisciplinary research, teaching and service centre, which also plays an integral role within the science programs of the University of Queensland, participating in undergraduate and postgraduate education.*



### Contact and information

Centre for Microscopy and Microanalysis (CMM)

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Node Director:  
Prof. John Drennan

### About the Node

The role of the Centre for Microscopy and Microanalysis is to promote, support and initiate research and teaching in the applications of microscopy and microanalysis, as well as to develop the discipline of microscopy and microanalysis itself.

Within the University of Queensland, this brief requires involvement with the research and teaching programs of faculties and institutes such as the:

- Biological and Chemical Sciences Faculty
- Health Sciences Faculty
- Natural Resources, Agriculture and Veterinary Science Faculty
- Engineering, Physical Sciences and Architecture Faculty
- Institute of Molecular Bioscience
- Australian Institute of Bioengineering and Nanotechnology

The CMM bridges the sciences and is dedicated to an understanding of the structure and composition of all materials at atomic, molecular, cellular and macromolecular scales. This understanding arises primarily from the application of optical and electron-optical techniques to biological and non-biological materials,

but also includes the use of X-rays, ions and surface signals. There is a growing strength at the University of Queensland in the area of nanotechnology, and the CMM provides key characterisation technology for practitioners in this exciting field of study.

The materials sciences research includes microstructure investigations of processing parameters in ceramics, metals and polymers; interface studies on a range of metals, ceramics and composites; and the characterisation of catalysts and substrates.

In the life sciences area, the CMM contributes significantly to the determination of macromolecular and sub-cellular structures.



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### Node Director & AMMRF Scientific Director



**Prof. John Drennan**

John is the Director of the CMM and also the Scientific Director of the AMMRF. His research interests focus on the relationship between

microstructure and physical properties of materials. John has extensive experience in the study of a wide range of materials by using high-resolution electron microscopy, and has built an international reputation in the general field of solid-state ionics, specialising in the investigation of the role of microstructure in the conducting properties of ionic conductors.

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### Deputy Director



**Prof. Rob Parton**

Rob is an NHMRC Principal Research Fellow and a group leader in the Institute for Molecular Bioscience (IMB). His research interests focus

on the organisation, dynamics, and functions of the plasma membrane with a particular interest in caveolae, small pits that cover the surface of many mammalian cells. Rob uses a number of microscopic techniques, including cryo-electron microscopy, electron tomography, and correlative light and electron microscopy to study how caveolae and other plasma membrane domains are generated and how they function in health and in disease.

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### Node Manager



**Mrs Jill Prescott**

Jill is responsible for the organisational and financial stability of the CMM. As a principal member of the Centre Executive Team, Jill

manages all functions in relation to financial, personnel and research administration, in accordance with the University of Queensland's policies and procedures. She plays a key role in contributing to the strategic and operational objectives of the Centre.

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### Client Liaison



**Mrs Kay Hodge**

Kay is responsible for client liaison within the Centre. In addition, she administers the Travel and Access Program for the AMMRF, coordinating

the acceptance of grants and the distribution of funds. Kay has had considerable experience in the private sector, gained before she joined the CMM in 2003.

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### Operations Manager



**Mr John Nailon**

John is the Operations Manager of the CMM and is responsible for the overall management of Centre's infrastructure and person-

nel resources. The Centre houses world-class equipment including TEM, SEM, XPS, EPMA and ICP-MS. John ensures the continued operation of these instruments. He is integral to the strategic planning for the Centre, overseeing the development of new laboratories and infrastructure of the Centre's five laboratories on the University of Queensland's St Lucia campus.

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### Flagship Manager



**Dr Matthias Floetenmeyer**

Matthias is the Flagship Manager of the CMM's Cryo-Transmission Electron Microscopy Laboratory located in the University's Institute for

Molecular Bioscience (IMB). The main focus of his work is to manage the technical operation and maintenance of the FEI Tecnai F30 Cryo-TEM flagship and ancillary sample-preparation equipment installed to facilitate programs in structural biology. Matthias is responsible for the training of new users in the instrumentation and ensuring the instruments produce high-quality data. Matthias's research interests are in cell biology, high-pressure freezing, electron tomography and cryo-electron microscopy.

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### Flagship Manager



**Dr Kathryn Green**

Kathryn obtained her PhD from the University of Queensland in 2002. An expert in biological micro-

scopy, Kathryn brings to the cryo-electron microscope facility a wealth of experience in handling and microstructural analysis of diverse specimen types. Kathryn has responsibility for training users and developing techniques in advanced microscopy of biological specimens.

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