

National Imaging Facility Annual Scientific Meeting 2024

Program 7 - 9 August, Brisbane 050824

| Wednesday, 7 August NIF Community Workshops Level 2, Christie Spaces Conference Centre, Brisbane | | | | |
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| Time | Molecular Imaging and Radiochemistry Room T | Data Room V | Magnetic Resonance (MR) Room U | Ultra High Field, Low Field and Point of Care MR Room W |
| 09:00 | Registration (09:00 – 09:30) | | | |
| 09:30 | Morning tea (09:30 – 10:00) | | | |
| 10:00 | Morning tea (10:30 – 11:00) | Data Infrastructure Workshop (10:00 – 11:00) | QA & QC Working Group (By invitation only) (10:00 – 11:00) | Australian 7T Network Meeting (10:00 – 11:00) |
| 10:30 | | Human Molecular Imaging Translation Network (11:00 -12:00) | Australian Imaging Service: Updates on MRFF, EU, and NCRIS Projects (11:00 – 12:30) | Exploring reproducibility and quality in MRI research (11:00 – 12:30) |
| 11:00 | 2nd Annual NIF PET Fellow Network Workshop (12:00 – 12:30) | | | |
| 11:30 | | Lunch (12:30 – 13:00) | Building and running Australian Imaging Service pipelines (13:00 – 15:00) | Scanning brain implants: Cochlear implants as a case study (13:00 – 15:00) |
| 12:00 | Afternoon tea (15:00 – 15:30) | | | |
| 12:30 | | 2nd Annual NIF PET Fellow Network Workshop (15:30 – 16:15) | Neurodegenerative PET Workshop (16:15 – 18:30) | Low Field and Ultra Low Field Magnetic Resonance (15:30 – 17:00) |
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Thursday, 8 August: NIF Scientific Symposium | Customs House, Brisbane

| | Name | Affiliation | Topic |
|-------|--|---|---|
| 08:45 | Prof Margaret Harding | NIF | Welcome |
| 08:50 | Prof Wojtek Goscinski | NIF | Introduction to National Imaging Facility 2024 and beyond |
| | Session 1: Accessible Imaging: Technology underpinning community outcomes | Chair/s: Dr Shawna Farquharson and A/Prof Zhaolin Chen | Focus: Initiatives making imaging technology more accessible in the community |
| 09:00 | A/Prof Samantha Holdsworth | University of Auckland | Matai: Integrating cutting-edge imaging research in the community |
| 09:15 | Prof Monika Janda | University of Queensland | Melanoma Detection and Prevention: The Australian Centre of Excellence for Melanoma Imaging Diagnosis |
| 09:30 | Prof Paul Parizel | University of Western Australia | Clinical Translation Perspectives on Low Field Portable MRI |
| 09:45 | Emeritus Prof Stuart Crozier | EMVision Medical Devices | Pre-hospital and Bedside Stroke detection and characterisation |
| 10:00 | A/Prof Matthew Rosen | Harvard University | Millitesla MRI - Translation to the Clinic and Beyond |
| 10:25 | Panel discussion | | |
| 10:45 | Networking break Morning tea | | |
| | Session 2: Large Imaging Studies: Lifecycle and Impact | Chair: Prof Tom Johnstone | Focus: Large impactful cohort studies underpinned by NIF infrastructure and expertise |
| 11:15 | Prof Michael Barnett | University of Sydney | Imaging to Understanding Multiple Sclerosis: the MSBase Imaging Repository |
| 11:30 | Dr Sarah Hellewell | Curtin University | AUS-mTBI: Designing and implementing the health informatics approaches to enhance treatment and care for people with mild TBI |
| 11:45 | Prof Chris Rowe | University of Melbourne | The Australian Dementia Network – Toward Alzheimer's Disease Treatment |
| 12:00 | A/Prof Heath Pardoe | The Florey Institute of Neuroscience and Mental Health | Australian Epilepsy Project: Underpinning infrastructure to deliver a large-scale imaging study |

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| 12:15 | A/Prof Roslyn Francis | University of Western Australia | Radiopharmaceutical Trials Across Australia - an ARTNet Showcase |
| 12:30 | Panel discussion | | |
| 12:50 | Networking break Lunch and Poster session | | |
| | Session 3: Therapeutic and Diagnostic Showcase: Helping to translate innovation to trials, industry and clinic | Chair: Dr Stuart Newman | Focus: The role of imaging in developing new diagnostics and therapeutics |
| 13:50 | Rachel Maclean | Monash University | Development of novel complexes to assist in prostate cancer imaging |
| 14:05 | Dr Christian Wichmann | ONJCRI | Automating the radiosynthesis of agents for multi-centre PET imaging of cytotoxic T-cells |
| 14:20 | Prof Kris Thurecht | University of Queensland | The ARC Research Hub for Advanced Manufacture of Targeted Radiopharmaceuticals - Building Strong Industry and Research Collaborations |
| 14:35 | Prof Stephen Rose | AdvanCell | AdvanCell: Developing new cancer therapies from preclinical development to first-in-human trials |
| 14:50 | Prof John Hooper | Mater Research Institute – University of Queensland | Novel tracers in ovarian and bladder cancer |
| 15:05 | Shiami Luchow and Dr Bryan Paton | University of Newcastle | Scanning brain implants: Cochlear implants as a case study |
| 15:20 | Networking break Afternoon tea | | |
| | Session 4: Imaging Power Pitch - NIF Community Highlights | Chair/s: Dr Karine Mardon and Dr Gary Cowin | |
| 15:55 | Dr Karine Mardon and Dr Gary Cowin | University of Queensland | Session Introduction |
| 16:00 | Brooklyn Wright | University of New South Wales | Novel Methods to Achieve the Highest Resolution in-vivo Child Brain MRI - A Pilot Study |
| 16:04 | Dr Bowen Xin | CSIRO | Ultrashort Echo-time MRI and Fourier Decomposition MRI for Structural and Functional Pulmonary Abnormalities in Ataxia Telangiectasia - A Pilot Study |
| 16:08 | Tran Hoang | Monash University | Structural connectivity of the claustrum-amygdala connection to the PFC suggests an underlying network related to anxiety |

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| 16:12 | Robert Williams | University of Melbourne | Appropriate selection of subjects for amyloid therapy; Visual Readings versus Centiloid |
| 16:16 | Xincheng Ye | University of Queensland | Modality-Specific Strategies for Medical Image Segmentation using Lightweight SAM Architectures |
| 16:20 | Dr Arif Gulzar | University of Queensland | Tumor Microenvironment responsive PET-MRI guided delivery of ^{212}Pb for cancer theranostic |
| 16:24 | Dr Kh Tohidul Islam | Monash University | Radiological Image Quality Assessment of Synthetic 3T MRI Image from 64mT MRI |
| 16:28 | Dr Ashley Stewart | University of Queensland | QSMxT: A Toolbox for Seamless Quantitative Susceptibility Mapping on Any Platform |
| 16:32 | Dr Fernanda Ribeiro | University of Queensland | DeepRetinotopy: Towards a Comprehensive Toolkit for Human Visual Cortex Parcellation |
| 16:36 | Marshall Xu | University of Queensland | VesselBoost: Improving Segmentation of Small Vessels in Human Brain Magnetic Resonance Angiograms |
| 16:40 | Dr Robert Smith | The Florey Institute of Neuroscience and Mental Health | "Where did you come from; where do you go?": Validation of orientation-dependent metadata in diffusion Magnetic Resonance Imaging |
| 16:44 | Dr Miao Cao | Swinburne University of Technology | Three-dimensional velocity fields of pathological and physiological neural dynamics reveal singularities and propagation pathways |
| 16:55 | Awards and Closing Remarks | | |
| 17:00 | Networking Drinks | | |
| 18:00 | END | | |

Friday, 9 August: NIF Thematic Group Meetings | University of Queensland, Brisbane City

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| 9:00 – 10:30 | NIF Thematic Group Meeting: Informatics Meeting | Level 2, Room 227 |
| 9:00 – 10:30 | NIF Radiographers' Community of Practice (By invitation only) | Level 2, Room 205 |
| 10:30 – 11:00 | Morning Tea | Level 2 |
| 11:00 – 12:30 | NIF Thematic Group Meeting: Human Imaging | Level 2, Room 227 |
| 12:30 – 13:00 | Lunch | Level 2 |
| 13:00 – 14:30 | NIF Thematic Group Meeting: Molecular Imaging and Radiochemistry | Level 2, Room 227 |
| 14:30 – 15:00 | Afternoon Tea | Level 2 |
| 15:00 – 16:30 | NIF Thematic Group Meeting: Animals, Plants and Materials | Level 2, Room 227 |