Speakers Profiles

Mikey Bernardo

Day 1. Session 1:

Introduction into current approaches to obtaining insights from data sets (e.g. data science, machine learning).

Day 2. Session1:

Introduction into various databases used for clinical management and how to work with them to affect change in facilities.

Simon Biggs

Day 2. Session 1:

Global collaborative software development

Simon Biggs Is a Medical Physicist at Riverina Cancer Care Centre who loves Python, easy to read software, and open source. Maintainer of PyMedPhys.

Deborah Carrick

Day 1. Session 4:

Risk Assessment and Analysis: Nuclear Medicine

Deborah is a Nuclear Medicine Medical Physics Specialist who originally training in the UK. She gained wide experience in nuclear medicine and PET from working specialist cardiac and oncology hospitals as well as a large general teaching hospital. Deborah currently works for Biomedical Technology Services as part of a state-side diagnostic imaging medical physics team in Queensland and is based at the Gold Coast University Hospital. She is also a part-time DIMP TEAP coordinator for ACSPEM.

Stephen Edwards

Day 1. Session 4:

The Principles of Radiation Risk: A Closer Look

Day 2. Session 3:

The Staff Dosimetry Management System (SDMS)

Stephen is an accredited Diagnostic Imaging Medical Physicist working under Biomedical Technology Services in Brisbane, Australia. Approaching ten year's clinical experience at numerous hospital facilities, he has been appointed the role of Radiation Safety Officer in various capacities and has a special interest in radiobiological research.

Matthew Field

Day 1. Session1:

Introduction to machine learning

Matthew Field received Ph.D. from the University of Wollongong, NSW, Australia, in 2015. He is now a research fellow at University of New South Wales and the Ingham Institute for Applied Medical Research, NSW, Australia. In this role he worked to establish the Australian Computer Assisted Theragnostics (OzCAT) network which aims to develop clinically relevant machine learning models from routinely collected radiotherapy data. In 2019 he received the Cancer Institute NSW early career fellowship award to investigate prognostic imaging biomarkers in a distributed learning network of hospitals. His research interests include machine learning, robotics, artificial intelligence and their applications in medical domains such as oncology, medical physics and radiotherapy.

Steven Goodman

Day 2. Session 3:

Using Open Source Automatic Lung Segmentation for Quantitative Lung Scintigraphy

Steven Goodman is a Nuclear Medicine Medical Physics Specialist working in the department of Nuclear Medicine and Specialised PET Services at the Royal Brisbane and Women's Hospital.

Kevin Hickson

Day 2 Session 3:

SAHMI experience with data-driven medical imaging projects

Kevin Hickson is a certified medical physicist in Nuclear Medicine and is currently the Head of Medical Physics and Radiation Safety for SA Medical Imaging. He has a keen interest in radionuclide dosimetry and preclinical imaging.

Lois Holloway

Day 1. Session1:

An introduction to data science from a medical physics perspective

Lois Holloway is a radiotherapy physicist who leads the medical physics research group at the Ingham Institute and Liverpool and Macarthur Cancer Therapy Centre. She has a strong interest in learning from data for the benefit of patients, including both clinical and imaging data. She leads the Australian Computer Assisted Theragnostics (OzCAT) program which enables machine learning between data housed in distributed locations, such as different hospitals.

Ronald Huynh

Day 1. Session2:
>   *Introduction to Presenting Data - Analytics and Visualisation*

Day 2. Session 1:
>   *Data visualisation: Learning from Covid-19*

Ronald is an Emergency Senior House Officer and Digital Engagement Officer working at Gold Coast Health. He has completed further studies in Data Science and Clinical Redesign, as well as working in UX, design and frontend web development. He loves working at the intersection between digital and health, and is passionate about improving patient care and clinician workflows with technology.

Price Jackson

Day 1. Session 3:
Expanding Quantitative Medicine in Imaging through AI and Automation

Price is a senior diagnostic radiology physicist at Peter MacCallum Cancer centre. He has also worked as a post-doctoral researcher supporting Peter Mac's radionuclide therapy service where he developed image-based dosimetry software and protocols. He is currently maintains a number of research interests in image analysis which now includes development of neural network tools. One particular focus is contouring normal organs on CT to assist with measuring uptake in molecular imaging or generate at-risk structures for RT planning.

Andrew Katsifis

Day 1 Session 3:
>   *Creating Intelligence in the Radiopharmaceutical Sciences: Advances and Challenges*

Professor Andrew Katsifis is a Principal Hospital Scientist at the "Department of Molecular Imaging", Royal Prince Alfred Hospital, Sydney. He has more than 31 years of experience in Radiopharmaceutical Science medicinal chemistry and radiopharmacology. His interests include radiopharmaceutical design and development, their pharmacological evaluation and clinical translation in the areas of neurodegeneration and cancer. He is also involved in teaching, student supervision and registrar training. He is currently involved in the establishment of education and training programs for the certification and registration of Radiopharmaceutical Scientists within the ACPSEM.

Benjamin Keir

Day 1. Session 4:
> *How do we assess risk in CT radiation exposure?*
> *Fetal dosimetry and risk in CT*

Ben is a registered DIMP with over 20 years' experience in the field. He and a small team of physicists deliver services to a number of medium to large hospitals and specialist health facilities. Ben has been privileged to be involved in educational projects run by WHO and the Indonesia Nuclear Energy Regulatory Agency along with working as a consultant physicist for Médecins Sans Frontières for a period of two years. His main interest is in diagnostic display devices but is excited to see where the application of big data will take healthcare and the profession in the future.
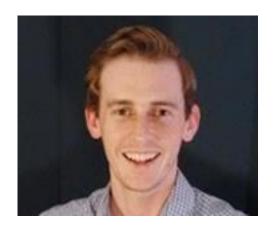

Samuel Peet

Day 2. Session 3:
> *The RBWH tech stack for data analysis and automation*

Sam Peet is a medical physics specialist at the Royal Brisbane and Women's Hospital. He is interested in workflow automation, software development, and out-of-field dosimetry.

Prabhakar Ramachandran

Day 1. Session3:
> *Deep Learning in Radiation Oncology*

Day 2. Session 3:
> *Deep learning for auto segmentation-PAH Experience*

Dr Prabhakar Ramachandran is the Director of Therapeutic Physics at the Princess Alexandra Hospital (Ipswich Road). He has post-graduate degrees in Medical Physics (Anna University), Electronics Engineering and Computer Science. He earned his PhD from the All India Institute of Medical Sciences, New Delhi. He holds accreditation in Radiotherapy QA from the Australasian College of Physical Scientists and Engineers in Medicine (ACPSEM) and in Radiation Safety from the Australasian Radiation Protection Society Inc (ARPS). He is also board certified by the American Board of Radiology. His research interests include real-time dosimetry, treatment planning, 4D-imaging, radiation dosimetry, and developing deep learning models for Gamma Knife radiotherapy.

Effi Shwintarsky, The Nova Group

Day 1. Session2:

The good use of data (i.e. selection of factors, population)
Misuse of data (i.e. graphs skewing perception of outcome)

In 1999, I founded a digital agency called The Nova Group, which now has five offices in Israel, Australia and the US and more than 12,500 clients, including recognisable brands like FIFA, GNC and Jaguar. My experience in paid media led me to data mining, social monitoring and content aggregation. From this knowledge NovaTools.io was born - an innovative technology that allows brands to understand their market and global sentiment of their product/brand in real time so they can improve their marketing strategy.

Ian Smith

Day 2. Session 1:

Quantitative Clinical Governance.

Dr Ian Smith is currently employed at St Andrew's War Memorial Hospital, Brisbane. At St Andrew's, Ian's role has evolved to include technology management, radiation safety and aspects of clinical governance and this is reflected in his current position as Senior Advisor, Physical Sciences & Clinical Outcomes Analysis. For the past 9 years, Ian has worked closely with the clinicians and administrators at St Andrew's on the development and implementation of clinical performance monitoring and evaluation techniques to support improved patient outcomes. In particular Ian's recent work has been in a diverse range of projects including the implementation of strategies to minimise radiation risks in cardiac imaging procedures and optimise blood management in cardiac surgery.

Jonathan Sykes

Day 2. Session 1:

Radiotherapy clinical management systems and how to extract data from it

Jonathan Sykes is a Radiation Oncology Medical Physicist working in the Sydney West Radiation Oncology Network (Westmead and Blacktown). He has specialised in the role of imaging in radiation oncology with early experience in the introduction of CBCT, 4D-CT, PET-CT and MRI in Radiation Oncology. In his role as research lead for physics he has fostered collaborations with a number of research groups including the Institute of Medical Physics (IMP) and ACRF Image-X at the University of Sydney and the OzCAT group based at the Ingham Institute (Liverpool). The latter has initiated an interest and understanding of the importance of mining data from clinical systems which he teaches on the IMP Masters of Medical Physics course.

Randle Taylor

Day 2. Session 1:

Efficient Machine QA Program Management with QATrack+

Randy Taylor is the owner of Multi Leaf Consulting (www.multileaf.ca), a small business providing cloud hosting and consulting services for QATrack+, an open source web application for recording, reviewing, and scheduling machine QA. Randy has been writing software for physicists in both academic and clinical settings since 2004. His academic experience focused on writing fast Monte Carlo codes for brachytherapy, but his favorite projects have all been centred around writing software to make radiation therapy clinics run more efficiently. Randy has written clinical applications for machine QA, automated dosimetry constraint checking, and a radiation therapy incident learning system. He is delighted to have software running in clinics around the world! Randy resides with his family on the shores of Lake Huron in Port Elgin, Ontario, Canada

Shona Van Garderen

Day 1. Session 4:

Understanding Research Ethics and the Role of Medical Physicists

Shona Van Garderen has worked with the Metro South Hospital and Health Service Human Research Ethics Committee over the last five years and is the current Coordinator. Her role entails overseeing the committee meetings as well as delivering education to the wider research community on the application of ethical thinking in research design. She has a background in humanities and social science.