

Dr Ilya Budovsky heads the Electricity Section at the National Measurement Institute of Australia (NMIA). The Section develops and disseminates Australian physical standards of measurement for electrical and time quantities. He also leads the Energy Sector Focus Team, which coordinates NMIA's engagement with the Australian energy sector.

Dr Budovsky is a Fellow of Engineers Australia, Senior Member of IEEE, and the Australian representative to the APMP TCEM and to the Consultative Committee for Electricity and Magnetism (CCEM) where, until March 2019, he chaired the Working Group on Regional Coordination. His former roles with APMP include Chair of the TCEM and the inaugural Lead TC Chair.

Dr Qing He, the director of Electricity and Magnetism Division, National Institute of Metrology, China. He also leads the Chinese Electricity and Magnetism Metrological Technic Committee, which is responsible for Chinese national electricity and magnetism metrological technic regulation.

He joined NIM in 1988. From then, he worked on establishing the Chinese QHR standard based on a cryogenic current comparator. He developed a method to measure the mutual inductance by using a digital integrator, which became the technical basis of the Chinese Joule Balance.

His current research interests are to evaluate the uncertainty of smart meters on-site by means of big data, the metrological service for smart grid, electrical vehicle charger.

Dr Sivinee Sawatdiaree heads the Electrical Metrology Department at the National Institute of Metrology (Thailand), NIMT. The Department develops and disseminates Thailand's national measurement standards for electrical and time quantities. Sivinee also leads NIMT New SI Team, which coordinates NIMT's efforts to develop new measurement standards for the revised SI. She is also leading a NQI Working Group, which is tasked to coordinate efforts and formulate work plans related to quality infrastructure within and beyond NIMT.

Dr Sawatdiaree earned a doctoral degree in theoretical physics from Gottfried Wilhelm Leibniz Universität Hannover, Germany in 2001. She studied thermodynamic properties of fractional quantum Hall systems until assuming her current position. She is now working on theoretical aspects of quantum impedance based on quantum Hall graphene and will soon lead NIMT participation in Thailand's National Quantum Technology Consortium.

Dr Blair Hall is a metrologist at the Measurement Standards Laboratory of New Zealand (MSL) where he leads a new project in data metrology. Blair joined MSL in 1998 and was initially responsible for developing new radio and microwave frequency measurement standards for New Zealand. He has been particularly interested in problems relating to measurement uncertainty in that field and pioneered the use algorithmic uncertainty propagation for rigorous metrological traceability to the SI. He has written more than 100 reports and papers in the field of radio and microwave frequency metrology.

Blair studied Physics at Victoria University of Wellington and at the Ecole Polytechnique Fédérale de Lausanne (EPFL). He holds a doctorate from EPFL and has worked at the Swiss national metrology institute (METAS) and at Massey University, as a Lecturer in Physics and Electronics.

Christian Rohrig is a scientist at the Physikalisch-Technische Bundesanstalt, Germany. Presently he works in the direct current measurement group in the field of calibration and development of calibration methods for electrical measurement instruments. He specializes in guarding techniques, low current calibration and calibration of shunt resistors of non-decade values.

Christian Rohrig established an automated, paperless calibration laboratory within PTB as early as in 2002. Presently a calibration database with a complete order management system is used within PTB's Department 2, providing a platform for new digitalization projects. He is applying his experience in his participation in the working groups to develop a digital calibration certificate

Dr Jan-Theodoor (JT) Janssen joined NPL in 1998. Prior to this he was a research fellow at the University of Bristol and did his PhD and Masters at the University of Nijmegen in the Netherlands. JT became an NPL Fellow in 2006 and was appointed a visiting professor at Lancaster University in 2018.

Since 2017 he has been a member of the NPL Executive team, first as the Research Director and recently as the Chief Scientist. In this role he is responsible for the external scientific engagements with academia and other government organisations. Internally, he is responsible for the quality and benchmarking of the research outputs of the laboratory and its knowledge management. JT is also the UK delegate for EURAMET, the European metrology organisation. JT is the executive sponsor for NPL's Juno committee, which aims to address gender equality in physics and to encourage better practice for all staff.

In 2015, JT launched and now heads the National Graphene Metrology Centre (NGMC), whose role it is to develop metrology and standardisation for the nascent graphene industry. JT is also a Scientific Co-Director of the Quantum Metrology Institute (QMI), which covers all of NPL's leading-edge quantum science and metrology research and provides the expertise and facilities needed for academia and industry to test, validate and ultimately commercialise new quantum research and technologies.

At NPL, his research has involved a wide range of topics in solid-state physics applied to electrical metrology. Key topics are: the behaviour and transport of electrons in nanostructured devices with the aim of developing a quantum standard for electrical current; the quantum Hall effect in both traditional semiconductor systems, as well as graphene, as a primary standard for resistance; and the Josephson effect for a quantum voltage standard. JT has also done extensive research in the properties of low-dimensional systems such as graphene and other 2D materials. He has co-authored more 100 scientific publications on these topics.

JT is a Chartered Physicist and a Fellow of the National Physical Laboratory (NPL), the Institute of Physics (UK) and the Institute of Engineering and Technology. He is also the NPL Head of Science and Engineering Profession for the Government Science and Engineering Profession (GSE).