



# **ACCREDITATION MATTERS**

**2025**

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**PROGRAMS**



# CONFERENCE DAY 1

## Room C4.5

8:00AM – 9:30AM

### Masterclass: From Doubt to Decision: Creating Results Through Measurement Uncertainty

Discover the fundamentals of measurement uncertainty in this hands-on masterclass. Through practical exercises, you will explore an internationally recognised framework for evaluating and expressing uncertainty in laboratory measurements. This masterclass session, facilitated by NATA Education & Advisory Services' Matthew Lewis and Tony Bergen from the Australian Photometry and Radiometry Laboratory, follows a structured seven-step process, guiding you from identifying sources of uncertainty to combining and reporting overall uncertainty in your measurements.

9:30AM – 10:00AM

### Opening Remarks and Welcome to Accreditation Matters 2025

NATA Board Chair Dr Sanmarié Schlebusch and NATA CEO Jennifer Evans open Accreditation Matters 2025 and provide an update on NATA Accreditation and its continued importance, new developments and plans for the future of accreditation.

10:00AM – 10:30AM

### Making the world go round - the role and importance of standards in science and trade

KEYNOTE: Australia's Former Chief Scientist, Dr Cathy Foley AO PSM provides a big picture view of the role of standards, accreditation and conformity assessment activities in science and why this matters.

10:45AM – 11:15AM

### Australia's Technical Infrastructure Alliance - Leaders Session

A must-see session. Leaders from Australia's Technical Infrastructure Alliance - Jennifer Evans (NATA), Jan Herrmann (National Measurement Institute), and Kareen Riley-Takos (Standards Australia) - sit down for an informative discussion on the important roles their organisations play in accreditation and conformance infrastructure in Australia for domestic consumers and for trade. Discover how they work together. Moderated by ABC Science Journalist Maddie Massy.

11:15AM – 11:45AM

### The Crucial Role of Consumer Representation in Standards Committees

CEO of Consumer Action Law Centre Stephanie Tonkin and Standards Australia's Ben Russell explore why consumer involvement is vital in standards development and its positive impact on outcomes.

11:45AM – 12:15PM

### Consumer Case Studies: The Importance of Standards in Button Batteries and AI

Stephanie Tonkin, CEO of Consumer Action Law Centre, will lead this panel session exploring the critical role of standards in ensuring consumer safety and trust, with a focus on two pivotal areas: button batteries and artificial intelligence (AI). Joining Stephanie will be ACCC Deputy Chair, Catriona Lowe, CHOICE CEO, Ashley De Silva, and Standards Australia's Engagement Manager, Ben Russell. Button Batteries: The session will begin with an overview of the voluntary and mandatory button battery standards in Australia, will discuss the regulatory landscape and what consumers need to know. Consumer advocacy representatives will share real-life incidents and the impact of these standards on preventing accidents and injuries. Artificial Intelligence (AI): The discussion will then shift to the rapidly evolving field of AI. Panellists will discuss the ethical and safety standards essential for AI development and deployment. We will hear about the implications of AI products without standards, regulations or input from consumers. Our panellists will share their unique insights and experiences while underscoring the necessity of consumer-centric standards and inspiring collaborative efforts in developing and enforcing them.



# CONFERENCE DAY 1

## Room C4.5

11:45AM - 1:15PM

### Masterclass: Management Systems - Turning Deficiencies into Opportunities

Facilitated by NATA Education and Advisory Services' Alasdair Stark, this masterclass will focus on the common problems that arise to affect the management system and conformance to the Standards. In this session, we will identify opportunities for improving management systems to prevent the recurrence of the most common deficiencies and plan actions to eliminate the cause(s) of detected nonconformities or other undesirable situations.

1:15PM - 1:45PM

### A Strategic Overview of Australian Science and Research in the New Federal Parliament and World Order

As science, technology, and research accelerate at an unprecedented pace, Australia's research ecosystem must stay agile to meet evolving domestic and global challenges and opportunities. This session, presented by Dr Sarah Tynan, Director of Policy and Government Relations at Science and Technology Australia (STA) aims to provide a strategic overview of how the new Australian Parliament and Government are shaping science and research policy, investment, and collaboration - and what this means for the crucial role of accreditation and standards.

1:45PM - 2:15PM

### Hydrogen Standards: Paving the Way for a Sustainable Australia

This presentation will delve into the current landscape of hydrogen standards in Australia, highlighting key regulatory frameworks and industry guidelines that are shaping the hydrogen sector. It will also address the collaborative efforts between government bodies, industry stakeholders, and research institutions to harmonize standards at both national and international levels. By examining case studies and best practices, the discussion will underscore the importance of standardized protocols in accelerating the adoption of hydrogen technologies and achieving Australia's sustainability goals. Attendees will gain insights into the strategic initiatives and policy measures that are driving the development of hydrogen standards, as well as the challenges and opportunities that lie ahead. This session aims to provide a comprehensive understanding of how hydrogen standards are paving the way for a sustainable and resilient energy future in Australia.

2:15PM - 2:45PM

### Why Australia's Hydrogen Future Needs Quality Control - A Perspective from Toyota

Coregas is a key player in Australia's hydrogen industry, operating the largest merchant hydrogen plant in Port Kembla, NSW. In collaboration with Toyota, Coregas launched Australia's first hydrogen refuelling station for heavy transport vehicles, known as the Coregas H2Station. Coregas and Toyota are working together to ensure their hydrogen fuel aligns with the AS ISO 14687 standard for purity and quality. This is essential for the safe and efficient use of hydrogen in their application. In this presentation case study Coregas Head of Innovation Wodek Jakubik and Toyota's Joel Driscoll look at challenges for analysis and accreditation facing suppliers and end users with the adoption of fuel cells, new standards and guidelines. Hydrogen has been used in industrial and scientific applications for many decades. With a historical requirement for ultra-high purity Hydrogen (99.999%) and impurity testing of, moisture, oxygen and hydrocarbons. And now a new market for hydrogen is emerging in fuel cells for mobility and stationary power generation with a focus on rigorous production, cylinder preparation, purification, and quality control processes.

2:45PM - 3:15PM

### How Standards and Conformance Support Hydrogen Fuel Infrastructure

Industry experts in the hydrogen economy, such as Standards Australia, NATA, and the National Measurement Institute, and regulators, can interact to facilitate the rollout of emerging technologies in clean energy. Join moderator NATA's Sector Manager Calibration, Paul McMullen and panellists Dr Damien Smeulders, Director of Reference Gases at NMI; Wodek Jakubik, Innovations Manager at Coregas; and George Sfinas, Engagement Manager in Electricity and Gas Sectors at Standards Australia.



# CONFERENCE DAY 1

## Room C4.5

3:30PM – 4:00PM

### Celebrating 150 Years of The Metre Treaty

The Metre Treaty was signed on the 20th of May in 1875 in Paris, marking a pivotal moment in global trade and collaboration by establishing a unified framework for measurement standards. Over the past 150 years, this landmark agreement has endured seismic changes in manufacturing, industrialisation and globalisation to become the cornerstone of international trade, trust, and cooperation. Today, it touches almost everything in our modern lives – from clean water, reliable electricity, effective medicines, safe travel and beyond. Victoria Coleman, Nanometrology Section Manager at the National Measurement Institute, delves into the history of the Metre Treaty, from its foundational role in ensuring accuracy and consistency in measurement standards to its adaptability as it meets the demands of a rapidly evolving world. Honouring a century and a half of accuracy and precision, Victoria will explore how the treaty continues to underpin advancements in fields including advanced manufacturing, climate monitoring, food safety and energy security, whilst also supporting new and emerging technologies, fostering interdisciplinary collaboration and driving future innovation.

4:00PM – 4:30PM

### What is Mutual Recognition for Accreditation and Why Does it Matter?

Michael Fraser, the Secretary of the International Laboratory Accreditation Cooperation (ILAC), explores how the long standing ILAC Mutual Recognition Arrangement works, including its coverage and how signatories, including NATA, are evaluated for recognition. The importance of the ILAC MRA provides consistency of outcomes from Accreditation Bodies to trade and economies against known international standards. Michael also looks at the creation of the Global Accreditation Cooperation Incorporated to replace ILAC and IAF, why it is happening, what the new MRA will look like, and what all this means for existing ILAC MRA and IAF MLA signatories (and their accredited conformity assessment bodies) as the launch date for Global Accreditation Cooperation Incorporated fast approaches.

4:30PM – 5:00PM

### International Keynote: A Global Perspective on Accreditation and Trade in a Changing World

The TIC Council is known as the voice of the global independent testing, inspection and certification industry. It engages governments and key stakeholders to advocate for effective solutions that protect the public, support innovation and facilitate trade. In this keynote presentation, Executive Director of TIC Council Europe, Martin Michelot, discusses the evolution of the TIC industry, plus looks at the challenges and risks facing the quality infrastructure ecosystem and why collaboration across standards, accreditation and market surveillance will be needed to address the new market needs, especially in areas such as sustainability, cyber and AI to uphold international trade.



# CONFERENCE DAY 1

## Room C4.6 – C4.7

8:00AM – 9:30AM

### **Masterclass: From Doubt to Decision: Creating Results Through Measurement Uncertainty**

Discover the fundamentals of measurement uncertainty in this hands-on masterclass. Through practical exercises, you will explore an internationally recognised framework for evaluating and expressing uncertainty in laboratory measurements. This masterclass session, facilitated by NATA Education & Advisory Services' Matthew Lewis and Tony Bergen from the Australian Photometry and Radiometry Laboratory, follows a structured seven-step process, guiding you from identifying sources of uncertainty to combining and reporting overall uncertainty in your measurements.

10:45AM – 11:15AM

### **How to Know What Your Staff Know: Training and Assessing Competence**

Keeping your staff competent is one of the challenges of being an accredited laboratory. In this presentation we will delve into various techniques for identifying gaps in competence, assessing your staff, and using adult learning principles to upskill them. By the end of this session, you will be able to build a skills matrix of staff competence, identify gaps and implement a proven technique to increase retention of learning new skills, ensuring less retraining.

11:15AM – 11:45AM

### **Influence and Effective Communication at Work**

Want to get people to listen, buy in, and take action? Success in any industry isn't just about having great ideas or technical skills – it's about how well you communicate and influence others. Whether you're leading change, negotiating priorities, or simply trying to get your emails noticed, effective communication is the key to making an impact. Join Keren Natalia, a seasoned industry professional, for a dynamic session on: - Building influence without formal authority - Mastering workplace communication—from conversations to emails - Overcoming resistance and securing buy-in for your ideas This interactive talk will equip you with practical strategies you can apply immediately—whether you're engaging with executives, colleagues, or clients. Don't miss this opportunity to level up your communication skills and expand your influence!

11:45AM – 12:15PM

### **Your Future, Your Voice: Adapting to AI and Building a Personal Brand**

The professional world is undergoing a seismic shift, with artificial intelligence at the forefront of change. In this session, Colin Gniel, LinkedIn's Head of Government will explore key insights from the Work Change Report, which reveals how AI is redefining industries, reshaping roles, and challenging individuals and organisations alike. He will then dive deeper with the Global Trends and Skills on the Rise reports, that further highlight these fundamental shifts and discuss strategies to navigate this transformation with confidence, resilience, and a focus on unlocking human capacity. From there, we'll shift to the art of personal branding in the digital age. With a deeper understanding of the evolving workforce, learn how to amplify your unique voice and make meaningful connections in a world where standing out is more important than ever. Leveraging your LinkedIn profile, we'll guide you in crafting an authentic and impactful professional narrative.

11:45AM – 1:15PM

### **Masterclass: Management Systems – Turning Deficiencies into Opportunities**

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1:15PM – 1:45PM

### **Measurement Uncertainty Minus the Maths – Making Informed Decisions with Uncertain Results**

Want to understand the role of measurement uncertainty in realistic decision making, quantifying confidence, and managing risk with uncertain data? NATA's Nick Di Cresce explains how you can successfully apply this in your organisation.



# CONFERENCE DAY 1

## Room C4.6 – C4.7

1:45PM – 2:15PM

### From Real to Realistic: Unlocking the Power of Synthetic Data in Testing and Implications for Accreditation

Discover the fundamentals of measurement uncertainty in this hands-on masterclass. Through practical exercises, you will explore an As data privacy regulations tighten and the need for innovation grows, synthetic data is emerging as a critical tool to balance compliance with progress. In this session Amir Marashi, Data Scientist at Digital Health CRC, demystifies synthetic data - how it's generated, why it's gaining traction, and where it delivers the most value. We'll explore real-world applications in medical testing, imaging, and reference materials, showing how synthetic data accelerates development, training, and validation without compromising sensitive information. Attendees will learn: Core principles and generation techniques behind synthetic data; Its role in enhancing privacy and compliance for quality assurance; and Emerging trends (e.g., AI-driven generation) and long-term implications. From medical diagnostics and imaging to reference material analysis, attendees will gain practical insights into implementing synthetic data solutions and the controls necessary for assuring integrity in testing and measurement.

1:45PM – 2:15PM

### The Next Frontier in Laboratories: How Digital Twins Are Transforming the Way We Work

Discover the fundamentals of measurement uncertainty in this hands-on masterclass. Through practical exercises, you will explore an Digital twin technology is transforming laboratories by dynamically bridging physical and digital systems. It enables digital control of the physical environment, delivering real-time insights to monitor, predict, and optimize operations—distance-agnostic. This drives smarter, multi-level decision-making and ensures regulatory adherence amid fast-evolving industry demands, creating value through cross-border compliance. Studies show that digital twins can reduce equipment downtime by 30%, improve resource utilization by 40%, and lower lab energy consumption by 20%. More importantly, they drive the digitisation of laboratories, enabling remote operations, enhancing reproducibility, and streamlining global compliance. This presentation explores how digital twins are revolutionising lab workflows by enhancing efficiency, collaboration, and compliance. Real-world case studies will demonstrate their impact on scalability, reproducibility, and regulatory precision in labs, paving the way for a more agile and connected future. Digital twin technology marks a paradigm shift in laboratory operations. How will you leverage its potential to drive efficiency, ensure compliance, and foster multi-lab collaboration—keeping you ahead of the competition?

3:30PM – 4:00PM

### Your 90-Day AI Plan – Going from Concept to Outcomes

AI is something that isn't in the future, it's available now - but leaders are overwhelmed where to begin. In this session you'll learn the 90-day plan Pathfindr developed through their experience working with NATA to get immediate benefits from AI without derailing day-to-day testing. We'll walk through three short phases: (1) the most common low-risk, high-value use cases; (2) putting in place just-enough governance to satisfy accreditation and data-integrity requirements; and (3) measuring impact with simple metrics. Attendees will leave with a clear idea and excitement of how to get started.

4:00PM – 4:30PM

### Why Good Staff Make Mistakes: A Scientific Approach to Better Lab Training

Modern laboratories are complex environments where staff must simultaneously perform day-to-day testing whilst adhering to management system requirements and rigorous quality standards. Staff must master not only technical procedures and instrument operation, but also navigate quality assurance requirements, safety protocols, and compliance documentation. This complexity creates a significant challenge: How can we train staff effectively without overwhelming them? This presentation explores how recent findings in cognitive science can help lab managers create more effective training programs, procedures, and communication strategies. Drawing from Cognitive Load Theory (CLT), we'll examine practical ways to improve how information is presented and processed in the laboratory setting. This research-based approach explains why some training methods work better than others and how we can make procedures easier to follow accurately. Unlike many training theories, CLT's effectiveness has been validated through numerous controlled studies in workplace settings. Understanding cognitive load helps explain many common challenges in laboratory management. This presentation examines how cognitive load affects staff training, procedure development, communication, and competency programs. We'll explore why traditional approaches sometimes fall short and how insights from cognitive science can improve our management practices. Using practical examples from laboratory settings, we'll discuss how cognitive load theory can inform better approaches to these key areas of laboratory management.



# CONFERENCE DAY 1

## Room C4.4

8:00AM – 9:30AM

### Masterclass: From Doubt to Decision: Creating Results Through Measurement Uncertainty

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11:15AM – 11:45AM

### The Role of NATA Accreditation in Animal Biosecurity

Accreditation against appropriate ISO/IEC standards underpins Australia's animal health laboratory network. Accurate and quality assured diagnostics is fundamental to Australia's emergency animal disease prevention, preparedness and response capabilities. The use of accredited laboratory testing in the network helps maintain and enhance trade and market access for animals and animal products whilst protecting our animal health, the environment and economy. Using equine piroplasmiasis, this presentation by Dr Annette Dougall and Tania Ware from Biosecurity Animal, Australian Government Department of Agriculture, Fisheries and Forestry, will exemplify how the department promotes NATA-accredited test development and use to manage animal biosecurity risks, which is also important to our preparation for the Brisbane Summer Olympics 2032.

11:45AM – 12:15PM

### How Testing Supports Residue Monitoring for Market Access and Food Safety

James Deller, National Residue Survey, Australian Government Department of Agriculture, Fisheries and Forestry discusses how residue monitoring is a vital part of the Australian system for managing the risk of chemical residues and environmental contaminants in Australian animal and plant products. Maximum Residue Limits (MRLs) that are set in Australia, and our export markets, should be complied with and testing samples of animal and plant food products can verify if residues in products are below these limits. Having accredited laboratories test samples is an important part of a trusted monitoring program, as are laboratory performance evaluation activities such as proficiency testing.

11:45AM – 1:15PM

### Masterclass: Management Systems – Turning Deficiencies into Opportunities

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1:15PM – 1:45PM

### Blind Faith in DNA – Questions to be Asked and the Role of Accreditation

DNA profiling has revolutionised forensic science and is now held up as the 'gold standard'. Since its inception, originally as DNA fingerprinting in 1985, where a large blood stain was needed and the test took 3 weeks, it has developed to a point where only a few cells are needed and a test completed in a matter of days. Moving from laboratory work being largely manual in the early days of DNA to now fully-automated and moving from humans interpreting DNA print-outs to the possibility that this can be done by harnessing new AI technologies, all have their tremendous advantages. The development of DNA profiling from 1985 to present has not been without some major challenges. In this presentation Professor Adrian Linacre, Finders University's Chair in Forensic DNA Technologies, explores the challenges and how the role of accreditation has been a key driver in ensuring confidence in forensic science.



# CONFERENCE DAY 1

## Room C4.4

1:45PM – 2:15PM

### Keeping Us Honest - What Accreditation Means for CHOICE

CHOICE reviews aim to put the spotlight on the best and worst products and services (and everything in between), to help guide and protect consumers. But not all companies respond well to criticism! That means our lab results need to be not only well focused on consumer needs, but reliable, repeatable and defensible. NATA accreditation plays a key role in keeping our lab practices in good shape. This presentation by CHOICE Senior Project Officer, Chris Barnes, will go in depth into how CHOICE manages product testing and how our laboratories operate.

2:45PM – 3:15PM

### Debunking Common Myths About NATA Accreditation

Accreditation plays a vital role in upholding quality, safety, and trust across industries. Yet, it is often surrounded by persistent myths—beliefs that are widely accepted despite being inconsistent with the evidence. NATA Accreditation Specialist, Claire Lillee, aims to separate fact from fiction by addressing common misconceptions about NATA accreditation. From the belief that accreditation guarantees perfection, to the idea that it is only for large organisations or merely a box-ticking exercise, these myths obscure the true value of the accreditation process. In reality, NATA accreditation is a rigorous, adaptable, and ongoing commitment to quality, continuous improvement, and accountability. By debunking these misconceptions, we clarify what accreditation truly represents and reinforce its role in supporting excellence and innovation across diverse sectors.

3:30PM – 4:00PM

### 20 Tests You Never Knew Existed

This session uncovers the fascinating and often overlooked testing methods used across diverse industries where NATA is involved. Highlights include the assessment of toilet flushing power, the strength testing of condoms and femidoms, and the intricate calibration of gaming machines, addressing both mechanical and software components. We explore document examination techniques, blood pattern analysis in forensic science, and the testing of cybersecurity software for penetration risk. Artificial sports surfaces are tested for ball roll, energy restitution, and vertical rebound according to FIFA standards. The biodegradability and compost ability of disposable plates are evaluated with compost and earthworms. Additional unique tests include synthetic blood penetration through face masks, mattress testing with standard human buttocks, and a quirky plumbing test for spas involving a ponytail and suction force measurement. Also featured are the identification of worms and forensic chemical testing, showcasing the wide array of unusual yet essential tests that shape our world.



# CONFERENCE DAY 1

## Room C4.1

8:00AM – 9:30AM

### **Masterclass: From Doubt to Decision: Creating Results Through Measurement Uncertainty**

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10:45AM – 11:15AM

### **Breathing Life into Respiratory Accreditation - TSANZ/- NATA Respiratory Function Laboratory Accreditation Program Explained**

The Thoracic Society of Australia and New Zealand (TSANZ) had an established accreditation program for Respiratory Laboratories that ran for more than 20 years. Due to increasing difficulties in administering the program, TSANZ sought a partnership with NATA to establish a new program using ISO 15189 as the framework. Brendan Kennedy, Senior Hospital Scientist and Lab Manager at the Sydney Children's Hospital Network and a member of NATA's Accreditation Advisory Committee for the TSANZ NATA Respiratory Function Laboratory Accreditation Program, will look at the evolution of the new program, covering the revision of the standards, the launch of the new program and most importantly the benefits for patients.

11:15AM – 11:45AM

### **Are you using the "right" Quality Control Material**

Are you developing a new method? Are you concerned about ongoing quality of results? Do you know how reference materials and quality control materials can help with your accreditation? Do you want to use reference materials but consider them too expensive? Hear from an accredited reference material producer about how best to select and use the right external materials to answer these questions and improve your test quality without blowing the budget.

11:15AM – 11:45AM

### **Proficiency Testing – Anticipating Change to Ensure Laboratories Have Accredited Methods**

We see alarming news headlines with implications for laboratory testing all the time. "Dam in Blue Mountains closed after elevated levels of PFAS chemicals detected", "Does Food Packaging have PFAS?", "Face facts: why your make-up may be harming you". When a crisis arises, laboratories must have methods in place to address emerging contaminants across various matrices. Proficiency testing stays one step ahead in designing studies based on the regulatory changes, public interest, and emerging contaminants to ensure that laboratories develop and maintain accredited methods in place. Join Luminita's presentation to see the "bricks and mortar" that go into making a Proficiency Testing study, and keeping your laboratory ready for anything.

11:15AM – 1:15PM

### **Masterclass: Management Systems – Turning Deficiencies into Opportunities**

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# CONFERENCE DAY 1

## Room C4.1

1:15PM – 1:45PM

### Enhancing NATA Accreditation with Laboratory Informatics Solutions

Angelo Moreno from LabWare examines how Laboratory Informatics Solutions can simplify and support the process of obtaining and maintaining NATA accreditation. Learn practical approaches for leveraging Laboratory Information Management Systems (LIMS), Electronic Laboratory Notebooks (ELN), Electronic Quality Management Systems (eQMS), Laboratory Integration Platforms, and digital audit tools. The presentation will showcase best practices for integrating these technologies to strengthen conformity and facilitate remote assessments, ensuring ongoing compliance with NATA and ISO 17025 requirements. Real-world examples will illustrate how Laboratory Informatics Solutions reduces manual workload, improves data integrity, and expedites the accreditation process. Participants will leave with actionable strategies to optimise laboratory operations and sustain robust accreditation in a changing regulatory environment.

1:45PM – 2:15PM

### Assessment Techniques for Building Trust, Rapport, and Understanding

Assessing a laboratory is not only a fact-finding mission to determine conformance, but also a work of collaboration and communication. Assessments can be stressful for everyone involved, when tensions rise, communication is key to collaboration, to gathering evidence, and work with people are nervous, defensive, or combative. In this session Naomi Aitken, General Manager of NATA Education & Advisory Services, investigates how we communicate and can make a difference in getting what we need and dealing with lab staff's confusion and frustration. Naomi will provide advice on how to hone your verbal and nonverbal communication skills, build rapport and trust, dealing with reactions to and managing conflict when things start to escalate.

2:15PM – 2:45PM

### Te Paerewa Recognition Program: A Scalable Pathway to Quality

Operations Managers at IANZ, Sharon Mawhinney, Melinda Sampson and Anne Hofstra lead a discussion as to the growth and development of alternative options in the accreditation sector. Formal accreditation has long been the international benchmark for assuring quality and technical competence. However, smaller organisations, those with limited operational scopes, or those with distinct cultural needs often find traditional accreditation inaccessible. In response, as part of their sustainable growth strategy, the Operations Managers have developed the Te Paerewa Recognition Programme—a culturally responsive and scalable framework that upholds the integrity of international standards while addressing local and sector-specific contexts. Co-designed with Cultural Advisors and guided by stakeholder engagement and the principles of Te Tiriti o Waitangi, the programme supports smaller and emerging organisations in strengthening their quality systems. Te Paerewa Recognition provides a credible pathway to enhanced capability and, where appropriate, full accreditation in the future—fostering trust, inclusivity, and sustainable growth.

2:45PM – 3:15PM

### Replicating the Process for More Accurate EQA

Discover how advances in External Quality Assurance processes are delivering more accurate assessments and other benefits. Satisfactory participation in External Quality Assurance (EQA) is a requirement for all pathology laboratories seeking accreditation, but it's a time-consuming manual process that doesn't accurately reflect normal laboratory processing and reporting of patient specimens. Learn how RCPAQAP has partnered with X-Lab to digitise and automate the entire external quality assurance (EQA) process by delivering e-orders for EQA programmes into a lab's Laboratory Information System (LIS) and automating populating the MyQAP portal with results. By eliminating manual data entry, labs are complying with NATA requirement to perform EQA in a similar manner to routine specimens, ensuring more meaningful quality assurance assessments and ultimately better patient outcomes.



# CONFERENCE DAY 1

## Room C4.1

3:30PM – 4:00PM

### Calibration Clarity: Interpreting your NATA Balance Calibration Certificate

Understanding your NATA balance calibration certificate is essential, even if you're not a metrologist. Obtaining an accredited accuracy calibration certificate (ACC), such as NATA, is crucial when commissioning a balance and at regular intervals during its operational life. This certificate is key in determining and estimating the uncertainty of your weighing results, but interpreting the uncertainty calculation can be challenging. How does this uncertainty align with the specific performance requirements of your processes? Mettler Toledo addresses this need by providing annexes to the Accuracy Calibration Certificate (ACC), allowing users to specify their required accuracy and the smallest net weight to be weighed. By applying a safety factor, users can derive a pass-fail result based on these criteria, utilizing the ACC data effectively. Join us to demystify calibration certificates and enhance your understanding of ensuring precision in your weighing processes.

4:00PM – 4:30PM

### How to get the Right Calibration Service?

Join our panel of calibration specialists to discuss how to ensure the accredited calibrations they provide are fit for purpose and invite questions from the room on laboratory experiences in selecting and reviewing calibration of equipment. NATA's Sector Manager Calibration, Paul McMullen, will moderate the session and will be joined by METTLER TOLEDO LabTec Product Manager Stewart Carter; Managing Director of Australian Pressure Laboratory, Liam Shanahan; and Managing Director of Australian Photometry and Radiometry Laboratory, Tony Bergen.



# CONFERENCE DAY 2

## Room C4.5

8:00AM – 9:30AM

### Masterclass: Cause Analysis & Corrective Action

This interactive, hands-on masterclass by NATA Education & Advisory Services' Alexander Walsh deep dives into the core principles of cause analysis and corrective action. We will cover the fundamentals of cause analysis and corrective actions, introduce some tools and techniques for identifying them, and use real-world application to put them in the laboratory context. Empower your team to resolve issues before they become recurring challenges.

9:00AM – 9:30PM

### Keynote: The Strategic Role of Standards in Global Trade and Geopolitics

As global trade grows more complex and digital, standards are no longer simply technical tools – they are becoming instruments of strategic influence. Countries are using standards to advance national interests, shape global norms and secure long-term market access. With an international standards system under growing pressure from a combination of technological, political and structural forces, a more agile, interdisciplinary approach to standards development and conformity assessment is required. Australia's ability to shape and respond to international standardisation will be critical to our long-term economic resilience and sovereignty.

9:45AM – 10:15AM

### Panel: International Trade – The Key Role of Standards and Conformance

As tariffs have broadly trended downwards in recent years, regulatory and other non-tariff measures to trade have increased. While many non-tariff measures are legitimate, important tools to achieve legitimate objectives, there is also a proliferation of excessive approaches that pose barriers to trade. NATA, along with Standards Australia, NMI, and JASANZ, are Australia's standards and conformance infrastructure bodies. This session will explore the importance of this infrastructure to the Australian Government's efforts to mitigate non-tariff measures and respond when these become non-tariff barriers, minimising impediments to our trading future at this time of global disruption and geopolitical uncertainty. Our panel includes Tim Ault from the Department of Foreign Affairs and Trade, Olivia Hall from the Department of Finance, Emily Dawson from the Department of Industry Science and Resources and James Deller from the Department of Agriculture, Fisheries and Forestry.

10:30AM – 11:15AM

### Panel: Governing Intelligence: Standards, Safety, Testing and the Future of AI

As AI systems become increasingly adopted into critical sectors like medicine and infrastructure, we must ensure that they are used and developed in a safe, reliable, and ethical manner. The regulation of AI has already begun in Europe, and it is only a matter of time before Australia implements its own mandatory regulations. Join Ali Akbari, Director AI Practice at the Gradient Institute, Aurelie Jacquet, Director Ethical AI Consulting & Chair of the Australian ISO mirror committee on AI, and Nick Di Cresce, NATA Deputy Sector Manager, all experts in AI safety, standardisation, and regulatory compliance, to explore the crucial roles of conformity assessment and governance for AI. They look at challenges in demonstrating compliance, the role of national and international standards, and the multidisciplinary nature of AI governance for organisations.

11:30AM – 12:00PM

### Panel: First Things First – Why Sampling Matters

Sampling is not a peripheral activity—it is the foundation on which credible testing rests. The panel – moderated by NATA Sector Manager, Diane Hobday with industry experts Bob Symons, Regional Technical Manager, Eurofins; David Mahaffey, Managing Director, Mahaffey Associates; and Steve Beaman, NSW EPA will examine the often underestimated role of sampling in ensuring valid, reliable, and decision-useful test results. We will explore the risks associated with sampling practices, the role of standardised methods in enabling comparability and confidence, and why the provenance and representativeness of samples must be understood as intrinsic to the integrity of any test report. Through examples and discussion, we will highlight the importance of embedding robust sampling practices in regulatory, commercial, and technical contexts.



# CONFERENCE DAY 2

## Room C4.5

12:00PM – 12:30PM

### Panel: Visibility is Everyone's Business - Learn to Tell Your Story and See the Results

Join our expert panel to boost your story and company visibility. Maddie Massy is a science communicator and presenter with a mission to connect people, particularly younger generations, with science. A presenter and producer at the ABC, Maddie also shares science videos on YouTube, TikTok and Instagram that have had more than 35 million views. Karen Eck is a visibility strategist specialising in putting brands and exceptional individuals in the spotlight by allowing them to tell their stories. She is the founder of publicity agency, eckfactor, and presenter of The Power of Visibility, helping subject matter experts and executive leaders build their profiles for better business. Brendon Moo is NATA's Head of Strategic Engagement and Communications and is helping to tell NATA's story and the importance of accreditation. A former journalist and marketing expert he has worked for FOXTEL, FOX Sports, News Corporation, the Nine Network and SBS, creating stories and building brands.

1:15PM – 1:45PM

### Conformity Assessment in 2050 - Smartification of Standards and the Impact of AI and Data

We are 25 years into the 21st century. So much has changed in that time but what will the next 25 years bring? What does the future of standards and conformity assessment look like? How do we even think about that far into the future? Ian Oppermann explores a vision for 2050 and the smartification of standards and conformity assessment in this must-see session.

2:15PM – 2:45PM

### Boldly Shaping Precision Medicine with the Use of Gut Microbiome Testing

The gut microbiome matters in maintaining human health and well-being, and its disruption by antibiotics can lead to adverse health outcomes. Sanmarie Schlebusch, Medical Director Microbiology, Virology, and Genomics at the Public and Environmental Health Reference Laboratories for Pathology Queensland and NATA Chair, showcases data from her recent research with the University of Queensland utilising advanced metagenomic technology to monitor the effects of antibiotics. This approach has the potential to guide the right treatment at the right time for the right person. Through case vignettes, the interplay between antibiotics and the gut microbiome will be illustrated, highlighting the potential to predict invasive infections with drug-resistant bacteria. Additionally, the use of faecal microbiota transplant (FMT) to recover the gut microbiome after a serious viral infection in a case will be discussed. This presentation underscores the bold advancements in microbiome science and the important role of accreditation, as we push the boundaries of diagnostic precision and transformative clinical applications to achieve better health outcomes.

3:30PM – 4:00PM

### PFAS in Consumer Products

Per- and polyfluoroalkyl substances (PFAS) are a large class of synthetic chemical compounds which are quickly gaining headlines and making its way into the public consciousness due to growing public health concerns. The prevalence and ubiquitous adoption of PFAS as well as their persistence in the environment has led to increasingly strict regulation around the use of PFAS in consumer products and setting limits on amounts found in drinking water. The US EPA toxicity database (DSSTox) lists more than 14,000 unique PFAS compounds and while targeted methods to measure PFAS in water and soils already exist and are widely used, they only measure a small set of (~40) PFAS compounds, meaning a large portion of PFAS go undetected. To make up for this analytical gap, novel approaches to measuring PFAS are emerging which aim to provide a more holistic view on the extent of PFAS contamination. The Analytical Services Branch of the National Measurement Institute will present their capability in PFAS testing and how accreditation is playing a role with a focus on Total Fluorine determination by Combustion-Ion Chromatography.

4:00PM – 4:30PM

### PFAS: The Legacy of Forever Chemicals

PFAS (per- and polyfluoroalkyl substances) are widely used, long lasting chemicals with components that breakdown slowly over time. The chemical properties of PFAS make them resistant to heat, stains, grease and water making them ideal for a range of applications from stain protection in fabrics and cosmetics, to sunscreens and fire-fighting foams. This panel session examines global concerns about these chemicals in the environment and strategies, including testing, for their identification and management.



# CONFERENCE DAY 2

## Room C4.6 – C4.7

8:00AM – 9:30AM

### Masterclass: Cause Analysis & Corrective Action

This interactive, hands-on masterclass by NATA Education & Advisory Services' Alexander Walsh deep dives into the core principles of cause analysis and corrective action. We will cover the fundamentals of cause analysis and corrective actions, introduce some tools and techniques for identifying them, and use real-world application to put them in the laboratory context. Empower your team to resolve issues before they become recurring challenges.

9:45AM – 10:15PM

### Perspectives from the Field: Experiences and Insights from Volunteer Technical Assessors

Technical Assessors play a pivotal role in upholding the integrity and quality of conformity assessment services through their contributions to the accreditation process. This panel discussion featuring Neil Horton, NSW Health Pathology; Andrew Wheeler, Advanced Bridge Engineering Systems Pty Ltd; Danielle Dicker, Technical Manager, NATA; and Tharien Klaumanns-Moller, Accreditation Development Manager, NATA; share their insights, challenges, and successes in the field. They will explore the motivations behind volunteering, the benefits of professional engagement, and the evolving nature of assessments in light of emerging technologies and standards. Attendees will gain a deeper understanding of the technical assessor role, hear real-world examples of assessment practices, and have the opportunity to engage in a Q&A session. This session is ideal for current and prospective assessors, accredited facility representatives, and anyone interested in learning more about the collaborative effort behind accreditation.

10:30AM – 11:00AM

### Certification Schemes – How They Work and Why We Need Them

Certification schemes touch every aspect of our lives, from healthcare, food safety, environmental protection, consumer electronics, building products, personnel certifications and much more. Without such schemes, our lives would be less secure, but how do schemes work and what are they supposed to achieve? And where does laboratory testing fit into this picture? Matthew Pitt, Technical Manager at JASANZ, will outline how certification schemes are developed, what JASANZ endorsement of a scheme entails, how certification bodies can be accredited to issue certificates under a scheme and why it matters.

11:00AM – 11:30AM

### The Role of Certification and Accreditation in Steel Construction Quality

Construction represents a critical economic sector for Australia, yet it is not without challenges – supply chains that span the globe and multi-layered responsibilities for on-site construction add formidable complexity to quality management. Peter will outline how a key industry is adapting to these challenges. Developing innovative and robust certification schemes, ensuring accountability at all stages of supply and drawing lessons from past failures are among the important ingredients for success in a globalised procurement environment. Accreditation also plays its part in helping to deliver better certification outcomes and greater confidence for building owners.

11:30AM – 12:00PM

### The Digital Certification Revolution

Hear from experts how suppliers are now leveraging technology to provide unprecedented access to verified product data, including test & certification data, through the power of linked data. Dr Andrew Wheeler of ACRS will explain from the perspective of a product certifier how barcodes are used to give access to certification data (including JASANZ accreditation coverage). Caroline Barrett of GS1 will discuss several retail implementations based on 2D barcodes that give consumers access to remarkably detailed product information (wine, cherries, citrus and table grapes).



# CONFERENCE DAY 2

## Room C4.6 – C4.7

12:00PM – 12:30PM

### Product Traceability and Compliance – A Construction Perspective

Tracing exactly which items have ended up in a building or engineering project, together with links to relevant compliance documents, has been a vexing problem. This also carries huge consequences, as demonstrated by the highly publicised case of non-compliant, non-traceable, electrical cabling installed in Australian buildings. Perhaps less well known is the extent to which Australia is leading in the development of interoperable traceability data. Hear from experts in the construction sector about ways in which supply chains are being digitally re-imagined, including an introduction from NATA about a new proposal for digital accreditation credentials. These initiatives hold potential lessons for many other sectors and have relevance for certifiers and test laboratories involved in product assurance.

1:15PM – 1:45PM

### Tunnel Vision: Making our Tunnels Safer for All

Tunnels present unique life safety challenges, particularly during emergencies like fires, where escape routes are limited and often lead upward through smoke-filled environments. As urban infrastructure expands, ensuring the safety of tunnel users becomes increasingly critical. CSIRO plays a pivotal role in this space, providing testing and certification services that underpin tunnel safety across Australia. This includes fire resistance testing of tunnel linings and evacuation doors, certification of fire detection and emergency systems, and accreditation of linemarking products and their applicators. CSIRO also conducts acoustic testing to enhance user comfort and performs final commissioning of smoke ventilation systems. Dr Christopher Preston, Director of CSIRO's Infrastructure Technologies, will explore how these efforts contribute to safer, more resilient tunnel infrastructure in our growing cities.

1:45PM – 2:15PM

### Leading the Way in Times of Change

The session will be opened by Catherine Farrow PhD, BSc, GradCertRespSc, CRFS, the Scientific Director of Respiratory Function Laboratory at Department of Respiratory and Sleep Medicine, Westmead Hospital. With Victor Chim, Speciality Gas and Export, Business Development Manager, Coregas, they will cover new certified gas standards which improve testing accuracy and efficiency in addition as well as demonstrate respiratory reference material in small cylinders with integrated valves and flowmeters which are making calibration and testing easier and safer.

2:15PM – 2:45PM

### Making the Invisible Visible

The COVID-19 pandemic raised the awareness of indoor air, which until then, had been largely invisible. Michael discusses the need for a shift in ventilation standards equal in scale to the 1800s transformation when cities began organising clean water supplies and centralised sewage systems. Aligned to this, the role of accreditation in improving outcomes in public health, productivity, education and access/inclusion.

2:45PM – 3:15PM

### Embedding NATA Standards in Science Education: Building Industry-Ready Graduates at Western Sydney University

WSU's science programs, including Forensic Science, Chemistry, Environmental Health, Microbiology, and Food Science embed laboratory quality education to prepare students for careers in accredited lab environments. Several units align with NATA's guidelines and enable meaningful industry engagement. Practicum 1, Practicum 2, and Complex Case Studies offer students hands-on experience and develop essential employability skills. A standout unit is Laboratory Quality Management (LQM), which integrates NATA accreditation principles. NATA assessors are involved as guest lecturers, mentors, and evaluators. Students undertake a mock accreditation process assessed against ISO/IEC 17025 and NATA's application document, receiving structured feedback. Successful students receive a certificate acknowledging completion of a NATA-aligned assessment. This collaboration ensures graduates are job-ready and familiar with industry standards. Looking ahead, there are opportunities to expand co-designed content with NATA, enhance joint outreach, and strengthen visibility of NATA's contribution. These initiatives will benefit both students and industry through improved workforce preparedness and stronger professional alignment.



# CONFERENCE DAY 2

## Room C4.6 – C4.7

3:30PM – 4:00PM

### **Accreditation by the Numbers: How Does Your Lab Compare**

Gillian explores how data plays a critical role in shaping and refining accreditation processes. Delve into the key metrics that underpin NATA's decision-making and get a quantitative perspective on accreditation performance and compliance trends. By analysing core statistical indicators – such as the volume and types of non-conformances identified during assessments, average close-out times for corrective actions, and comparative data against ISO standards – this session will demonstrate how data-driven insights enhance the efficiency and effectiveness of NATA's accreditation framework. By understanding these metrics, participants will gain a clearer picture of how NATA uses quantitative data to maintain rigorous standards, foster transparency, and optimize operational processes. Whether you are an accreditation professional, a facility representative, or someone interested in the mechanics of quality assurance, this presentation will offer a data-driven perspective on NATA's commitment to continuous improvement and is essential for those interested in how NATA leverages its data to ensure ongoing quality assurance and regulatory compliance.



# CONFERENCE DAY 2

## Room C4.4

8:00AM – 9:30AM

### Masterclass: Cause Analysis & Corrective Action

This interactive, hands-on masterclass by NATA Education & Advisory Services' Alexander Walsh deep dives into the core principles of cause analysis and corrective action. We will cover the fundamentals of cause analysis and corrective actions, introduce some tools and techniques for identifying them, and use real-world application to put them in the laboratory context. Empower your team to resolve issues before they become recurring challenges.

9:45AM – 10:15PM

### Pathway to Accreditation: Unlocking the Value of NATA Membership

Achieving NATA accreditation is more than a mark of quality—it is a strategic investment that strengthens credibility, supports compliance, and enhances market access. This session will guide organisations through the key steps in the accreditation process, outlining essential do's and don'ts at each stage. Accredited organisations become NATA members, joining a network committed to the highest standards in testing, inspection and conformity assessment. Membership signifies a dedication to quality, contributes to public confidence, and provides access to exclusive technical insights, industry recognition, and peer collaboration. Join NATA's Business Development Manager, Sandeep Pathak, to discover how accreditation enhances operational integrity, builds stakeholder trust, and delivers long-term business value. Whether you're considering accreditation or seeking to maximise its impact, this session will equip you with the knowledge and tools to succeed.

11:00AM – 11:30AM

### Dodging the Danger Zones: Lab Lessons from Assessments

NATA's Principal Accreditation Specialist, Shelley Fox, underscores the critical role accreditation plays in maintaining quality and reliability in laboratory settings. Back by popular demand and drawing from real-world assessments, this presentation will highlight recurring areas of non-conformance that can impact compliance, performance, and trust in laboratory outcomes. Rather than simply identifying issues, the session focuses on the importance of robust documentation and processes, and how ongoing monitoring and improvement can support long-term success. Attendees will gain practical insights and actionable recommendations to strengthen their quality systems, avoid common pitfalls, and uphold the standards expected in an accredited environment.

11:30AM – 12:00PM

### Why the Carrot is More Powerful than the Stick: Navigating Unfavourable Accreditation Decisions

What happens when testing facilities are unable to meet accreditation requirements? Accreditation isn't always smooth sailing, and in some cases, accreditation bodies like NATA must make difficult decisions regarding non-compliance. In this session, Tony explores how NATA ensures due process and procedural fairness when suspending or cancelling accreditations. Attendees will gain insight into how NATA balances the enforcement of accreditation requirements with maintaining trust and supporting facilities, ultimately safeguarding the integrity and reputation of accredited organisations. This session will also delve into the broader working relationship between accreditation bodies and facilities, offering strategies to foster collaboration while upholding stringent quality standards.

12:00PM – 12:30PM

### Navigating a NATA Assessment – Tips from an Authorised Representative

It's demanding, stressful, and continues for months. NATA assessments can be draining. However, there are techniques and processes to facilitate a less frazzled and optimal audit conclusion. Key strategies in early assessment phase range from review of prior assessment report findings, good preparation checklists, utilising NATA document resources, to good communication with laboratory staff. During the assessment, it is essential to fully understand each condition raised. After the exit meeting, maintaining momentum is crucial—promptly addressing non-conformances and providing feedback to the team helps with engagement. In the home straight, when compiling the assessment response, it is best to provide full write-ups with evidence for all conditions (whether critical or minor). Clear logical evidence file naming can assist NATA and Technical Assessor to review response more easily. These shared learnings from a Quality Manager, are tips for successful and efficient audit process from preparation to assessment closure.



# CONFERENCE DAY 2

## Room C4.4

1:15PM – 1:45PM

### In-House IVD Regulation: The TGA's Perspective

The TGA will present an insightful session on the regulation of in-house in vitro diagnostic (IVD) medical devices. Key topics include overview of the regulatory landscape for in-house and commercial IVDs, the TGA's relationship with NATA and the National Pathology Accreditation Scheme, and TGA regulatory processes such as the Application Audit Framework, notification forms for Class 1-3 in-house IVDs, and the regulatory process and exemptions for Class 4 in-house IVDs. The session will also cover the ongoing and upcoming IVD reforms and initiatives, including companion diagnostics (CDx) and IVD classification and definitions.

2:15PM – 2:45PM

### How Do We Build Trust in Forensic Science Through Quality Assurance

Building trust in forensic science is critical for its effective application in the justice system, particularly in the face of a complex and evolving landscape. This paper explores the cross-jurisdictional challenges and megatrends currently impacting policing and forensic science, highlighting operational difficulties that can compromise the reliability and integrity of forensic evidence. The recent Queensland DNA inquiries serve as a pivotal case study, underscoring the need for heightened scrutiny and improvement in forensic practices. Furthermore, the presentation examines the significant role of collaborative efforts between organisations such as ANZPAA NIFS and NATA in advancing quality assurance measures. By leveraging partnerships and fostering a culture of rigorous research and continuous improvement, we can build greater trust in forensic science practices. The discussion culminates in identifying future directions for strengthening forensic science through enhanced quality assurance initiatives.

2:45PM – 3:15PM

### Workplace Drug Testing, A Client Perspective on the Value of Accreditation

NATA accreditation ensures workplace drug and alcohol testing providers meet stringent quality, precision, and reliability standards. John explores the requirements of Australian and ANZ Standards, examining both benefits and challenges in achieving accreditation. He highlights how accreditation underpins effective policies, testing procedures, awareness programs, and Employee Assistance Programs, ultimately fostering workplace safety and confidence in drug and alcohol testing frameworks.

3:30PM – 4:00PM

### Right Result, Right Test, Right Patient

When you as a patient or any treating clinician receive a pathology result, particularly an unexpected one, you want to be sure that it is correct. Does it really belong to that patient, is there any chance it was mixed up, is the number a true value, is the diagnosis accurate? Is it really what was requested? How does accreditation help us ensure that we meet this brief? Cathy also looks at what can we put in place and how can we manage the challenges in busy pathology laboratories using a risk-based approach.

4:00PM – 4:30PM

### Biobanking: Why We Can't Afford to Step Away

Biobanking is fundamental to the future of biomedical research, precision medicine, and AI-driven discovery – but its importance extends far beyond human health. From seed banks preserving crop diversity to environmental biobanks tracking biodiversity and climate impacts, accredited biobanking practices safeguard the integrity and provenance of biological materials across sectors. Ensuring sample quality and clear documentation underpins research reproducibility, reliable data models, and innovation in healthcare, agriculture, and environmental science. Brodie highlights why stepping away from biobanking accreditation risks compromising scientific trust, data reliability, and our ability to address global challenges through research and industry collaboration.



# CONFERENCE DAY 2

## Room C4.1

8:00AM – 9:30AM

### Masterclass: Cause Analysis & Corrective Action

This interactive, hands-on masterclass by NATA Education & Advisory Services' Alexander Walsh deep dives into the core principles of cause analysis and corrective action. We will cover the fundamentals of cause analysis and corrective actions, introduce some tools and techniques for identifying them, and use real-world application to put them in the laboratory context. Empower your team to resolve issues before they become recurring challenges.

9:45AM – 10:15PM

### How Automated Data Collection is Strengthening Accreditation Compliance

As laboratories embrace digital transformation and AI-enhanced systems, one truth becomes increasingly clear: without context, data can mislead, and without traceability, compliance can falter. In this session, BinaryMed explores how high-integrity, real-world data forms the foundation for trustworthy automation, robust quality systems, and long-term accreditation success. While pre-analytical processes such as sample transport have traditionally lacked transparency, they offer a compelling example of how automated, contextual data can reveal compliance gaps and strengthen audit readiness. Drawing on insights from thousands of monitored pathology samples, we'll demonstrate how continuous tracking of temperature, location, and handling events aligns with ISO 15189. We'll show how capturing rich, contextual transport data enables laboratories to close critical compliance gaps, simplify audits, and generate trusted data to support both current operations and future AI tools. Accreditation doesn't begin at the audit – it begins with what you can see, verify, and improve.

10:30AM – 11:00AM

### How Can I Trust My Instrument When it Uses AI and Why it Matters

Until recently, instruments have normally operated in a more or less predictable and linear manner and calibration results could usually be interpolated with a reasonable degree of confidence. However, instruments are now available on the market which produce a synthesised measurement result. An instrument may have a limited performance, but use a lookup table of measurements made on higher-quality equipment and employ machine learning to make an educated guess at a measurement outcome. While there are clearly applications where such a process can be beneficial, this does raise a number of questions regarding their calibration and use; metrological traceability; and measurement uncertainty. Tony explores this topic and consider issues such as: how can the user of the instrument be assured that the instrument will behave predictably when measuring a measurand that is not similar to any that formed part of its learning? How does a calibration laboratory that is unfamiliar with such an instrument ensure that a calibration is fit for purpose for the user? A calibration now combines a traceability scale in one laboratory with measurements made with different traceability that formed part of the instrument's learning, so how is a measurement result made with the instrument now traceable to the international system of units (SI)?

11:00AM – 11:30AM

### Why Accredited Testing is Important: A High-Tech

While not always mandatory, accredited ElectroMagnetic Compatibility (EMC) test reports are widely sought for risk mitigation, particularly in legal or regulatory challenges. Some jurisdictions mandate accredited reports, while others require double audits – one for ISO/IEC 17025 compliance and another by a government entity. Technological advancements in electric vehicles (EVs), the Internet of Things (IoT), Artificial Intelligence (AI), WiFi 6E/7, and 5G/6G, along with cybersecurity concerns, challenge regulators to ensure safety, performance, and security. Without clear policies, regulations, and accredited conformity assessment bodies, consumers lack essential protections. In this presentation, Praveen Rao, CEO and Technical Director at C-PRAV Group, looks at how accredited testing is not a complete solution to the challenges of rapidly evolving technology but is a crucial assurance mechanism within regulatory frameworks, supporting confidence, compliance, and consumer protection.

11:30AM – 12:00PM

### Mobile Telecommunication Safety - Why Accreditation Matters

Rob examines the critical role of accredited inspection in supporting safety within Australia's mobile telecommunications industry, and will explore the regulatory framework, safety standards, and inspection processes that govern radio frequency electromagnetic energy (RF EME) compliance and the role accreditation plays.



# CONFERENCE DAY 2

## Room C4.1

12:00PM – 12:30PM

### How Accredited Inspection Supports Workplace and Equipment Safety

In this session Andrew Taylor, Bullivants Technical Service and Training Manager, and Tim Webster, Komatsu Engineering Manager, explore how accredited inspection plays an important role in underpinning safety in the Australian industry. Andrew looks at how inspection contributes to the reliability of crucial lifting equipment, and Tim explains how inspection activities support the safe use of electrical equipment in potentially explosive atmospheres under the ANZEx scheme.

1:15PM – 1:45PM

### Beyond the Baseline: Victoria's Road Map for Best Practice Asbestos Eradication

The first Australian state government agency of its type, the Victorian Asbestos Eradication Agency (VAEA) is dedicated to ending the lethal legacy of asbestos in government-owned buildings across Victoria. Despite a final ban on the use of all types of asbestos in Australia in 2003, legacy asbestos remains a significant issue – in Victoria and across Australia – and the clock is ticking as asbestos-containing materials (ACMs) age and degrade. To deal with this legacy in a sustained, strategic way, the VAEA developed a long-term plan for the prioritised removal of asbestos-containing materials (ACMs) from government-owned buildings in Victoria. This has involved developing comprehensive and practical initiatives centred on safety, quality and value for money, including: – innovative tools to identify and address the asbestos legacy, including a central, online database of government asbestos registers – a nationally adopted ACM risk assessment model – a state-wide prioritised asbestos removal program – best practice and industry standards.

1:45PM – 2:15PM

### Asbestos Proficiency Testing – Why Competence Matters in Keeping Australia Safe

With over 30 years' experience in the delivery of Asbestos Proficiency Testing Programs, Proficiency Testing Australia's (PTA) General Manager, Karen Cividin, and PTA Senior Scientific Officer, Christine Hirst, highlight how external QA programs play their part in delivering confidence to testing laboratories and their clients, underpin accreditation, and contribute real and positive outcomes in the fight to reduce asbestos-related risk in Australia and beyond. Proficiency Testing has remained a vital component of the laboratory testing ecosystem since the very origins of accreditation. The importance of a practical tool to provide evidence of competence, and confidence in the accuracy of test results is never more evident than in the health and safety of our most crucial commodity – everyday people. The word "Asbestos" fuels fear and anxiety in our community, infiltrating the very buildings and environment we raise our families in. A session not to miss.

2:15PM – 2:45PM

### Reliability of Asbestos Fibre Air Monitoring Results Without Metrological Traceability

"If the result of an analysis cannot be trusted, then it has little value and the analysis might as well have not been carried out (Eurachem Guide 2014)". In response to widespread industry concerns regarding the practice of using unproven volume measurements (of air) to calculate airborne asbestos fibre concentration results, and the issue of those results presented as fibres per millilitre (f/mL), Richard presents a discussion on the "Reliability of Asbestos Fibre Air Monitoring Results Without Metrological Traceability. By using unproven volume measurements, control and clearance air monitoring required per state/territory WHS regulations (during asbestos removal works) should be considered invalid and would not meet WHS Regulations and the mandated clearance standard, highlighting the potential human health risk that must be considered. The practice of undertaking asbestos air monitoring with the absence of metrological traceability leads to the publishing of results that are ultimately false and misleading. This practice must be addressed and creating awareness and further discussion is critical. Whilst the focus of this discussion is in relation to airborne asbestos fibre air monitoring, the principle of accurately establishing the volume of air sampled and demonstrating metrological traceability applies to the sampling of all analytes where the volume measurement of the air sampled is critical to the analytical result including but not limited to: Respirable Dust, Respirable Crystalline Silica, Inhalable Dust, Diesel Particulates, Welding Fumes, VOC's, PAH's.



# CONFERENCE DAY 2

## Room C4.1

2:45PM – 3:15PM

### **PFAS: regulation, water sampling, and why reliable results matter**

PFAS is a major priority for the community and the EPA. High quality data and insights will be essential to help provide the community with assurance on the risks to human health and the environment. In this session, Steve Beaman will discuss the PFAS NEMP, the broader regulatory environment, and the recent bore water sampling program conducted by the EPA in conjunction with councils. This program provides communities with accurate data, and helps councils plan for the future.

3:30PM – 4:00PM

### **Illuminating the Unknown: Strategies for Overcoming Modern Challenges in Drug Detection and Analysis**

Dr. Ashraf Mina, Principal Scientist at NSW Health Pathology, will present on the critical role of Sample Validity Testing (SVT) in ensuring the integrity of drug testing in this session. Without SVT, healthcare providers may fail to detect cases where individuals adulterate their urine samples to manipulate drug test results. Data from NSW Police indicates that approximately one in ten drivers operates a vehicle under the influence of drugs—highlighting not only road safety concerns but also the broader societal impact of substance abuse. While laboratory drug testing typically measures markers such as creatinine, uric acid, urea, specific gravity (SG), and pH, these parameters alone may not be sufficient to detect adulterated or synthetic urine. Furthermore, a dilute sample can significantly reduce the accuracy of drug detection. Current SVT protocols are inadequate in reliably distinguishing between authentic biological specimens and tampered or synthetic samples. To address these challenges, Dr. Mina will discuss the development of a new protocol incorporating an advanced LC-MS/MS method that enhances the detection of adulterated or synthetic urine.