

**QAMT State Conference 2025 – Virtual Day – Fri 18 July 2025 Engaging Minds, Inspiring Learning**

| Time        | Room 1 (Snr secondary)                                                                                                                                                           |                                                                                                                                                                               | Room 2 (Primary and Jnr Secondary)                                                                                                                                 | Room 3 (All years)                                                                                                              |
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| 8:15        | Log in and check connections                                                                                                                                                     |                                                                                                                                                                               |                                                                                                                                                                    |                                                                                                                                 |
| 8:30-8:45   | Welcome and housekeeping (Room 1A)                                                                                                                                               |                                                                                                                                                                               |                                                                                                                                                                    |                                                                                                                                 |
| 8:45 -9:30  | Welcome Keynote – Dr Laura Tuohilamoi (LINK Room 1A) Popularising Mathematics                                                                                                    |                                                                                                                                                                               |                                                                                                                                                                    |                                                                                                                                 |
| 9:30-10:25  | Room 1A                                                                                                                                                                          | Room 1B                                                                                                                                                                       | Room 2                                                                                                                                                             | Room 3                                                                                                                          |
|             | <b>Preparing assessment for the 2025 syllabus in Mathematical Methods and Specialist Mathematics –</b><br>Catherine Smith,<br>Principal Education Officer –<br>Mathematics, QCAA | <b>Preparing assessment for the 2025 syllabus in General Mathematics and Essential Mathematics</b><br>– Robyn McNamara,<br>Principal Education Officer – Mathematics,<br>QCAA | <b>Developing Mathematical Discussions in the classroom</b><br>Margaret Marshman, University of the Sunshine Coast                                                 | <b>7 Flexible Strategies for Number and Algebra</b><br>Tierney Kennedy (recording and discussion)                               |
| 10:30-11:25 |                                                                                                                                                                                  |                                                                                                                                                                               | Room 2                                                                                                                                                             | Room 3                                                                                                                          |
|             |                                                                                                                                                                                  |                                                                                                                                                                               | <b>Gamification and pedagogy: approaches to increase fluency in middle-school mathematics</b><br>Amanda Mathewson, Boonah State High School                        | <b>Engaging Games that Differentiate</b><br>Kate Mason, Riverside Christian College                                             |
| 11:30-12pm  | Break 1                                                                                                                                                                          |                                                                                                                                                                               |                                                                                                                                                                    |                                                                                                                                 |
| 12-12:55    | Room 1 A                                                                                                                                                                         |                                                                                                                                                                               | Room 2                                                                                                                                                             | Room 3                                                                                                                          |
|             | <b>Huh? When did we learn that?</b><br>Tom Sprenger, St Joseph's College                                                                                                         |                                                                                                                                                                               | <b>Maths Eyes and problem pictures.</b><br>Sue Carter, Maths in Schools, University of Adelaide                                                                    | <b>Getting started with the NEW CASIO fx-1AU Graph</b><br>Anthony Harradine, Prince Alfred College for Casio Education          |
| 1 – 1:55    | Room 1 A                                                                                                                                                                         |                                                                                                                                                                               | Room 2                                                                                                                                                             | Room 3                                                                                                                          |
|             | <b>Mind Over Maths: Why our brains trip over numbers</b><br>Peter Fox, Texas Instruments                                                                                         |                                                                                                                                                                               | <b>Mathematical modelling in the Australian Curriculum v9.0: Mathematics P-10</b><br>Libby Foley and Abigail Twyman, QCAA                                          | <b>Reframing Maths Teaching: From Best Practice to Best Decisions</b><br>Allan Dougan, AAMT                                     |
| 2:00-2:30   | Break 2                                                                                                                                                                          |                                                                                                                                                                               |                                                                                                                                                                    |                                                                                                                                 |
| 2:30-3:25   | Room 1 A                                                                                                                                                                         |                                                                                                                                                                               | Room 2                                                                                                                                                             | Room 3                                                                                                                          |
|             | <b>Teaching Methods and Specialist from a Tech Active vantage point.</b><br>Joe Ousby                                                                                            |                                                                                                                                                                               | <b>Encouraging Teachers to Utilise the Tablet PC to Provide Feedback Through the use of Formative Assessment.</b><br>Antony Dekkers, Central Queensland University | <b>Free financial literacy courses, micro-credentials, videos and games</b><br>Damian Nicholson<br>Financial Basics Foundations |
| 3:30-3:45   | Closing and thanks (Room 1A)                                                                                                                                                     |                                                                                                                                                                               |                                                                                                                                                                    |                                                                                                                                 |

| Presenter                                                            | Presentation Title                                                                            | Presentation Abstract                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Audience                                        |
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| Welcome Keynote – Dr Laura Tuohilamoi, University of New South Wales | Popularising Mathematics                                                                      | Maths remains a critical and largely emphasised skill, but the practical applications to make it work for today's students (and teachers) are scarce. We are needed! In this lecture, you'll get tools to give access to mathematics for all and learn about long term engagement and the role of interest development. Together we can determine what the future of mathematics education looks like!                                                                                                                                                                                                                                                      | All years                                       |
| Amanda Mathewson, Boonah State High School                           | Gamification and pedagogy: approaches to increase fluency in middle-school mathematics        | This workshop explores how elements of game design can be effectively integrated into mathematics instruction to enhance student engagement and fluency, and consequently, student performance. Practical examples and digital tools will be discussed that highlight how gamification can be used to incorporate a variety of pedagogical approaches/strategies.                                                                                                                                                                                                                                                                                           | Years 5-9                                       |
| Tom Sprenger, St Joseph's College, Gregory Terrace                   | Huh? When did we learn that?                                                                  | The syllabus documents published by the QCAA provide an outline of the knowledge and skills that students require as they enter Methods and Specialist. However, this isn't an exhaustive list. Often in our lessons, we find ourselves drawing upon a range of skills and ideas developed over Years 7 to 10 (and even earlier!). Without these skills, students' ability to engage meaningfully with the subject matter is impacted. In this session, we'll be working backwards from the content descriptors of Methods and Specialist to understand the sequence of how the skills required for Methods and Specialist are developed over Years 5 to 10 | Senior secondary                                |
| Libby Foley and Abigail Twyman, PPO Mathematics QCAA                 | Mathematical modelling in the Australian Curriculum v9.0: Mathematics P-10                    | A key consideration for teachers when planning for learning and assessment in Mathematics is the importance of providing opportunities for students to engage with the mathematical processes, which includes mathematical modelling. Mathematical modelling enables students to formulate problems, connect and apply procedures, and communicate results to real-world situations. In this session, teachers will gain a deeper understanding of how mathematical modelling develops across year levels and explore practical considerations for planning and assessment.                                                                                 | P- Year 10                                      |
| Catherine Smith, Principal Education Officer – Mathematics, QCAA     | Preparing assessment for the 2025 syllabus in Mathematical Methods and Specialist Mathematics | The session will focus on creating internal assessments for the 2025 syllabus. Considerations: specifications and conditions, adapting an IA from the 2019 syllabus, movement of subject matter, complexity of questions, technology access in examinations and resources available, opportunities for writing an IA1 using Unit 4 subject matter.                                                                                                                                                                                                                                                                                                          | Specialist Mathematics and Mathematical Methods |

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| Robyn McNamara,<br>Principal Education<br>Officer –<br>Mathematics, QCAA | Preparing assessment for the 2025 syllabus in<br>General Mathematics and Essential<br>Mathematics                | The session will focus on creating internal assessments for the 2025 syllabus. Considerations: specifications and conditions, adapting an IA from the 2019 syllabus, movement of subject matter, complexity of questions, opportunities for writing an General Mathematics IA1 using Unit 4 subject matter.                                                                                                                                                                                                                                                                                                                     | General and<br>Essential<br>Mathematics |
| Antony Dekkers,<br>Central Queensland<br>University                      | Encouraging Teachers to Utilise the Tablet PC to<br>Provide Feedback Through the use of Formative<br>Assessment. | The teaching of mathematics today focuses on providing more meaning for students, encouraging them to think logically, developing their number sense and cultivating a true mathematical understanding. This presentation seeks to explore issues inherent in the delivery of mathematical course content using a tablet PC to aid students' understanding and the strategies that may be employed to encourage teachers to adopt the technology.                                                                                                                                                                               | Years 10-12                             |
| Sue Carter, Maths in<br>Schools                                          | Maths Eyes and problem pictures.                                                                                 | Mathematics surrounds us in our everyday lives, but for many it can seem invisible. Viewing the world through 'Maths Eyes' provides opportunities to see – and actively look for – maths in the real world. In this session we will explore ways to assist young students to see maths all around them in fun and engaging ways whilst building confidence. Do you have maths eyes?                                                                                                                                                                                                                                             | All years                               |
| Allan Dougan, AAMT                                                       | Reframing Maths Teaching: From Best Practice<br>to Best Decisions                                                | What does great maths teaching look like in your classroom, with your students, in your context? In this session, we'll unpack the Australian Association of Mathematics Teachers' new pedagogy position paper , 'Pedagogy in Mathematics'. Instead of chasing the perfect strategy, we'll focus on how to make principled, purposeful decisions about practice—drawing from a range of evidence-informed methods to meet the diverse needs of learners. Whether you're just getting started or deep into refining your craft, this session will offer practical insights and provoke thinking about what works, when, and why. | All years                               |
| Margaret Marshman,<br>University of the<br>Sunshine Coast                | Developing Mathematical Discussions in the<br>classroom                                                          | TBC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | TBC                                     |
| Damian Nicholson,<br>Financial Basics<br>Foundations                     | Free financial literacy courses, micro-<br>credentials, videos and games                                         | Discover free, curriculum-aligned tools from Financial Basics Foundation designed to support teachers and engage students in developing real-world financial life skills within mathematical contexts.                                                                                                                                                                                                                                                                                                                                                                                                                          | All years                               |
| Peter Fox, Texas<br>Instruments<br>RECORDING                             | Mind Over Maths: Why our brains trip over<br>numbers                                                             | In this session we will explore a collection of mathematics problems that students often get wrong; some simple, some challenging, but mostly predictable. Are students simply wired to get it wrong? Join us as we explore                                                                                                                                                                                                                                                                                                                                                                                                     | Years 7-12                              |

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|                                                                    |                                                                   | ways to mitigate some of these errors, drawing upon examples from Year 7 through to senior mathematics exams including a range of exam tips. Please see the virtual satchel for pre-session materials.                                                                                                                                                                                                                                                                                                                                                                                                   |             |
| Anthony Harradine,<br>Prince Alfred College<br>for CASIO Education | Getting started with the NEW CASIO fx-1AU Graph                   | The new CASIO fx-1AU Graph (successor to the fx-CG-50 AU) will soon be available for use in schools. The new fx-1AU Graph has the same heart as the fx-CG-50 AU, but possesses a new and more intuitive user interface, providing a simpler flow to the output you require. In this session the new interface will be explained and demonstrated.                                                                                                                                                                                                                                                        | Years 10-12 |
| Kate Mason, Riverside<br>Christian College                         | Engaging Games that Differentiate                                 | This workshop will provide primary teachers with a variety of games, strategies and learning experiences that engage the student in the mathematical learning process. These games are easily differentiated to suit a range of abilities. These activities can be easily implemented in the primary classroom and instil in students a love of learning maths!                                                                                                                                                                                                                                          | P-Year 2    |
| Tierney Kennedy,<br>Kennedy Press<br>RECORDING                     | 7 Flexible Strategies for Number and Algebra                      | Flexible strategies allow teachers to connect multiple content areas through a single procedure. In this series of 7 short videos, teachers will be introduced to 7 strategies that Tierney uses to teach and connect all content aspects from P-9 plus essential maths. They include: number line, array model, relationship table, post-it note algebra, place value chart (especially useful for measurement conversions), partition it and a horizontal strategy for operations and algebra. The videos range in length from 3 minutes to 15 minutes, and each is useful for multiple content areas. | P- Year 6   |
| Joe Ousby                                                          | Teaching Methods and Specialist from a Tech Active vantage point. | The focus in this session is on Tech Active approaches to teaching Trigonometry, Probability, Calculus and Functions. And what becomes possible in understanding when looking through the Tech Active lens.                                                                                                                                                                                                                                                                                                                                                                                              | Years 10-12 |