




# 18th AAPA International Flexible Pavements Conference & Exhibition

Saturday 17<sup>th</sup> August 2019 & Sunday 18<sup>th</sup> August 2019



| Time          | Exhibition Hall                                  |  |
|---------------|--|--|
|               | <b>Saturday 17<sup>th</sup> August 2019</b>      | <b>Sunday 18<sup>th</sup> August 2019</b><br><br>Registrations open from 12.00pm to 4.00pm   |
| 12:00-1:00 pm | Exhibitor Bump in times will be allocated by PCO | Exhibition & Family Open day<br><br>Sponsored by  <b>WIRTGEN GROUP</b><br><br>Coffee Cart<br>Sponsored by  <b>SAMI</b> |
| 1:00-2:30 pm  |  |  |
| 2:30-3:00 pm  |  |  |
| 3:00-4:30 pm  |  | Welcome Reception<br><br>Sponsored by  <b>CATERPILLAR®</b>  |
| 4:30-6:00 pm  |  |  |

# 18th AAPA International Flexible Pavements Conference & Exhibition

## Monday 19<sup>th</sup> August 2019



| Time             | Exhibition Hall 2 | Pyrmont Theatre  | Room C2.1   | Room C2.2&3  | Room C2.4   |
|------------------|-------------------|--|---|--|---|
|                  |                   | Registrations open from 7.00am to 5.00pm   |   |  |   |
| 10:00 - 10:30 am | Exhibition        | Welcome & Opening  |   |  |   |
| 10.30 - 11.10 am |                   | <b>K1 - Key note 1:</b><br><b>Hugh Bradlow</b><br>Opening Keynote  |   |  |   |
| 11:20 - 12:00 pm |                   | <b>K2 - Key note 2:</b><br><b>Dr.Erik Denneman</b><br>Guide to Our Everlasting Roads: Enabling Future Mobility   |   |  |   |
| 12:00 - 1:00 pm  |                   | Lunch  |   |  |   |
| 1:00 - 2:30 pm   | Exhibition        | <p><b>T01 - Circular economy: promoting reuse of reclaimed asphalt</b></p> <p><b>T01-2</b> - Increasing the use of RAP in WA by <b>Elsabe van Aswegen</b></p> <p><b>T01-3</b> - Bringing recycling to the next level using bio-based rejuvenator by <b>Laurant Porot</b></p> <p><b>T01-4</b> - Cold-in-Place Recycling Trends in the United States and Canada by <b>Eric Baker</b></p> <p><b>T01-1</b> - Maximising the Use of Asphalt Mixes containing High Percentages of RAP material by <b>Jason Jones</b></p> | <p><b>T02 - Continual improvement: Innovative construction technology</b></p> <p><b>T02-1</b> - Designing a world class forward moving aggregate chip spreader for a safe future in bituminous spray sealing by <b>Stuart Partridge</b></p> <p><b>T02-2</b>- Asset Management and ISO 55001 Asset Management System Standard Implementation in DM Roads by <b>Nabin Pradhan</b></p> <p><b>T02-3</b> - Safer Approach to Determine Binder Content – automatic asphalt analyser by <b>Luke Murphy</b></p> <p><b>T02-4</b> - C: Invited speaker from AAPA construction company members - innovative construction and best practice outcomes (Project award nominees and winners)</p> | <p><b>T03 - Roads as a service: Advances in asset management</b></p> <p><b>T03-1</b> Consideration of sustainability aspects in the assessment of the feasibility of surfacing of unsealed roads by <b>Ian Van Wijk</b></p> <p><b>T03-2</b> -Incorporating Big Data techniques in Road Asset Management Practices by <b>Jin Jiangzhong</b></p> <p><b>T03-3</b> -Quantifying the cost of different runway overlay designs by <b>Greg White</b></p> <p><b>T03-4</b> -Application of Automated Continuous Integrated Pavement Condition Data in South Africa by <b>Simon Tetley</b></p> | <p><b>T04 - Pavement preservation &amp; rehabilitation: stabilisation technology</b></p> <p><b>T04-1</b> - Practical Applications of Insitu Foamed Bitumen Stabilisation within High Traffic Volume Environments by <b>Daniel Orriss</b></p> <p><b>T04-2</b> - Foamed Bitumen Stabilisation (FBS) - Case Studies by <b>Hamed Haghghi , Matthew Kovess</b></p> <p><b>T04-3</b> - Fatigue behaviour of Foamed Bitumen Stabilised Materials tested under the accelerated loading facility by <b>James Gernfel</b></p> <p><b>T04-4</b> - Study on generalized friction coefficient between base and surface layers of asphalt pavement by <b>Haitao Zhang</b></p> |

2:30 - 3:00 pm

Afternoon Tea

3:00 - 4:30 pm

Exhibition

**T05 - Continual improvement: Advances in material testing & characterisation**

- T05-1** - 20 years of Performance Grade binder specifications and Superpave mix design in the US by **David Timm**
- T05-2** - Introducing performance based binder specifications - New Zealand by **Anna D'Angelo**
- T05-3** - AAPA Laboratory Proficiency – Outcomes and the need for harmonisation of test methods by **Erik Denneman**
- T05-4** - New protocol for asphalt dynamic modulus testing using asphalt mix performance tester (AMPT) by **Hossein Asadi**

**T06 - Continual improvement of bituminous solutions**

- T06-1**- Asphalt In Rail For The First Time In Australia by **Ryan Jansz**
- T06-2** - Hot Sprayed Seals and Bitumen Emulsions using Low Viscosity Polymers by **David Bell**
- T06-3** - Redesign of Brisbane City Council’s Type 3 Multigrade Asphalt by **Andrew Kidd**
- T06-4** - Tuggeranong Parkway - Cape Seal by **Peter Thompson & Kirsty Reaks**

**T07 - Circular economy: alternative pavement materials**

- T07-1** - Evaluation of glass as a sand replacement in asphalt by **Greg White**
- T07-2** - Waste plastic as additive in asphalt pavement reinforcement: a review by **Nuha S Mashaan**
- T07-3** - The use of geopolymer as supplementary binder in foamed bitumen stabilisation by **Andreas Nataatmadja**
- T07-4** - Innovations in Asphalt Mix Production Incorporating Waste Materials by **Farzaneh Tahmoorian**

**T08 - Pavement preservation & rehabilitation: Rehabilitation design**

- T08-1** - Pavement rehabilitation design is not new pavement design by **Anna-Carin Brink**
- T08-2** -Evaluation of Geosynthetic stabilised pavements over reactive clay subgrade by **Rajesh Bhavsar**
- T08-3** -Modification of Mechanistic-Empirical pavement design method to incorporate the influence of hexagonal stabilisation geogrids by **Piotr Mazurowski**
- T08-4** -Effects of Orientation on Angularity of Aggregate Using Digital Image Technique by **Bharat Rajan**

4:30 - 5:30 pm

Networking Drinks Sponsored by  **State Asphalt Services** Pty Ltd

6:00 pm - late

Opening Cruise

Sponsored by



# 18th AAPA International Flexible Pavements Conference & Exhibition

## Tuesday 20<sup>th</sup> August 2019



| Time            | Exhibition Hall 2 | Pyrmont Theatre  | Room C2.1  | Room C2.2&3  | Room C2.4   |
|-----------------|-------------------|--|--|--|---|
|                 |                   | Registrations open from 7.30am to 3.00pm   |  |  |   |
| 8:30 - 9:20 am  | Exhibition        | <b>K3 -Key note 1:</b><br>Dr. George K. Chang<br>Intelligent compaction  |  |  |   |
| 9:20 - 10:00 am |                   | <b>K4 -Key note 2:</b><br>Darren Hill<br>Shift Thinking - exploring the patterns of great leadership   |  |  |   |
| 10:00-10:30 am  | Morning tea       |  |  |  |   |
| 10:30-12:00 pm  | Exhibition        | <b>T09 - Continual Improvement: Innovative construction technology</b><br><b>T09-1</b> - Embracing the circular economy – Action not words by <b>Jim Appleby</b><br><b>T09-2</b> – Concrete Fracturing Technology by <b>Marty LaNauze</b><br><b>T09-3</b> - SAFL T6 Pavement Rehabilitation by <b>Phil Burns</b><br><b>T09-4</b> - FAB4 – Opportunities In Sustainable Asphalt by <b>Tyra Sherriff</b> | <b>T10 - Continual improvement: Laboratory method</b><br><b>T10-1</b> - Implications of Reheating of Asphalt Mixes on Performance Testing by <b>Andrew Kidd</b><br><b>T10-2</b> - Conventional Wheel Trackers Versus Modified Wheel Tracker by <b>Mofreh Saleh</b><br><b>T10-3</b> - Evaluation of Resilient Modulus of Subgrade in Hungary and Its Implementation in Pavement Design by <b>Janos Szendefy</b><br><b>T10-4</b> - Evaluation of flexural behaviour of Foamed bitumen stabilised pavement material beams using distributed fibre optic sensors and fibre brag grating sensors by <b>Sameera Pitawala</b> | <b>T11 - Circular economy: emulsion solutions</b><br><b>T11-1</b> - Developing a Viable Emulsion Alternative to Hot Cutback Bitumen in New Zealand by <b>Darcy Rogers</b><br><b>T11-2</b> - Emulsion Treated Road Base – Bracalba Quarry Case study by <b>Iulian Man</b><br><b>T11-3</b> - Overview of innovative tests supporting emulsion applications by <b>Véronique Ducreux</b><br><b>T11-4</b> - The International Bitumen Emulsion Federation – Update by <b>Gaylon Baumgardner</b> | <b>T12 - Continual improvement: Continual professional development by Marc Fickling &amp; Lorena Clayton – Pragmatic Thinking</b> |
| 12:00-1:00 pm   | Lunch             |  |  |  |   |

|                |  |  |   |   |  |
|----------------|--|--|---|---|--|
| 1:00-2:30 pm   | Exhibition   | <p><b>T13 - Circular economy: reclaimed asphalt</b><br/> <b>T13-1</b> - Insitu performance monitoring of a high RAP content asphalt mix designed using the binder blend characterisation method by <b>Laszlo Petho</b><br/> <b>T13-2</b> - Towards the use of RAP in GB5® mix design by <b>Francois Olard</b><br/> <b>T13-3</b> - Performance of Reclaimed Asphalt Pavement (RAP) Material in Asphalt Mixtures by <b>Sridhar Raju</b><br/> <b>T13-4</b> - Laboratory investigation of Hot Mix Asphalt with Reclaimed Asphalt for a sustainable construction by <b>Kumari Monu</b></p>        | <p><b>T14 - Continual improvement: Flexible pavement technology for (Air)ports</b><br/> <b>T14-1</b> - Developing a Sprayed Sealing Specification for Airports by <b>Greg White</b><br/> <b>T14-2</b> - Performance of Flexible Pavements in Container Terminals by <b>Bevan Sullivan</b><br/> <b>T14-3</b> - Determination of Critical Loading in Terminal Operations by <b>Keith Patrick</b><br/> <b>T14-4</b> - Innovative airport asphalt mixes based on hybrid-polymerisation of bitumen and optimised aggregate texture by <b>Filippo Giustozzi</b></p> | <p><b>T15 - Continual improvement: Innovative construction technology</b><br/> <b>T15-1</b> - Recycling with counterflow – pioneering and environmentally friendly concept for asphalt production, <b>Roland Tuecks</b><br/> <b>T15-2</b> - Laboratory assessment of the service life of asphalt pavements based on creep deformation by <b>Majid Zargar</b><br/> <b>T15-3</b> - An evaluation of ultra-thin HMA with asphalt modifier reinforced fiber (CSM) for preventive maintenance and noise reduction by <b>Young Ik Kim</b><br/> <b>T15-4</b> - Use of soft plastics recycle in asphalt pavements by <b>Henry Beh</b></p>                                       | <p><b>T16 - Continual improvement: Continual professional development</b><br/> <b>T16-1</b> - Developing an Online, On-Demand Certificate Program for Asphalt Emulsions by <b>Andrew Braham</b><br/> <b>T16-2</b> - Panel discussion - Developing Industry, increasing engagement and changing industry perception...<b>RMIT / Protech / Peter Rimpus / RudTek</b><br/> <b>T16-3</b> - Developing a Confident and Competent workforce by <b>David Broadhurst</b></p> |
| 2:30-3:00 pm   | Afternoon Tea  |  |   |   |  |
| 3:00-4:30 pm   | Exhibition   | <p><b>T17 - Circular economy: Warm and cold mix asphalt technology</b><br/> <b>T17-1</b> - Measuring the sustainability performance of asphalt products by <b>Rob Rouwette</b><br/> <b>T17-2</b> - Warm mix asphalt on the Easing Sydney’s Congestion Program. A success story of collaboration, sustainability and innovation by <b>Carlos Solis-Navarro</b><br/> <b>T17-3</b> - Field Validation of Warm Mix Pavements (End of Life Assessment) by <b>Nicholas Lee</b><br/> <b>T17-4</b> - Production of Cleaner Warm Mixture Asphalt: Case Study for Australia by <b>Ali Jamshidi</b></p> | <p><b>T18 - Continual improvement: advanced pavement materials</b><br/> <b>T18-1</b> - High performance bond coat emulsion for high stressed pavement layers by <b>Kanjana Yindee</b><br/> <b>T18-2</b> - Hydrated lime vs liquid antistrip agents by <b>Trevor Distin</b><br/> <b>T18-3</b> - Engineering Properties and In-Service Performance of Porous Asphalt Mixes by <b>Jian-Shiuh Chen</b><br/> <b>T18-4</b> - Warm Mix Asphalt: An alternative to lime for adhesion and much more by <b>Tyler Francis</b></p>  | <p><b>T19 - Continual improvement: Advances in binder technology</b><br/> <b>T19-1</b> - Recent outcomes of the Asphalt Institute Foundation Strategic Asphalt Research (STAR) program by <b>Ralph Shirts</b><br/> <b>T19-2</b> - How Variations in Bitumen Sources Affect the Production of Polymer Modified Bitumen - <b>Khoa Vo</b><br/> <b>T19-3</b> - Implementation of the AASHTO Performance Graded Asphalt Binder Specifications in the New Zealand Operating Environment by <b>Sean Bearsley</b><br/> <b>T19-4</b> -Effect of polymer type and concentration on the high temperature rheological properties of SBS modified binders by <b>Yogesh Kumar</b></p> | <p><b>T20 - Continual improvement: Continual professional development</b><br/> <b>T20- 1</b> - AAPA, LTT, VET, RTOs, AASNs, NATA and more by <b>Simon Gazia</b><br/> <b>T20- 2</b> - The capability challenge for local government by <b>Craig Moss</b><br/> <b>T20- 3</b> - Release of the Chain of Responsibility training program and the implications for industry to meet regulations by <b>Shan Ruprai</b></p>   |
| 4.30 – 5.30 pm | Networking Drinks Sponsored by      |  |   |   |  |
| 6:00 pm-late   | Gala 50 Years of AAPA Sponsored by  |  |   |   |  |

# 18th AAPA International Flexible Pavements Conference & Exhibition

## Wednesday 21<sup>st</sup> August



| Time             | Exhibition Hall 2 | Pyrmont Theatre  | Room C2.1   | Room C2.2&3  | Room C2.4   |
|------------------|-------------------|--|---|--|---|
|                  |                   | Registrations open from 8.00am to 12.00pm  |   |  |   |
| 8:30 - 9:10 am   | Exhibition        | <b>K5 - Key note 1:<br/>Jodie Bricout</b><br>Circular economy opportunities for Australia's roads sector   |   |  |   |
| 9:20 - 10:00 am  |                   | <b>K6 - Key note 2:<br/>Dr. David Timm</b><br>Perpetual Pavement   |   |  |   |
| 10:00 - 10:30 am | Morning tea       |  |   |  |   |
| 10:30 - 12:00 pm | Exhibition        | <b>T21 - Circular economy: crumb rubber modified asphalt and sprayed seals</b><br><b>T21-1</b> - The effect of oil addition to crumb rubber modified bitumen – a study of storage stability and rheological properties <b>by Anna Erickson</b><br><b>T21-2</b> - Transfer of Crumb Rubber Modified Binder Technology in Asphalt to Western Australia by <b>Elsabe van Aswegen</b><br><b>T21-3</b> - Crumb Rubber Asphalt Stanlake Ave trial, Mitcham Council by <b>Rod McArthur</b><br><b>T21-4</b> - S45R+ : Next Generation Stabilised Crumb Rubber Modified Bitumen by <b>Stephen Bernard</b> | <b>T22 -Continual improvement: Perpetual pavement design</b><br><b>T22-1</b> - Perpetual Pavements Plus (PP+) – Improving Traditional Asphalt Concrete Perpetual Pavements by <b>Andrew Braham</b><br><b>T22-2</b> - Binder and mix evaluation of highly modified asphaltic binder by <b>Laurent Porot</b><br><b>T22-3</b> - A graphene-based supermodifier for perpetual road pavements by <b>Loretta Venturini (Author) Muhammad Jamal (Presenter)</b><br><b>T22-4</b> - Engineering Characterization of Highly Modified Asphalt Mixtures for Rehabilitated Pavements by <b>Min-Chih Liao</b> | <b>T23 -Pavement preservation &amp; rehabilitation: Surface preservation treatments</b><br><b>T23-1</b> - Surface Life Extension Through Alternative Maintenance Material: Ultramender by <b>David Alexander</b><br><b>T23-2</b> - Asphalt Preservation System by <b>Magdalena Machura</b><br><b>T23-3</b> - Sydney airport surface preservation treatment by <b>Paul Rubsov</b><br><b>T23-4</b> - Pavement assets preservation through induction healing of asphalt materials by <b>Filippo Giustozzi</b> | <b>T24 - Circular Economy: Sustainability beyond the challenge of waste</b><br><b>T24-1</b> - Business drivers for circular approaches by <b>Jodie Bricout</b><br><b>T24-2</b> - Using life cycle assessment to charter the path by <b>Rob Rouwette</b><br><b>T24-3</b> - Road Asset Operator by <b>Matthew Brennan</b><br><b>T24-4</b> - How circularity fits into the ISCA rating scheme by <b>Jonathan Avery</b> |
| 12:00 - 1:00 pm  | Lunch             |  |   |  |   |

|                |               |  |  |  |       |
|----------------|---------------|--|--|--|-------|
| 1:00 - 1:30 pm |               | <p><b>T25 - Circular Economy: Challenges to the use of Australian crumb rubber in roads</b><br/> <b>T25-1 - TSA sponsored workshop</b></p> <p>Workshop facilitator: Joe Grobler - ARRB</p> <p>Presentations by:</p> <ul style="list-style-type: none"> <li>· <b>Liam O'Keefe</b> - Tyre Stewardship Australia</li> <li>· <b>Dr Erik Denneman</b> - Puma Bitumen</li> <li>· <b>Clinton Hubner</b> - TyreCycle</li> <li>· <b>Joe Grobler</b> - ARRB</li> <li>· <b>Darryl Byrne</b> - Fulton Hogan / AAPA member</li> </ul> | <p><b>T26 -Continual improvement: advanced binder testing</b><br/> <b>T26-1</b> - Effect of additives on property erosion in SBS modified binders during storage by <b>Sumit Singh</b><br/> <b>T26-2</b> - Rheological analysis of rutting criterion in PG grading of Polymer Modified Asphalt Binders by <b>Akanksha Pandey</b><br/> <b>T26-3</b> - Rubberized Biochar used as Bitumen additive by <b>Alexandru Let</b><br/> <b>T26-4</b> - Pavement materials test methods: the importance of advanced digital control for precise test performance, full data-capture and analysis of pavement materials by <b>Kieran McGrane</b></p> | <p><b>T27 -Continual improvement: Flexible pavement technology for (Air)ports</b><br/> <b>T27-1</b> - Advances and innovations in flexible airport pavements by <b>Greg White</b><br/> <b>T27-2</b> - Stone mastic asphalt as an ungrooved runway surface for Australian Airports by <b>Sean Jamieson</b><br/> <b>T27-3</b> - The utilisation of EME2 at Brisbane Airport by <b>Andrew Henningsen</b><br/> <b>T27-4</b> - Validation of proprietary binders for airport asphalt by <b>Greg White</b></p> | T28 - |
| 1.30 - 2.30 pm |               |  |  |  |       |
| 2:30 - 3:00 pm | Afternoon Tea |  |  |  |       |
| 3:00 - 3:30 pm |               | Closing session  |  |  |       |
| 3:30 - 4:30 pm |               | AAPA 2019 Annual General Meeting   |  |  |       |