



15th International Conference on Bulk Materials Storage, Handling and Transportation

7-9 July 2026

Esplanade Hotel Fremantle, Western Australia

ICBMH 2026
2026 Fremantle
Australia

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Monday, 06/07/2026

17.00- 19.30	Welcome / Cocktail Reception Esplanade Hotel Fremantle by Rydges, Ball and Chain Bar
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Tuesday, 07/07/2026

Day 1 - Sponsored by Fenner Conveyors

8.15 - 08.45	Conference Registration, Prince Regent Room
8.45 - 9.00	Welcome by Conference Chair, Em Prof Mark Jones, TUNRA Bulk Solids <i>Sponsor Address - Mike Finlen, Fenner Conveyors</i> Sirius Room
9.00 - 9.30	Plenary Presentation: Dr Jenny Yu - Continental <i>Conveyor Belt Reinforcement Review and Outlook</i>
9.30 - 10.00	Plenary Presentation: Professor Jin Ooi, University of Edinburgh <i>A Mesoscale DEM Approach to Bulk Solids Handling Applications</i>

10.00 - 10.30	Morning Tea - Southern Cross Lobby
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	Pneumatic Conveying Admiralty Gulf Room	Belt Conveying - Monitoring & Diagnostics Sirius Room	Storage & Handling King Sound Room
Session Chair	Mark Jones	Craig Wheeler	David Hastie
10.30 - 10.55	Keynote Paper: Informed Utilisation of Air Classification: Towards Advancing Sustainable Powder Processing <i>Hamed J Sarnavi, Atul Sharma, Baldeep Kaur, Mike Bradley</i> Wolfson Centre for Bulk Solids Handling Technology, UK	Keynote Paper: New Smart Monitoring Technologies for Belt Conveyors <i>Shaun R Santana and Brett E DeVries</i> Flexco, Australia and USA	Keynote Paper: Revision to Australian Standard AS4324.1 Mobile Equipment for Continuous Handling of Bulk Materials – General Requirements for the Design of Steel Structures <i>Richard Morgan</i> Aspec Engineering, Australia
10.55 - 11.20	Impacts and Implications of Particle Exchange Delays in Horizontal Slug Flow Pneumatic Conveying <i>Ognjen Orozovic</i> Bechtel, Australia	Condition-Based Monitoring of Belt Conveyor Idlers Using a Mobile Acoustic Sensor Unit <i>Hendrik Käßmeyer, Stephan HERNSCHIER, Carsten Schmidt, Benjamin Küster, Robert Schneider, Sylvio Simon, Ludger Overmeyer</i> Institut für Integrierte Produktion Hannover gGmbH, Germany	A Review of Fatigue Prediction and Remediation in Bulk Materials Handling Structures <i>Luke E Stone and Brett A Thompson</i> Hatch, Australia
11.20 - 11.45	Particle Slug Evolution in Low-Velocity Slug Flow Pneumatic Conveying <i>Chehan L K Y Yapa Mudiyansele, Atul Sharma, Michael S A Bradley, Daniel Shinn</i> The Wolfson Centre for Bulk Solids Handling Technology, UK	AI-Enabled Conveyor Monitoring and Smart Tensioning Systems: Practical Implementation and Data-Driven Evaluation in Mining Conveyors <i>Sonja Volhein</i> Hosch, Australia	Motivations for Improved Methods to Predict Bulk Material Loads <i>Shaun Reid</i> Agilitus, Australia
11.45 - 12.10	Modelling the Unstable Zone in Horizontal Slug Flow Pneumatic Conveying <i>Ognjen Orozovic</i> Bechtel, Australia	Reducing Conveyor Belt Failures by Implementing Conveyor Diagnostics Systems <i>James D Hunter</i> Wagener Vulcanizers, Australia	Wall Friction and Flow Behaviour of Bulk Materials: Effects of Liner Hardness, Surface Roughness, and Particle Properties <i>Tiago Cousseau, Jayne O'Shea, Ergun Onder</i> TUNRA Bulk Solids, Australia, Istanbul Technical University, Turkey

12.10 - 13.45	Lunch - Atrium Garden Restaurant
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	General Topics on Materials Handling - Wear Admiralty Gulf Room	Belt Conveying - Monitoring & Diagnostics Sirius Room	Storage & Handling King Sound Room
Session Chair	Mark Jones	Michael Carr	Tim Donohue
13.45 - 14.10	Keynote Paper: Wear Assessment of Mining Components: Bridging the Gap Between Laboratory and Field Tests <i>Jimmy I. Penagos, Christian C. V. Arango, <u>Cousseau T</u></i> Instituto Tecnológico Vale, Brazil and TUNRA Bulk Solids, Australia	Application of Distributed Acoustic Sensing for Proactive Maintenance in Conveyor Systems <u>Rachael Laudehr</u> Rema Tip Top, Australia	Overview and Analysis of Variable Bulk Density Janssen Based Approaches <u>Ognjen Orozovic</u> Bechtel, Australia
14.10 - 14.35	Effect of Manganese Content on Abrasive Wear Resistance of Hadfield Steels: Correlation between Jaw Crusher and Crushing Pin-on-Disc Tests <i>A.B., Furtado, R.N.J.F., Silva, Pritzelwitz, P and <u>P.C., Machado</u></i> Federal University of Pará, and Vale, Brazil	Conveyor Monitoring through Fibre Optic Cables - Reducing Downtime, Increasing Safety and Improving Preventative Maintenance <u>Matthew Cook</u> Hawk Measurement Systems, Australia	Modelling and Monitoring Stability of Iron Ore Stockpiles <u>Andrew Grima, Jayan S. Vinod, Shafna Kaliparambil Jamal and Dodangoda Liyanage Uttara Deshanee</u> University of Wollongong, Australia
14.35 - 15.00	Engineering Considerations for the Use of Magnetic Wear Panels in Fixed Plant Protection <u>Paul Duthy</u> Elastotec, Australia	Smart Conveyors for a Break-Down Free Future: Operational Excellence Through Real-Time Idler Intelligence <u>Ryan Norris</u> Vayeron, Australia	Dewatering of Tailings using a Passive Pilot Test Rig <u>Thomas Bunn, Ognjen Orozovic, Peter Robinson, Kevin Rowe, Peter Shumack, Craig Wheeler and Michael Carr</u> University of Newcastle, TUNRA Bulk Solids and Glencore, Australia
15.00 - 15.30	Afternoon Tea - Southern Cross Lobby		
	General Topics on Materials Handling - Wear Admiralty Gulf Room	Belt Conveying - Monitoring & Diagnostics Sirius Room	Storage & Handling King Sound Room
Session Chair	Tim Donohue	Craig Wheeler	David Hastie
15.30 - 15.55	Testing of a New Wear Sensor System for Predictive Maintenance in Bulk Materials Handling <u>Daniel Grasser</u> and Con Kamaras TUNRA Bulk Solids and BMH Global, Australia	Precision at the Edge: Automating Conveyor Belt Skirt Wear Inspection — Gap and Liner Height Measurement with Robotics and AI <u>Lachlan Campbell, Paul Collins, Nick Galm, Dr Yanyang Gu</u> Geobotica, Australia	Assessment of Conveyability of Iron Ore Tailings for Dry Disposal <i>Priscilla Freire, David Bradney, <u>Jayne O'Shea</u>, Gil Ribeiro Vilela Neto, José Pedro da Silva</i> TUNRA Bulk Solids, Australia and Samarco SA, Brazil
15.55 - 16.20	Improvements in Wear Protection for Slurry Boxes, Launderers and Wet Transfer Chutes <u>Jon Hepburn</u> Elastotec, Australia	The Twofold Problem of Belt Scale Accuracy <u>Ian Burrell</u> Control Systems Technology, Australia	Reducing Hangup and Downtime in Bauxite Handling <u>Bart Fox</u> Kinder Australia
16.20 - 16.45	General Topics on Materials Handling Keynote Paper: Data Driven insights for Sustainable TLO Lifecycle Management <u>Richard Elliott</u> and Brent Lane Rockfield Technologies, Australia	Bridging the Skills Gap in Mine Maintenance for Bulk Materials Handling <u>Sonja Volhejn</u> Hosch, Australia	Surge Bin Reclaim Bi-Directional Belt Feeder <u>Bin Chen and Elia Khoury</u> TUNRA Bulk Solids and RCR Mining, Australia
16.45 - 17.10	Moisture-Dependent Grindability of Basalt: A Comparative Study of Linear and Non-Linear Population Balance Models <i>Tahir Jauhar, <u>Michael Carr</u> and Craig Wheeler</i> University of Newcastle, Australia		Microwave Blocked Chute and Flow Detection in Bulk Materials Handling: Application Selection, Implementation and Practical Limits <u>Matthew Cook</u> Hawk Measurement Systems, Australia
17.00 - 18.00	Informal Drinks		

8.50 - 9.00	Welcome by Conference Chair, Em Prof Mark Jones, TUNRA Bulk Solids Sponsor Address - Alex McDonald, Kinder Australia Sirius Room		
Session 1	Computational Simulation & Calibration Admiralty Gulf Room	Belt Conveying - Pulleys and Drives Sirius Room	Storage and Handling King Sound Room
Session Chair	Andre Katterfeld	Jayne O'Shea	Mark Jones
09.00 - 09.25	Keynote Paper: Shape matters: DEM Modelling of Coarse Cohesionless Materials for Bulk Handling and Transport <i>Wouter Schuitemaker, Hao Shi, Niels de Vries, Dingena Schott</i> TU Delft, The Netherlands	Keynote Paper: Pulley Lagging and Belt Interaction for Power Transmission and Service Life <i>Brad Lawson, Andrew Jennings, Peter Robinson, Jason Willis, Mariana Ballestrin, Caroline G. D. Oliveira</i> Conveyor Dynamics, USA, University of Newcastle and Elastotec, Australia	Tracking Powder Discharge from a Vessel using Cavity Sound Pressure Amplitude <i>Mohammad Barzegar, Olive E Davies, Miles C E Grafton</i> Auckland University of Technology and Massey University, New Zealand
09.25 - 09.50	Shear Cell investigation of 2 Common DEM Adhesion Models, and a Comparison of Results in a Transfer Chute <i>Richard Elliott</i> Rockfield Technologies, Australia	Reverse Shear and Belt Slip: Dynamic Simulations vs. Classical Theory <i>Jason Willis, Ashleigh Kirkland, Peter Robinson, Craig A Wheeler, Michael J Carr</i> University of Newcastle, Australia	Experimental and DEM Investigation of Cohesionless Discharge from Flexible Intermediate Bulk Containers <i>Mitch Boots, Mark Jones, Peter Robinson, Eric Fimbinger, Alan Roberts, Craig Wheeler</i> TUNRA Bulk Solids, University of Newcastle, Australia, University of Leoben, Austria
10.00 - 10.30	Morning Tea - Southern Cross Lobby		
Session 2	Computational Simulation & Calibration Admiralty Gulf Room	Belt Conveying - Pulleys and Drives Sirius Room	Storage and Handling King Sound Room
Session Chair	Andrew Grima	Craig Wheeler	David Hastie
10.30 - 10.55	Simulating Behaviour of Extreme Moisture Content Materials with Combined SPH and DEM Modelling <i>Liam J Withey, Shaun C Reid, Daniel G Ausling</i> Agilitus, Australia	Non-Linearities of Drive Contact Friction <i>Ashleigh Kirkland, Jason Willis, Craig Wheeler, Michael Carr, Peter Robinson</i> University of Newcastle, Australia	Screw Feeder Design for Reliable Performance: An Industrial Case Study <i>Bin Chen and Alan Roberts</i> TUNRA Bulk Solids, Australia
10.55 - 11.20	Wet Transfer Chute Design in Mineral Processing: Addressing DEM Limitations Through Advanced Coupled SPH Simulations <i>Chris Linton and Paul Stevenson</i> EMTek, Australia	Simulation-Based Analysis of Driving Idlers as Intermediate Drives in Belt Conveyor Systems <i>Carsten Schmidt and Ludger Overmeyer</i> Leibniz Universität Hannover, Germany	Mobile Bulk Materials Handling Machines – Strategies and Techniques for Structural Life Extension <i>Adam Mayers</i> Aspec Engineering, Australia
11.20 - 11.45	Modelling the Transition from Compacted to Free-Flowing Behaviour in Stockpiled Bulk Materials Using Rocky DEM <i>Ben McPherson and David Bradney</i> TUNRA Bulk Solids, Australia	Belt Conveying -Splicing, Cutting & Vulcanising Advances in Mechanical Splicing for Steel Cord Conveyor Belts <i>Brett E DeVries</i> Flexco, USA	Energy & Environment Tailings to Topsoil: Advances in Coal Tailings Utilisation for Soil Health <i>Ken Williams</i> University of Newcastle, Australia
11.45 - 12.10	Optimisation of a Stationary Grizzly Design using Discrete Element Method <i>Marcel R. Castanheira, Guilherme P. Oliveira</i> Vale, Brazil	AI-Driven Verification of Conveyor Splice Integrity: A Real-Time QA/QC Framework for High-Reliability Belt Systems <i>Beau Weiss</i> Belt Wise, Australia	Quantitative Assessment of Airscrape's capability to Generate Pressure Differentials under Varying Conditions <i>Bradley R Owen and Jacob O Kerr</i> Kinder Australia

12.10 - 13.45	Lunch - Atrium Garden Restaurant		
Session 3	Computational Simulation & Calibration Admiralty Gulf Room	Belt Conveying - Splicing, Cutting & Vulcanising Sirius Room	Energy & Environment King Sound Room
Session Chair	Ben McPherson	Michael Carr	Andrew Grima
13.45 - 14.10	Experimental and Simulation-Based Investigation of Particle Degradation Due to Impact from Great Drop Heights <i>Hendrik Otto, Richard Spaargaren, Lisa Wonner, Mohsin Ajmal, Andre Katterfeld</i> IBAF GmbH, ESI Eurosil BV and Otto von Guericke University	Optimizing Life Cycle Costs with High-Quality Vulcanizing Presses <i>James D Hunter and Karsten Volzke</i> Wagener Vulcanizers, Australia	Optimising Water Droplet Spectrum for Effective Dust Suppression in Bulk Materials Handling in the Mining Industry <i>Subhankar Biswas, Jon Roberts, and Xia Zhao</i> Jacobs and University of Wollongong, Australia
14.10 - 14.35	Application of Adjustable Guides to Reduce Clogging and Misalignment in Ship Loaders <i>Marcel R. Castanheira, Guilherme P. Oliveira, Savio A. Mello</i> Vale, Brazil	Engineering Approach to Greenfield Overland Conveyor Splice Design and Validation <i>Brendan Hong Teck Beh</i> Fenner Conveyors, Australia	Field Deployment of 100 Low-Cost Dust Monitors for Environmental and Operational Insights <i>Aleksej Lavrinec</i> University of Newcastle, Australia
14.35 - 15.00	Analysis of a Powder feeding System under Micro Gravity Conditions <i>Andre Katterfeld</i> Otto von Guericke University Magdeburg, Leibniz University Hannover, Germany	Enhancing Safety and Sustainability in Cutting Steel Cord Conveyor Belts <i>Karsten M Volzke</i> Wagener Vulcanizers, Australia	Comparative Analysis of Spray Nozzle Performance for Dust Suppression of Coal and Silica Dusts <i>Xia Zhao, Jon Roberts, Ting Ren, Ming Qiao</i> University of Wollongong, Australia
15.00 - 15.25	Froude-Based Calibration Refinement for Physical Scale Modelling of Iron Ore Transfer Chutes <i>Aleef Rahman, Liz Del Cid, Corin Holmes, Jie Guo</i> Jenike and Johanson, USA	Research on the Design Calculation Method of Linear Friction Tripper Booster Drive <i>SONG Guanting and SONG Weiqiang</i> CCTEG Shenyang Engineering Company and Northeastern University, China	Developing an Engineering Technology Readiness Level for Recyclables in the Pacific Islands <i>Beth Foster and Ken Williams</i> University of Newcastle, Australia
15.25	Afternoon Tea - Southern Cross Lobby		
17.00 - 10.00 pm	Conference Dinner Bathers Beach House Fremantle		

Thursday 09/07/2026



Partners in Productivity

Day 3 - Sponsored by Flexco



Partners in Productivity

8.50 - 9.00	Welcome by Conference Chair, Em Prof Mark Jones, TUNRA Bulk Solids Sponsor Address - Shaun Santana, Flexco Australia Sirius Room		
9.00 - 9.30	Plenary Presentation: Dr Eric Fimbinger, Technical University of Leoben Virtual Prototyping of Raw Materials Processing Equipment		
9.30 - 10.00	Plenary Presentation: Jodie Kimber - Westfarmers Chemical, Energy and Fertilizers Move It Better or Emit More: Why Bulk Materials Handling is the Missing Lever in Industrial Decarbonisation		
10.00 - 10.30	Morning Tea - Southern Cross Lobby		
Session 1	Computational Simulation & Calibration	Belt Conveying - Conveyor Belts	Belt Conveying - Idlers & Rollers
Session Chair	Admiralty Gulf Room	Sirius Room	King Sound Room
	Alex Lavrinec	Craig Wheeler	Tim Donohue
10.30 -10.55	Keynote Paper: Quantifying Mechanical Degradation of Direct Reduced Iron Under Impact Load Conditions <u>Katharina Skoff</u>, Michael Prenner University of Leoben, Austria	Keynote Paper: What's Changing in Australian Conveyor Belt Standards: Understanding Alignments and Revisions <u>Jayne O'Shea</u> TUNRA Bulk Solids, Australia	
10.55 - 11.20	Coupled DEM-FEM Simulations of a Peristaltic Surface Conveyor <u>Hanna Westphal</u>, Elmar Woschke, Fabian B�thge, Hauke Gravenkamp, Daniel Juhre, Matthias Pusch, Andre Katterfeld Otto von Guericke University Magdeburg, Germany	Bridging Laboratory Testing and Field Performance in Conveyor Belt Compound Development <u>Kim Wah Beh</u>, Sam Kodikara, Hua Chen, Pathum Rathugamage, Dr. Jenny Z. Yu, Dr. Stephan Hoette Continental, Australia	Keynote Paper: Contamination Assessment in Idler Rollers: Challenges and New Insights <u>Tiago Cousseau</u>, Joe L. Rougetel, Yusuf Badat TUNRA Bulk Solids, Australia
11.20 - 11.45	DEM-Based Surrogate Modelling for SAG Mill Energy Spectra Optimization <u>Tahir Jauhar</u>, Dasun Balasooriya, Ben Wilks, Stephan Chalup, <u>Michael Carr</u>, Craig Wheeler, Dean Ellis University of Newcastle, Australia	Ultra Strength Flex (UsFlex) Belting as an Alternative to Steel Cord Belting in Severe Duty Iron Ore Applications <u>Michael John Finlen</u> Fenner Conveyors, Australia	Impact Time and Force Estimation for Conveyor Loading Using Explicit Dynamic FEA <u>Ramin Saremi</u>, Isaac M Rapanaro, <u>Alfred Tang</u> CPS, Australia
11.45 - 12.10	Particle-Size Scalling in DEM Characterisation of Coal-Measure Sandstone Fragments for Bulk-Solids Handling <u>Jipei Chen</u>, Itmam Abedin, Jon Roberts, David Hastie, Ting Ren University of Wollongong, Australia	The World's Strongest Belt – Executing an unprecedented Belt Replacement <u>Cameron T Portelli</u> Continental, Australia	Large-Diameter Polymer Idlers for Overland Conveyors: Energy Performance & Survivability Characterisation <u>Shawn Ryan</u>, <u>Tiago Cosseau</u>, Jayne O'Shea, Yusuf Badat Big Roller™ Overland Conveyor Company, TUNRA Bulk Solids, Australia
12.10 - 13.45	Lunch - Atrium Garden Restaurant		

Session 2	Transportation & Logistics Admiralty Gulf Room	Belt Conveying - Conveyor Belts Sirius Room	Belt Conveying - Idlers & Rollers King Sound Room
Session Chair	Mark Jones	Andrew Grima	Eric Fimbinger
13.45 - 14.10	Keynote Paper: Benchmarking Dry Bulk Terminal Unloading Performance Using Open Data and OEE Analysis <i>Gerrit de Leeuw, Mark Duinkerken, Yusong Pang, Reinier Tans, Dingena Schott</i> TU Delft and Haskoning, The Netherlands	DEM Analysis of The Effect of Belt Conveyor Geometry on Surcharge Angle <i>Thomas P Walkemeyer</i> Sedgman Onyx, Australia	Case Study of CPS Heat-Resistant Rollers in Conveyor Impact Applications <i>Jessie Zhang and Ahmad Fleyfel</i> CPS, Australia
14.10 - 14.35	Refurbishment of Shiploader Wharf Rails <i>Paul Munzenberger</i> Aspec Engineering, Australia	Characterizing Strain Response Patterns Across the Width of Conveyor Belts During Operation <i>Jakob Müller, Michael Prenner, Nikolaus A. Sifferlinger</i> Montanuniversität Leoben, Austria	Belt Conveying -Non-conventional Conveyors
14.35 - 15.00	Towards Efficient Multi-dimensional Grab Design Optimisation <i>Mikhail Anisimov, Haluk Akay, Dingena Schott</i> TU Delft, The Netherlands	Belt Conveying - Design, Optimisation & Operation Design, Construction and Performance of the First Rail-Running Conveyor in a Mining Environment <i>Craig A. Wheeler, Martin S. Lurie, Michael J. Carr, Peter W. Robinson, Vladimir Svirsky, Timothy A. Turner, Jonathan Wegener, Kalin Tonchev and Angus S. Foley</i> The University of Newcastle, Australia, Fluor Mining and Metals / Virta Inc., USA.	Sandwich Belt Conveyors: Direct High Angle Path, Unlimited Tonnage for IPCC <i>Joseph A. dos Santos and Marcus J. dos Santos</i> Dos Santos International, USA
			Experiments and Simulations of Main Resistance for Pouch Belt Conveyor in Horizontal Straight Sections <i>Jingye Tian, David B Hastie, Jon Roberts, Peter W Wypych</i> University of Wollongong, Australia, Fujian Longking,China
15:00 - 15:30	Afternoon Tea - Southern Cross Lobby		
Session 3		Belt Conveying - Design, Optimisation & Operation Sirius Room	Belt Conveying - Non-conventional Conveyors King Sound Room
Session Chair		Jayne O'Shea	Eric Fimbinger
15.30 - 15.55		Energy and Cost Optimisation for World's Longest Conveyor <i>Nicholas Russell</i> Worley, Australia	Research on Full Life Cycle Testing Method for the Transverse Stiffness of Pipe Conveyor Belts SHEN Huimin, YE Yangzheng, GAO Changyong, <u>SONG Weigang</u> Zhejiang Double Arrow Rubber, Northeastern University, China
15.55 - 16.20		Dune Express - The World's 2nd Longest Conveyor System <i>Andrew Jennings and Bradley Lawson</i> Conveyor Dynamics Inc (CDI), USA	
16.20 - 16.45		The Development of a Dynamic Analysis Model for the Rail-Running Conveyor <i>Angus Foley, Peter Robinson, Michael Carr, Craig Wheeler</i> The University of Newcastle, Australia	
16.45 - 17.10		Design of a Large-Scale Downhill Belt Conveyor System JI Hongbo, YANG Fan, <u>SONG Weigang</u> Northwestern University, China	
	Conference Closure - Sirius Room		