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

7-9 July 2026
Esplanade Hotel Fremantle, Western Australia

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BULK HANDLING REVIEW

Monday, 06/07/2026

17.30 - 19.30	**Welcome / Cocktail Reception** Esplanade Hotel Fremantle by Rydges, Ball and Chain Bar

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** ***Sponsor Address - Fenner Conveyors*** **Orion Room**
9.00 - 9.30	**Plenary Presentation: Dr Jenny Wu - ContiTech** *Conveyor Belt Reinforcement Review and Outlook*
9.30 - 10.00	**Plenary Presentation: Professor Jin Ooi, University of Edinburgh** *A Mesoscale DEM Approach to Bulk Solids Handling Applications*
10.00 - 10.30	**Morning Tea (Orion Room)**

	Pneumatic Conveying Admiralty Gulf Room	Belt Conveying - Monitoring & Diagnostics Orion 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** *Hamed J Sarnavi, Atul Sharma, Baldeep Kaur, Mike Bradley* The Wolfson Centre for Bulk Solids Handling Technology, UK	**Keynote Paper: New Smart Monitoring Technologies for Belt Conveyors** *Shaun R Santana and Brett E DeVries* Flexco, 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** *Richard Morgan* Aspec Engineering, Australia
10.55 - 11.20	**Impacts and Implications of Particle Exchange Delays in Horizontal Slug Flow Pneumatic Conveying** *Ognjen Orozovic* Bechtel, Australia	**Condition-Based Monitoring of Belt Conveyor Idlers Using a Mobile Acoustic Sensor Unit** *Hendrik Käßmeyer, Stephan Hernschier, Carsten Schmidt, Benjamin Küster, Robert Schneider, Sylvio Simon, Ludger Overmeyer* Institut für Integrierte Produktion Hannover gGmbH, Germany	**A Review of Fatigue Prediction and Remediation in Bulk Materials Handling Structures** *Luke Stone* Hatch, Australia
11.20 - 11.45	**Particle Slug Evolution in Low-Velocity Slug Flow Pneumatic Conveying** *Chehan L K Y Yapa Mudiyanselage, Atul Sharma, Michael S A Bradley, Daniel Shinn* The Wolfson Centre for Bulk Solids Handling Technology, UK	**Modern Conveyor Technologies and Independent Evaluation: Electronic Tensioning, AI Monitoring, and the Role of Data-Driven Trials** *Sonja Volhejn* Hosch, Australia	**Maximising Value: Life Extension Strategies for Aging Materials Handling Machines** *Adam Mayers* Aspec Engineering, Australia
11.45 - 12.10	**Modelling the Unstable Zone in Horizontal Slug Flow Pneumatic Conveying** *Ognjen Orozovic* Bechtel, Australia	**Reducing Conveyor Belt Failures by Implementing Conveyor Diagnostics Systems** *James D Hunter* Wagener Vulcanizers, Australia	**Surge Bin Reclaim Bi-Directional Belt Feeder** *Bin Chen and Elia Khoury* TUNRA Bulk Solids and RCR Mining, Australia
12.10 - 13.45	**Lunch Break**		

	General Topics on Materials Handling - Wear Admiralty Gulf Room	Belt Conveying - Monitoring & Diagnostics Orion Room	Storage & Handling King Sound Room
Session Chair	**Tim Donohue**	**Jayne O'Shea**	**Andrew Grima**
13.45 - 14.10	**Keynote Paper: Wear Assessment of Mining Components: Bridging the Gap Between Laboratory and Field Tests** *Dr Tiago Cousseau* TUNRA Bulk Solids, Australia	**Unbiased Performance Testing: Challenges and Benefits of Data-Driven Trials for Conveyor Technologies** *Sonja Volhejn* Hosch, Australia	**Motivations for Improved Methods to Predict Bulk Material Loads** *Shaun Reid* Agilitus, 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** *A.B., Furtado, R.N.J.F., Silva and P.C., Machado* Institute of Technology, Federal University of Pará, Brazil	**Application of Distributed Acoustic Sensing for Proactive Maintenance in Conveyor Systems** *Rachael Laudehr* Rema Tip Top, Australia	**Overview and Analysis of Variable Bulk Density Janssen Based Approaches** *Ognjen Orozovic* Bechtel, Australia
14.35 - 15.00	**Engineering Considerations for the Use of Magnetic Wear Panels in Fixed Plant Protection** *Paul Duthy* Elastotec, Australia	**Conveyor Monitoring through Firbre Optic Cables - Reducing Downtime, Increasing Safety and Improving Preventative Maintenance** *Matthew Cook* Hawk Measurement Systems, Australia	**Wall Friction and Flow Behaviour of Bulk Materials: Effects of Liner Hardness, Surface Roughness, and Particle Properties** *Jayne O'Shea and Tiago Cousseau* TUNRA Bulk Solids, Australia
15.00 - 15.30	**Afternoon Tea - Orion Room / Alan W Roberts introduces his newly published book "The Theory and Practice of Bulk Materials Handling"**		

	General Topics on Materials Handling - Wear Admiralty Gulf Room	Belt Conveying - Monitoring & Diagnostics Orion Room	Storage & Handling King Sound Room
Session Chair	**Tim Donohue**	**Craig Wheeler**	**David Hastie**
15.30 - 15.55	**Modelling (DEM) and Testing (sensor) of a Wear Plate for Chutes** *Daniel Grasser and Con Kamaras* TUNRA Bulk Solids and BMH Global, Australia	**Smart Conveyors for a Break-Down Free Future: Operational Excellence Through Real-Time Idler Intelligence** *Ryan Norris* Vayeron, Australia	**Modelling and Monitoring Stability of Iron Ore Stockpiles** *Andrew Grima, Jayan S. Vinod, Shafna Kaliparambil Jamal and Dodangoda Livanage Uttara Deshanee* University of Wollongong, Australia
15.55 - 16.20	**Improvements in Wear Protection for Slurry Boxes, Launders and Wet Transfer Chutes** *Jon Hepburn* Elastotec, Australia	**All Talk, No Torque: Closing the Loop Between Conveyor Intelligence and Physical Intervention** *Joshua Pritchard* Auto Track, Australia	**Dewatering of Tailings using a Passive Pilot Test Rig** *Thomas Bunn* University of Newcastle and TUNRA Bulk Solids, Australia
16.20 - 16.45	**Computational Modelling Workshop hosted by TUNRA Bulk Solids**	**Precision at the Edge: Automating Conveyor Belt Skirt Wear Inspection Gap and Liner Height Measurement with Geobotica and BHP** *Lachlan Campbell, Paul Collins, Nick Galm, Dr Yanyang Gu* Geobotica and BHP, Australia	**Assessment of Conveyability of Iron Ore Tailings for Dry Disposal** *Priscilla Freire, David Bradney, Jayne O'Shea, Gil Ribeiro Vilela Neto, José Pedro da Silva* TUNRA Bulk Solids, Australia and Samarco SA, Brazil
16.45 - 17.10		**The Twofold Problem of Belt Scale Accuracy** *Ian Burrell* Control Systems Technology, Australia	**Modelling of Variable Pressure and Rate Batch Filtration** *Ognjen Orozovic* Bechtel, Australia
17.00 - 18.00	**Informal Drinks - Marine Bar Lounge**		

Wednesday 08/07/2026 | KINDER EXPERIENCE INNOVATION PRODUCTIVITY | **Day 2 - Sponsored by Kinder Australia** | KINDER EXPERIENCE INNOVATION PRODUCTIVITY

8.50 - 9.00	**Welcome by Conference Chair, Em Prof Mark Jones, TUNRA Bulk Solids** ***Sponsor Address - Kinder Australia*** **Orion Room**		
Session 1	**Computational Simulation & Calibration** Admiralty Gulf Room	**Belt Conveying - Pulleys and Drives** Orion Room	**Storage and Handling** King Sound Room
Session Chair	**Andre Katterfeld**	**Jayne O'Shea**	**Angus Pidgeon**
09.00 - 09.25	**Keynote Paper: Shape matters: DEM Modelling of Coarse Cohesionless Materials for Bulk Handling and Transport** *Wouter Schuitemaker, Hao Shi, Niels de Vries, Dingena Schott* TU Delft, The Netherlands	**Keynote Paper: Pulley Lagging and Belt Interaction for Power Transmission and Service Life** *Andrew Jennings, Brad Lawson, Mariana Ballestrin, Caroline Oliveria* Conveyor Dynamics, USA and Elastotec, Australia	**Tracking Powder Discharge from a Vessel using Cavity Sound Pressure Amplitude** *Mohammad Barzegar, Clive E Davies, Miles C E Grafton* AUT, 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** *Richard Elliott* Rockfield Technologies, Australia	**The Effect of Pressure and Velocity-Dependent Coefficient of Friction on Shear Distribution in the Contact Arc of Conveyor Drives** *Jason Willis and Ashleigh Kirkland* University of Newcastle, Australia	**Experimental and DEM Investigation of Cohesionless Discharge from Flexible Intermediate Bulk Containers** *Mitchell Boots, Mark Jones, Peter Robinson, Craig Wheeler, Alan Roberts* TUNRA Bulk Solids and University of Newcastle, Australia
10.00 - 10.30	**Morning Tea (Orion Room)**		
Session 2	**Computational Simulation & Calibration** Admiralty Gulf Room	**Belt Conveying - Pulleys and Drives** Orion Room	**Storage and Handling** King Sound Room
Session Chair	**Andre Katterfeld**	**Andrew Grima**	**Mark Jones**
10.30 - 10.55	**Simulating Behaviour of Extreme Moisture Content Materials with Combined SPH and DEM Modelling** *Liam J Withey, Shaun C Reid, Daniel G Ausling* Agilitus, Australia	**Pulleys and Drives - Frictional Interactions in Conveyor Drive Systems** *Ashleigh Kirkland* University of Newcastle, Australia	**Screw Feeder Design for Reliable Performance: An Industrial Case Study** *Bin Chen and Alan Roberts* TUNRA Bulk Solids, Australia
10.55 - 11.20	**Wet Transfer Chute Design in Mineral Processing: Addressing DEM Limitations Through Advanced Coupled SPH Simulations** *Chris Linton and Paul Stevenson* EMTek, Australia	**Simulation-Based Analysis of Driving Idlers as Intermediate Drives in Belt Conveyor Systems** *Carsten Schmidt and Ludger Overmeyer* Leibniz Universität Hannover, Germany	**Energy & Environment** **Keynote Paper: Design Considerations for Direct-Contact Moving-Bed Dryers for Wood Chips** *Gregory Mehos* Mehos and Associates, USA
11.20 - 11.45	**Modelling the Transition from Compacted to Free-Flowing Behaviour in Stockpiled Bulk Materials Using DEM** *Ben McPherson* TUNRA Bulk Solids, Australia	**Belt Conveying -Splicing, Cutting & Vulcanising** **Keynote Paper: AI-Driven Verification of Conveyor Splice Integrity: A Real-Time QA/QC Framework for High-Reliability Belt Systems** *Beau Weiss* Belt Wise, Australia	**Developing an Engineering Technology Readiness Level for Recyclables in the Pacific Islands** *Beth Foster and Ken Williams* University of Newcastle, Australia
11.45 - 12.10	**Optimisation of a Static Grizzly Grid Design using Discrete Element Method** *Marcel R. Castanheira, Guilherme P. Oliveira* Vale, Brazil	**Optimizing Life Cycle Costs with High-Quality Vulcanizing Presses** *James D Hunter* Wagener Vulcanizers, Australia	**Tailings to Topsoil: Advances in Coal Tailings Utilisation for Soil Health** *Ken Williams* University of Newcastle, Australia

12.10 - 13.45	**Lunch Break**		
Session 3	**Computational Simulation & Calibration** Admiralty Gulf Room	**Belt Conveying - Splicing, Cutting & Vulcanising** Orion Room	**Energy & Environment** King Sound Room
Session Chair	**Ken Williams**	**Craig Wheeler**	**Angus Pidgeon**
13.45 - 14.10	**Coupled DEM-FEM Simulations of a Peristaltic Surface Conveyor** *Hanna Westphal* Otto von Guericke University Magdeburg, Germany	**Advances in Mechanical Splicing for Steel Cord Conveyor Belts** *Brett E DeVries* Flexco, USA	**Quantitative Assessment of Airscrape's capability to Generate Pressure Differentials under Varying Conditions** *Bradley R Owen and Jacob O Kerr* Kinder Australia
14.10 - 14.35	**Application of Adjustable Guides to Reduce Clogging and Misalignment in Ship Loaders** *Marcel R. Castanheira, Guilherme P. Oliveira, Savio A. Mello* Vale, Brazil	**Engineering Approach to Greenfield Overland Conveyor Splice Design and Validation** *Brendan Hong Teck Beh* Fenner Conveyors, Australia	**Optimising Water Droplet Spectrum for Effective Dust Suppression in Bulk Materials Handling in the Mining Industry** *Subhankar Biswas, Jon Roberts, and Xia Zhao* Jacobs and University of Wollongong, Australia
14.35 - 15.00	**Analysis of a Powder feeding System under Micro Gravity Conditions** *André Katterfeld* Otto von Guericke University Magdeburg, Leibniz University Hannover, Germany	**Enhancing Safety and Sustainability in Cutting Steel Cord Conveyor Belts** *Karsten M Volzke* Wagener Vulcanizers, Australia	**Field Deployment of 100 Low-Cost Dust Monitors for Environmental and Operational Insights** *Aleksej Lavrinec* University of Newcastle, Australia
15.00 - 15.25	**Froude-Based Calibration Refinement for Physical Scale Modelling of Iron Ore Transfer Chutes** *Aleef Rahman, Liz Del Cid, Corin Holmes, Jie Guo* Jenike and Johanson, USA	**Research on the Design Calculation Method of Linear Friction Tripper Booster Drive** *SONG Guanting and SONG Weigang* CCTEG Shenyang Engineering Company and Northeastern University, China	**Comparative Analysis of Spray Nozzle Performance for Dust Suppression of Coal and Silica Dusts** *Xia Zhao, Jon Roberts, Ting Ren, Ming Qiao* University of Wollongong, Australia
15.25	**Afternoon Tea (Orion Room)**		
17.30 - 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 - Flexco Australia*** **Orion Room**
9.00 - 9.30	**Plenary Presentation: Dr Eric Fimbinger, Technical University of Leoben** *Virtual Prototyping of Raw Materials Processing Equipment* **Orion Room**
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* **Orion Room**
10.00 - 10.30	**Morning Tea (Orion Room)**

Session 1	**Computational Simulation & Calibration** Admiralty Gulf Room	**Belt Conveying - Conveyor Belts** Orion Room	**Belt Conveying - Idlers & Rollers** King Sound Room
Session Chair	**Mark Jones**	**Craig Wheeler**	**Tim Donohue**
10.30 -10.55	**Keynote Paper: Quantifying Mechanical Degradation of Direct Reduced Iron Under Impact Load Conditions** *Katharina Skoff, Michael Prenner* University of Leoben, Austria	**Keynote Paper: What's Changing in Australian Conveyor Belt Standards: Understanding Alignments and Revisions** *Jayne O'Shea* TUNRA Bulk Solids, Australia	**Keynote Paper: Contamination Assessment in Idler Rollers: Challenges and New Insights** *Tiago Cousseau , Joe L. Rougetel, Yusuf Badat* TUNRA Bulk Solids, Australia
10.55 - 11.20	**Experimental and Simulation-Based Investigation of Particle Degradation Due to Impact from Great Drop Heights** *Hendrik Otto, Richard Spaargaren, Lisa Wonner, Mohsin Ajmal, André Katterfeld* IBAF GmbH, ESI Eurosilo BV and Otto von Guericke University Magdeburg, Germany	**Engineering High-performance Conveyor Belts with Super Low Rolling Resistance and High Abrasion Resistance** *Dylan Riddell, Kim Wah Beh, Sam Kodikara, Hua Chen, Pathum Rathugamage, Dr. Jenny Z. Yu, Dr. Stephan Hoette* Continental, Australia	**Impact Time and Force Estimation for Conveyor Loading Using Explicit Dynamic FEA** *Ramin Saremi and Isaac M Rapanaro* CPS Conveyor, Australia
11.20 - 11.45	**DEM-Based Surrogate Modelling for SAG Mill Energy Spectra Optimization** *Tahir Jauhar , Dasun Balasooriya, Ben Wilks, Stephan Chalup, Michael Carr, 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** *Michael John Finlen* Fenner Conveyors, Australia	**Development and Validation of a 20-inch >20kg Roller and complementary Idlers and Ground Module System for Overland Conveyors** *Shawn Ryan , Jayne O'Shea, Tiago Cosseau, Yusuf Badat,* Big Roller™ Overland Conveyor Company, TUNRA Bulk Solids, Australia
11.55 - 12.10	**Particle-Size Scalling in DEM Characterisation of Coal-Measure Sandstone Fragments for Bulk-Solids Handling** *Jipei Chen , Itmam Abedin, Jon Roberts, David Hastie, Ting Ren* University of Wollongong, Australia	**The World's Strongest Belt – Executing an unprecedented Belt Replacement** *Cameron T Portelli and Sridhar Mullapudi* Continental, Australia	**A case Study on Improved Polyurethane Performance for Impact Areas** Jessie Zhang CPS Conveyor, Australia
12.10 - 13.45	**Lunch Break**		

Session 2	Transportation & Logistics Admiralty Gulf Room	Belt Conveying - Conveyor Belts Orion Room	Belt Conveying -Non-conventional Conveyors King Sound Room
Session Chair	**Ken Williams**	**Angus Pidgeon**	**Eric Fimbinger**
13.45 - 14.10	**Keynote Paper: Benchmarking Dry Bulk Terminal Unloading Performance Using Open Data and OEE Analysis** *Dingena Schott* TU Delft, The Netherlands	**Keynote Paper: Analysing the Operational Effectiveness of Different Belt Tracking Designs** *Jacob O Kerr, Bradley R Owen* Kinder Australia	**Sandwich Belt Conveyors: Direct High Angle Path, Unlimited Tonnage for IPCC** *Joseph A. dos Santos and Marcus J. dos Santos* Dos Santos International, USA
14.10 - 14.35	**Refurbishment of Shiploader Wharf Rails** *Paul Munzenberger* Aspec Engineering, Australia	**Interlaboratory Evaluation of Abrasion Resistance Using the Rotary Drum Method on Steel-Cord Conveyor Belt Splices** *Zinato, L. N., Santos, Y.L.Viáfara, CC Silva, P.H.B, Vasconcelos, G.C. Oliveira, H.V Andrade, C.G.B.Wiebeck, H.Toffoli, S.M.Valera, T.S.Falqueto , P.A, Pereira, R.D. Penagos, J.J* Vale, Federal University of Ouro Preto UFOP, University of Sao Paulo USP, Vale S/A, Brazil	**Design, Construction and Performance of the First Rail-Running Conveyor in a Mining Environment** *Craig Wheeler, Michael Carr, Peter Robinson, Angus Foley and Martin Lurie* The University of Newcastle, Australia
14.35 - 15.00	**Towards Efficient Multi-dimensional Grab Design Optimisation** *Mikhail Anisimov , Haluk Akay, Dingena Schott* TU Delft, The Netherlands	**DEM Analysis of The Effect of Belt Conveyor Geometry on Surcharge Angle** *Thomas P Walkemeyer* Sedgman Onyx, Australia	**The Development of a Dynamic Analysis Model for the Rail-Running Conveyor** *Angus Foley , Peter Robinson, Michael Carr, Craig Wheeler* The University of Newcastle, Australia
15:00 - 15:30	**Afternoon Tea (Orion Room)**		

Session 3	Transportation & Logistics Admiralty Gulf Room	Belt Conveying - Design, Optimisation & Operation Orion Room	Belt Conveying - Non-conventional Conveyors King Sound Room
Session Chair	**Mark Jones**	**Craig Wheeler**	**Ognjen Orovozic**
15.30 - 15.55	**Moisture Mobility in Bulk Solids Systems: from Safety to Separation** *Ken Williams* University of Newcastle, Australia	**Energy and Cost Optimisation for World's Longest Conveyor** *Nicholas Russell* Worley, Australia	**Experiments and Simulations of Main Resistance for Pouch Belt Conveyor in Horizontal Straight Sections** *Jingye Tian, David B Hastie, Jon Roberts, Peter W Wypych* University of Wollongong, Australia, Fujian Longking Co Ltd, China
	General Topics on Materials Handling		
15.55 - 16.20	**Keynote Paper: Data Driven insights for Sustainable TLO Lifecycle Management** *Richard Elliott and Brent Lane* Rockfield Technologies, Australia	**Dune Express - The World's 2nd Longest Conveyor System** *Andrew Jennings and Bradley Lawson* Conveyor Dynamics Inc (CDI), USA	**Research on Full Life Cycle Testing Method for the Transverse Stiffness of Pipe Conveyor Belts** SHEN Huimin, YE Yangzheng, GAO Changyong, SONG Weigang Zhejiang Double Arrow Rubber Co., Ltd, China and Northeastern University, China
16.20 - 16.45	**The Influence of Moisture Content on the Grindability of Basalt** *Michael J. Carr, Tahir A. Jauhar and Craig A. Wheeler* TUNRA Bulk Solids, Australia	**Characterizing Strain Response Patterns Across the Width of Conveyor Belts During Operation** *Jakob Müller, Michael Prenner, Nikolaus A. Sifferlinger* Montanuniversität Leoben, Austria	
16.45 - 17.10	**Blocked Chute Monitoring Technology** *Matthew Cook* Hawk Measurement Systems, Australia	**Design of a Large-Scale Downhill Belt Conveyor System** JI Hongbo, YANG Fan, SONG Weigang Nortwestern University, China	
17.10 - 17.15	**Conference Closure**		