

**Pre-Conference Events: Monday, 08/07/2019**

08:30 - 16:00	<b>Site Tour: Condong Sugar Mill / Stone and Wood Brewery</b> Bus leaves The Mantra on View
17:30 - 19:30	<b>Welcome / Cocktail Reception: sponsored by Schenck Process</b> The Mantra on View, Level 1 - Main Foyer



**Day 1: Tuesday, 09/07/2019**

8:15 - 08:45	<b>Conference Registration, Level 1 - Main Foyer</b> Welcome by Conference Chair
8:45 - 8:55	Professor Mark Jones - The University of Newcastle, Australia <b>Boulevard Room 2 &amp; 3</b>
8:55 - 9:10	<b>Opening Address</b> Paul Jeans, Chancellor, The University of Newcastle, Australia <b>Boulevard Room 2 &amp; 3</b>
9:10 - 9:40	<b>Plenary 1 - OLC/LRR/High Strength Conveyor Belts</b> Dr. Robin Steven - Conveyor Belt Group, Continental North America, USA Plenary Chair: Prof Mark Jones <b>Boulevard Room 2 &amp; 3</b>
9:40 - 10:10	<b>Plenary 2 - Title TBA</b> Jane Macey, Roy Hill Plenary Chair: Prof Mark Jones <b>Boulevard Room 2 &amp; 3</b>

10:10 - 10:35	<b>Morning Tea (Reception Area): sponsored by TUNRA Bulk Solids</b>
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Session 1	General Topics on Materials Handling Boulevard Room 1	Belt Conveying - Design Boulevard Room 2	Storage & Handling Paradise Room 2 & 3	Simulation & Modelling - Calibration Boulevard Room 3
Session Chair	Peter Wypych	Craig Wheeler	Richard Farnish	Xiaoshu Cai
10:35 - 11:05	<b>Keynote Paper: Measurement and Characterisation in Flows of Bulk Solids: Flow Rate, Bulk Density and Particle Size</b> <i>Clive E. Davies</i>  Massey University, New Zealand	<b>Keynote Paper: Influence of Australian Research on Conveyor Technology</b> <i>Alex Harrison</i>  The University of Newcastle, Australia	<b>Keynote Paper: Investigation of Loads Acting on Flow Isolating Gates in Bulk Solids Storage Bins</b> <i>Alan Roberts<sup>1</sup>, Brendan Beh<sup>2</sup>, Jiahe Shen<sup>3</sup>, Bin Chen<sup>3,4</sup> and Timothy Donohue<sup>5</sup></i> <sup>1,3,4,5</sup> TUNRA Bulk Solids, Australia <sup>2</sup> The University of Newcastle, Australia	<b>Keynote Paper: Influence of Particle Shape in Discrete Element Simulations of Industrial Transfer Chutes</b> <i>Andrew Grima<sup>1</sup>, Jon Roberts<sup>1</sup>, David Hastie<sup>1</sup>, Stephen Cole<sup>2</sup></i>  <sup>1</sup> The University of Wollongong, <sup>2</sup> DEM Solutions, UK
11:05 - 11:30	<b>Prediction and Measurement of High Pressure Flow Functions</b>  <i>Edward P Alexander, Peter W Wypych, Peter C Arnold</i>  University of Wollongong, Australia	<b>A Dynamic Analysis of the Rail Conveyor System</b>  <i>Aleef Rahman, Peter W A Robinson, Michael J Carr, Craig A Wheeler</i>  The University of Newcastle, Australia	<b>Some Theoretical Consideration of Stress States at the Hopper Feeder Interface</b>  <i>Jie Guo<sup>1</sup>, Alan W Roberts<sup>1</sup>, Mark G Jones<sup>1</sup></i>  <sup>1</sup> The University of Newcastle, Australia	<b>On the Calibration of DEM Parameters for Abrasive Sliding Wear</b>  <i>Thomas Roessler and Andre Katterfeld</i>  University of Magdeburg, Germany
11:30 - 11:55	<b>A Review of the Wall Yield Locus in the Context of Wet and Sticky Ores</b> <i>Terrance J. Franqakis, John Sheer</i> University of the Witwatersrand, South Africa	<b>Steep Incline and Vertical Conveyors – Advantages, Challenges and Applications</b> <i>Zoltán Tarpay</i> Conveyor Belt Group, Continental, Division ContiTech, Germany	<b>Instability Analysis of Vertical Stiffeners of Cylindrical Steel Silos Made of Corrugated Sheets</b> <i>Ana Carolina Albernaz Rodrigues<sup>1</sup>, Carlito Calil Jr<sup>1</sup></i> <sup>1</sup> University of São Paulo, Brazil	<b>Coarse Graining of Adhesive Elasto-plastic DEM Contact Models in Quasi-static Processes</b> <i>M.Javad Mohajeri<sup>1</sup>, Cees van Rhee<sup>2</sup>, Dingena L.Schott<sup>3</sup></i> Delft University of Technology, The Netherlands
11:55 - 12:20	<b>The Prediction of Bulk Material Adhesion using a Modified Instantaneous Yield Locus (IYL)</b> <i>Michael Carr, Alan Roberts, Craig Wheeler</i>  The University of Newcastle, Australia	<b>Dynamic Conveyor Belt Simulation using the Discrete Element Method</b> <i>Eric Fimbiniger</i>  University of Leoben, Austria	<b>Measurement of Fill Volume of a Storage Vessel by Optical Means</b>  <i>Mohamed Barzegar<sup>1</sup>, Gabe P. Redding<sup>2</sup>, Clive E Davies<sup>1</sup>, Luke Fullard<sup>1</sup>, Miles C Graffon<sup>1</sup></i> <sup>1</sup> Massey University, New Zealand, <sup>2</sup> Biological Systems Modelling, New Zealand	<b>Insights into Granular Mechanics Through Neutron Scattering</b>  <i>Christopher M Wensrich<sup>1</sup>, Jubert Pineda<sup>1</sup>, Vladimir Luzin<sup>2</sup>, Iaxmi Suwal<sup>1</sup>, Erich H Kisi<sup>1</sup>, Oliver Kirstein<sup>3</sup></i> <sup>1</sup> The University of Newcastle, Australia, <sup>2</sup> Australian Centre for Neutron Scattering, Australia, <sup>3</sup> European Spallation Source, Sweden

12:20 - 1:45	<b>Lunch Break</b>
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Afternoon

Afternoon				
<b>Session 2</b>	<b>General Topics on Materials Handling</b> Boulevard Room 1	<b>Belt Conveying - Reliability and Maintenance</b> Boulevard Room 2	<b>Storage &amp; Handling</b> Paradise Room 2 & 3	<b>Simulation &amp; Modelling - Calibration</b> Boulevard Room 3
<b>Session Chair</b>	Francisco Cabrejos	Alexander Harrison	Clive Davies	Wei Chen
<b>1:45 - 2:10</b>	<b>Roy Hill: A Case Study on the Path to 100% Reliability</b> <i>Timothy Donohue<sup>1</sup>, N Williams<sup>2</sup>, S Reid<sup>1</sup>, B Chen<sup>1</sup> and J Plinke<sup>1</sup></i> TUNRA Bulk Solids <sup>1</sup> , Australia, Roy Hill <sup>2</sup>	<b>Intelligent Maintenance of Belt Conveyors using Machine Learning</b> <i>Xiangwei Liu<sup>1</sup>, Deli Pei<sup>1</sup>, Gabriel Lodewijks<sup>2</sup>, Zhangyan Zhao<sup>3</sup></i> <sup>1</sup> Beijing, China, <sup>2</sup> The University of New South Wales, Australia, <sup>3</sup> Wuhan University of Technology, Wuhan, China	<b>Life Cycle Costing: A Bridge Reclaimer Case Study</b> <i>Eric Lau</i> South32, Australia	<b>Calibration of the Discrete Element Method using an Annular Ring Shear Tester</b> <i>Corne Coetzee</i> Stellenbosch University, South Africa
<b>2:10 - 2:35</b>	<b>Effects of Segregation on Granulated NPK Sieving – A Case Study</b> <i>Felipe Mendes Cardoso Carvalho</i> C.A.S. Tecnologia, Brazil	<b>315 - Intelligent IoT Idler Stations for the Identification of Damaged Idler Bearings</b> <i>André Katterfeld<sup>1</sup>, Christian Richter<sup>1</sup>, Karl Fessel<sup>1</sup>, Mohsin Ajmal<sup>1</sup>, Rolf Schwandtke<sup>2</sup>, Yevgeniy Chumachenko<sup>2</sup></i> <sup>1</sup> University of Magdeburg, Germany <sup>2</sup> Artur Küpper, Germany	<b>A Stochastic Framework for Predicting Transfer Chute Blockages Based on Materials Properties</b> <i>Priscilla G Freire, Kenneth C Williams, Jayne O'Shea, Ognjen Orozovic</i> The University of Newcastle, Australia	<b>Verification of Dust Particle Behaviour in 2D and 3D Symmetrical Simulations</b> <i>Luke E. Stone<sup>1</sup>, David B. Hastie<sup>1</sup>, Peter W. Wypych<sup>1</sup>, Jon Roberts<sup>1</sup>, Stefan Zigan<sup>2</sup></i> <sup>1</sup> University of Wollongong, Australia <sup>2</sup> University of Greenwich
<b>2:35 - 3:00</b>	<b>Optimization of Sampling Practices at Córrego do Sítio Metallurgical Plant</b> <i>Marcus F. Maqalhães<sup>1</sup>, Ana Carolina Chieregati<sup>2</sup>, Vinicius M. de Assis<sup>1</sup></i> <sup>1</sup> Anglogold Ashanti, Brazil, <sup>2</sup> University of São Paulo, Brazil	<b>Automatable Splicing Method for Steel Cord Conveyor Belts using High-Pressure Water Jetting</b> <i>Patrick Riemer, Markus Mlinaric, Thomas Hassel, Ludger Overmeyer</i> Leibniz Universität Hannover, Germany	<b>Innovative Design, Safety and Performance Enhancements of Air Cannons</b> <i>Mick Hutton and James Stievenard</i> ESS Engineering, Australia	<b>Calibration procedure of Discrete Element Method (DEM) parameters for cohesive bulk materials</b> <i>Michael Carr<sup>1</sup>, Thomas Roessler<sup>2</sup>, Hendrik Otto<sup>2</sup>, Christian Richter<sup>2</sup>, André Katterfeld<sup>2</sup>, Craig Wheeler<sup>1</sup>, Kenneth Williams<sup>1</sup>, Greg Elphick<sup>3</sup>, Kylie Nettleton<sup>3</sup></i> <sup>1</sup> The University of Newcastle, Australia <sup>2</sup> University of Magdeburg, Germany, <sup>3</sup> BHP WAIO, Australia
<b>3:00 - 3:30</b>	Afternoon Tea (reception area)			
<b>Session 3</b>	<b>General Topics on Materials Handling</b> Boulevard Room 1	<b>Belt Conveying - Reliability and Maintenance</b> Boulevard Room 2	<b>Storage &amp; Handling</b> Paradise Room 2 & 3	<b>Simulation &amp; Modelling - Calibration</b> Boulevard Room 3
<b>Session Chair</b>	Haim Kalman	Peter Robinson	Jie Guo	Andre Katterfeld
<b>3:30 - 3:55</b>	<b>Moving and Mixing Materials with a Mechanical Intestine</b> <i>Gerald K. Olson, Clive E. Davies, Luke Fullar, Rose Y. G. Davies, Gourab Sen Gupta</i> Massey University, New Zealand	<b>Remote NDT Measurement for the Effective Maintenance of Steel Cord Belts</b> <i>K. Lees</i> Conveyor Technologies, Australia	<b>A Practical Approach combining Analytical and Computational Methods to Design Granular Materials Transfer System</b> <i>Gonzalo Emanuel Echaniz<sup>1</sup>, Nicolas Aldrete<sup>2</sup>, Alejandro Benites<sup>2</sup>, Federico Larco<sup>1</sup></i> <sup>1</sup> Ternium Argentinar, Argentina, <sup>2</sup> NOITEC S.A., Argentina	<b>Development of a Cohesive DEM Parameters Calibration Protocol for Bulk Materials using Rapid Flow and Low Consolidation Standard Tests</b> <i>Mohsin Ajmal<sup>1</sup>, Thomas Roessler<sup>1</sup>, Michael Carr<sup>2</sup>, André Katterfeld<sup>1</sup></i> <sup>1</sup> University of Magdeburg, Germany, <sup>2</sup> The University of Newcastle, Australia
<b>3:55 - 4:20</b>	<b>Solid State Material Driven Turbine</b> <i>Michael Prenner</i> University of Leoben, Austria	<b>Evaluation of Test Methods for the Determination of Belt Cover Wear Resistance</b> <i>Shaun C Reid<sup>1</sup>, Brendan Beh<sup>1</sup>, Craig A Wheeler<sup>2</sup></i> <sup>1</sup> TUNRA Bulk Solids, <sup>2</sup> The University of Newcastle, Australia	<b>Upgrading the Matraville Gypsum Handling and Storage System</b> <i>Alfons Montebello<sup>1</sup>, Roger A Hayim<sup>2</sup>, Brad A Allsopp<sup>2</sup></i> <sup>1</sup> Knauf Plasterboard, Australia, <sup>2</sup> WSP Australia	<b>DEM / Modelling Workshop</b> Boulevard Room 3
<b>4:20 - 4:45</b>	<b>Internal Visualisation of Flowing Granular Media using Dynamic X-ray radiography</b> <i>James Baker, Jiachen Bao, François Guillard, Benjy Marks and Itai Einav</i> The University of Sydney, Australia	<b>Belt Mistracking-Simulation and Measurements of Belt Sideways Dynamics</b> <i>Hendrik Otto, André Katterfeld</i> University of Magdeburg, Germany	<b>Technology for Clean Bulk Ports</b> <i>B Velan</i> Scorpio Engineering, India	
<b>4:45 - 6:00 pm</b>	Infomal Drinks			

**Day 2: Wednesday 10/07/2019**

9:00 - 9:30	<p><b>Plenary 3: A Standard Calibration Approach for DEM Parameters of Cohesionless Bulk Materials</b>  <i>Prof André Katterfeld - University of Magdeburg, Germany</i>  <i>Plenary Chair: Prof Craig Wheeler</i>  <b>Boulevard Room 2 &amp; 3</b></p>
9:30 - 10:00	<p><b>Plenary 4: Opportunities and Challenges for Increased Biomass in New South Wales</b>  <i>Dr Fabiano Ximenes - Department of Primary Industry, NSW, Australia</i>  <i>Plenary Chair: Prof Craig Wheeler</i>  <b>Boulevard Room 2 &amp; 3</b></p>

10:00 - 10:30	<p><b>Morning Tea (Reception Area): sponsored by Jenike &amp; Johanson</b></p> 
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Session 1	General Topics on Materials Handling Boulevard Room 1	Belt Conveying Boulevard Room 2	Biomass, Energy & Environment Paradise Room 2 & 3	Simulation & Modelling Boulevard Room 3
<b>Session Chair</b>	Mark Jones	Gabriel Lodewijks	Dusan Ilic	Timothy Donohue
10:30 - 11:00	<p><b>Keynote Paper: Bulk Solids Handling-A Chemical Engineer's Perspective</b>  <i>Grant Wellwood</i>                      Jenike &amp; Johanson, Australia</p>	<p><b>Keynote Paper: Performance-based Design: Case Study of Conveyor Belt Idlers</b>  <i>Tiago Cousseau<sup>1</sup>, Bruna K. Borges<sup>1</sup>, Philip v. Pritzelwitz<sup>2</sup>, Felipe R. da Fonseca<sup>2</sup></i>  <sup>1</sup>Federal University of Technology of Paraná, Curitiba, Brazil, <sup>2</sup>Vale S.A., Brazil</p>	<p><b>Keynote Paper: Dust Explosion Venting in Silos</b>  <i>Alvaro Ramirez-Gomes</i>                      University Madrid, Spain</p>	<p><b>Keynote Paper: Energy Absorption in Erosion and Fragmentation</b>  <i>Avi Uzi and Avi Levy</i>                      Ben-Gurion University of the Negev, Israel</p>
11:00 - 11:25	<p><b>Investigation of Impingement Angle Influence on Impact Wear of Different Chutel Liners by Employing a Novel Impact Wear Tester</b>  <i>Caroline Gomes de Oliveira, Jayne O'Shea, Jie Guo, Anna Giacomini, Kenneth Williams</i>                      The University of Newcastle, Australia</p>	<p><b>Reducing Belt Conveyor Transfer Impact Energy using a Dynamic Idler</b>  <i>Cameron Portelli</i>                      Kinder Australia</p>	<p><b>Developing Research on Use of Water and Chemicals for Management of Dust Emissions from Coal Products during Storage, Handling and Transportation</b>  <i>John Planner</i>                      Introspec Consulting</p>	<p><b>Coupled Simulations of a Ship Unloading Grab Bucket Utilising Discrete Element Modelling and Multi-body Dynamics</b>  <i>Samuel R Lord<sup>1</sup>, David B Hastie<sup>2</sup></i>  <sup>1</sup>Hatch, Australia, <sup>2</sup>University of Wollongong, Australia</p>
11:25 - 11:50	<p><b>Design of Optimized Convex Pattern Surface for Wear Tests in a Test Rig</b>  <i>Yunpeng Yan<sup>1</sup>, Wouter Vreeburg<sup>1</sup>, Guangming Chen<sup>3</sup>, Craig Wheeler<sup>2</sup>, Dingena Schott<sup>1</sup></i>  <sup>1</sup>Delft University of Technology, The Netherlands, <sup>2</sup>The University of Newcastle, Australia, <sup>3</sup>Nanjing University of Aeronautics and Astronautics, China</p>	<p><b>Tubular Push Conveyor – Functional Analysis and Simulation</b>  <i>André Katterfeld<sup>1</sup>, Christian Richter<sup>1</sup>, Matthias Pusch<sup>1</sup>, Rolf Kamps<sup>2</sup></i>  <sup>1</sup>University of Magdeburg, Germany  <sup>2</sup>Bühler AG, Switzerland</p>	<p><b>Overview of Forest Biomass Harvesting Studies in Australia</b>  <i>Mohammad R. Ghaffariyan</i>                      University of Sunshine Coast, Australia</p>	<p><b>Application of Numerical Modelling and Micro-Mist Spray Technology to Longwall Coal Mining Operations</b>  <i>Jon Roberts<sup>1</sup>, Peter Wypych<sup>1</sup>, Vitold Ronda<sup>2</sup>, David Hastie<sup>1</sup></i>  <sup>1</sup>University of Wollongong, Australia, <sup>2</sup>Enviromist Pty Ltd, Australia</p>
11:50 - 12:15	<p><b>A Systematic Study on the Addition of Niobium in High Chromium Cast Irons for Mining Applications</b>  <i>J.J. Penagos<sup>1</sup>, E.M. Bortoleto<sup>1</sup>, G. Tressia<sup>1</sup>, E. Albertin<sup>2</sup>, A. Sinatora<sup>1</sup></i>  <sup>1</sup>Instituto Tecnológico Vale, Ouro Preto, Brazil.  <sup>2</sup>Institute for Technological Research of São Paulo State, Metallurgy Division, Brazil</p>	<p><b>Case Study of Pellet Pipe Conveyor Belt (ST1800) Frequent Failure</b>  <i>Kaushal Kumar Singh, Probal Ghosh, Rajesh Mishra, Sudhir Kumar Mehta</i>                      Tata Steel, India</p>	<p><b>Implementation of Waste to Energy Technologies in Pacific Island Communities – Considerations of Technical, Environmental and Social Impact</b>  <i>Kenneth Williams, Stewart Williams, Dusan Ilic, Cristelle Maurin, Michael Askew</i>                      The University of Newcastle, Australia</p>	<p><b>Numerical Study on the Multiphase Flow in the CAP Cyclone</b>  <i>Ruizhi Jin<sup>1</sup>, Erfan Keshavarzian<sup>1</sup>, Kejun Dong<sup>1</sup>, Sijie Dong<sup>1,2</sup>, Bo Wang<sup>2</sup>, Kenny Kwok<sup>3</sup>, Ming Zhao<sup>1</sup></i>  <sup>1</sup>Western Sydney University, Australia, <sup>2</sup>Key Laboratory of Western China's Environmental Systems and Lanzhou University, China, <sup>3</sup>The University of Sydney, Australia</p>

12:20 - 1:45	<p><b>Lunch Break</b></p>
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Afternoon

Session 2	General Topics on Materials Handling Boulevard Room 1	Belt Conveying - Economic Considerations Boulevard Room 2	Biomass, Energy & Environment Paradise Room 2 & 3	Simulation & Modelling Boulevard Room 3
Session Chair	Mark Jones	Tiago Cousseau	Kenneth Williams	Andrew Grima
1:45 - 2:10	<b>A Dynamic Model for Materials Storage to Model Size Segregation</b> <i>Ziming Ye, Mohsen Yahyaei, Marko Hilden, Malcolm Powell</i> The University of Queensland, Australia	<b>Drive Rollers to Increase the Capacity of Belt Conveyors</b> <i>Daniel Hötte, Lars Bindzus, Ludger Overmeyer</i> Leibniz Universität Hannover, Germany	<b>The Effect of Pellet Length on Mechanical Durability and Breakage Behaviour of Torrefied Biomass</b> <i>Hamid Gilvari<sup>1</sup>, Wiebren de Jong<sup>2</sup>, Dingena L. Schott<sup>1</sup></i> Delft University of Technology, The Netherlands	<b>Modelling Slurry Pulps for Grinding Mill Application using a Coupled DEM-SPH Framework</b> <i>Wei Chen<sup>1</sup>, Damian Glowinski<sup>1</sup>, Reece Attwood<sup>1</sup>, Brad Drinkwater<sup>1</sup></i> <sup>1</sup> Bradken Resources Ltd, Australia
2:10 - 2:35	<b>Pneumatic &amp; Hydraulic Conveying - Slurry Handling</b> Boulevard Room 1 <b>Rheological Study of Copper, Nickel, Magnetite Concentrates and Gold Ores</b> <i>Thomas F Bunn<sup>1</sup>, Wei Chen<sup>2</sup></i> <sup>1</sup> TUNRA Bulk Solids, Australia, <sup>2</sup> Bradken Resources, Australia	<b>Technical and Economic Considerations for the Selection of Drive Technology for High Powered Belt Conveyors</b> <i>Thomas J Hicks</i> Bechtel Australia	<b>A General Discrete Element Contact Model for Biomass Material</b> <i>Dean Ellis, Dusan Ilic, Wei Chen, Kenneth Williams</i> The University of Newcastle, Australia	<b>A Novel Algorithm about Size Distribution and Concentration of Pulverized Coal Based on Compound Poisson Distribution</b> <i>Shouxuan Qin, Wu Zho, Xiaoshu Cai</i> University of Shanghai for Science & Technology, China
2:35 - 3:00	<b>Classifying and/or Cleaning Bulk Materials using the Concept of Terminal Free-fall Velocity in Vertical Pneumatic Conveying Systems</b> <i>Francisco J. Cabrejos</i> Jenike and Johanson Chile S.A, Chile	<b>Energy Savings for Belt Conveying Systems by Preview Control</b> <i>Yusong Pang<sup>1</sup>, Tiezhu Qiao<sup>2</sup>, Dingena Schott<sup>1</sup>, Gaowei Ya<sup>2</sup></i> <sup>1</sup> Delft University of Technology, The Netherlands, <sup>2</sup> Taiyuan University of Technology, Tianyuan, China	<b>Investigation of Wood Pellet Breakage during Pneumatic Delivery Processes</b> <i>Julian Jägers, Siegmart Wirtz, Viktor Scherer</i> Ruhr-University Bochum, Germany	<b>Predictive Optimisation of SAG-Mill Wear using DEM</b> <i>Peter Rizkalla<sup>1</sup>, Alex Potapov<sup>2</sup>, Saurabh Sarkar<sup>2</sup>, Guilherme Hanauer de Lima<sup>2</sup></i> <sup>1</sup> LEAP Australia, <sup>2</sup> ESSS, Brazil
3:00 - 3:30	Afternoon Tea (reception area)			
Session 3	Pneumatic & Hydraulic Conveying Boulevard Room 1	Belt Conveying - Design Boulevard Room 2	Biomass, Energy & Environment Paradise Room 2 & 3	Simulation & Modelling Boulevard Room 3
Session Chair			Dusan Ilic	
3:30 - 3:55			<b>Biomass &amp; Energy Workshop</b> Paradise Room 2 & 3	
3:55 - 4:20			<b>Biomass &amp; Energy Workshop</b> Paradise Room 2 & 3	
6:30 - 10:30 pm	Conference Dinner: Major Sponsor ContiTech Australia The Island, Level 12 3128 Surfers Paradise Blvd, Surfers Paradise, QLD			



**Day 3: Thursday 11/07/2019**

9:00 - 9:30	<b>Plenary 5 - Pneumatic Conveying Troubleshooting: AI Approaches</b> <i>Prof George Klinzing, Pittsburgh University, USA</i> <i>Plenary Chair: Prof Mark Jones</i> <b>Boulevard Room 2 &amp; 3</b>
9:30 - 10:00	<b>Plenary 6 - Multi-perspective bulk handling: from grains to terminal logistics</b> <i>Dr Dingena Schott, Delft University of Technology</i> <i>Plenary Chair: Prof Mark Jones</i> <b>Boulevard Room 2 &amp; 3</b>

**10:00 - 10:30 Morning Tea (Reception Area)**

Session 1	Pneumatic & Hydraulic Conveying Boulevard Room 1	Belt Conveying - Design Boulevard Room 2	Biomass, Energy & Environment Paradise Room 2 & 3	Simulation & Modelling Boulevard Room 3
Session Chair	Vijay Agarwal	Robin Steven	Alvaro Ramirez-Gomes	Dingena Schott
10:30 - 11:00	<b>Keynote Paper: The Role of Ar Number in Particle-Fluid Flows</b> <i>Haim Kalman</i> Ben-Gurion University of the Negev, Israel	<b>Keynote Paper: Getting a Pipe Conveyor in Shape - Theory and Practice</b> <i>Gabriel Lodewijks</i> University of New South Wales, Australia	<b>Keynote Paper: Investigation into the Effects of Cyclic Particle Loading onto a Filter Media</b> <i>Richard J Farnish, Abdelhafid Beladi, Stefan Zigan</i> University of Greenwich, UK	<b>Keynote Paper: In-line Measurement Techniques for Particles Based on the Combination of Image and Light Scattering</b> <i>Shouxuan Qin, Wu Zho, Xiaoshu Cai</i> University of Shanghai for Science & Technology, China
11:00 - 11:25	<b>Calibration of Coupled CFD DEM Using a Bench Scale Pseudo 2D Single Spout Fluidised Bed Apparatus</b> <i>Aleksesj Lavrinec, Ognjen Orozovic, Jason Willis, Kenneth Williams, Mark Jones</i> The University of Newcastle, Australia	<b>Research on Contact Relationship between Conveyor Belt and Idlers of Pipe Belt Conveyor</b> <i>Xinrong Gong<sup>1</sup>, Weiqiang Song<sup>2</sup>, Bo Wang<sup>2</sup></i> <sup>1</sup> Zigong Conveying Machine Co. LTD, China, <sup>2</sup> Northeastern University, Shenyang, China	<b>Revised Coal Dustiness Test Method AS4156.6 - Part 2: Preparation</b> <i>Dusan Ilic, Aleksesj Lavrinec, Kenneth Williams</i> The University of Newcastle, Australia	<b>A Case Study of Stacker Chute Analysis using both DEM and Scale Modelling</b> <i>Bin Chen<sup>1</sup>, Xinghua Zhao<sup>2</sup>, Chao Ma<sup>2</sup>, Minghui Lu<sup>2</sup>, Guannan Qiao<sup>2</sup>, Hainan Wu<sup>2</sup>, Alan Roberts<sup>1</sup></i> <sup>1</sup> TUNRA Bulk Solids, Australia, <sup>2</sup> Dalian Huarui Heavy Industry International Co, Ltd, China
11:25 - 11:50	<b>Development of an Optimised Gas Cyclone for an Industrial Fluid Bed Furnace System</b> <i>Therese Amilli<sup>1</sup>, Chandana Ratnayake<sup>2,3</sup>, Finn Stalesen<sup>1</sup></i> <sup>1</sup> Glencore Nikkelverk AS, Norway, <sup>2</sup> SINTEF Tel-Tek SINTEF Industry, Norway, <sup>3</sup> University of South-Eastern Norway	<b>Pipe Belts – Advantages, Challenges and Applications</b> <i>Stephan Hötte</i> ContiTech, Australia	<b>Dust Suppression Efficiency of Spraying Systems – A Review</b> <i>Rongfu Liao<sup>1,2</sup>, Peter Wypych<sup>1</sup>, Renhu Pan<sup>2</sup>, David B Hastie<sup>1</sup>, Jon Roberts<sup>1</sup></i> <sup>1</sup> University of Wollongong, Australia, <sup>2</sup> Fujian Longking Co Ltd, China	<b>Multi-Scale Simulation of the Pellet Rounding Process during Spheronization</b> <i>Dominik Weis<sup>1</sup>, Maria Evers<sup>2</sup>, Markus Thommes<sup>2</sup>, Sergiy Antonyuk<sup>1</sup></i> <sup>1</sup> University of Kaiserslautern, Germany, <sup>2</sup> Technical University Dortmund, Germany
11:50 - 12:15	<b>Assessment on Mode Transition in Fluidized Dense Phase Pneumatic Conveying based on Wavelet Energy Distribution</b> <i>Yassin Alkassar<sup>1</sup>, Vijay K Agarwal<sup>1</sup>, R. K. Pandey<sup>2</sup>, Niranjana Behera<sup>3</sup>, Mark G Jones<sup>4</sup></i> <sup>1,2</sup> IIT, India, <sup>3</sup> VIT University, India, <sup>4</sup> The University of Newcastle, Australia	<b>3D Modelling of Indentation Rolling Resistance</b> <i>Paul Munzenberger<sup>1</sup> and Craig Wheeler<sup>2</sup></i> <sup>1</sup> ASPEC Engineering, Australia, <sup>2</sup> The University of Newcastle, Australia	<b>The Effects of Varied Temperature when Conducting AS4156.6 Dustiness Testing</b> <i>Ian Frew<sup>1</sup>, David B Hastie<sup>1</sup>, John Webb<sup>1</sup>, Renhu Pan<sup>2</sup></i> <sup>1</sup> University of Wollongong, Australia, <sup>2</sup> Fujian Longking Co Ltd, China	<b>Interstitial Particle Liquid Bridge Formation and its Breakage by Vibration</b> <i>Jian Chen, Kenneth Williams, Jie Guo</i> The University of Newcastle, Australia

**12:20 - 1:45 Lunch Break: sponsored by BCS**



Afternoon

<p><b>Session 2</b></p>	<p><b>Pneumatic &amp; Hydraulic Conveying</b> Boulevard Room 1</p>	<p><b>Belt Conveying - Design</b> Boulevard Room 2</p>	<p><b>Biomass, Energy &amp; Environment</b> Paradise Room 2 &amp; 3</p>	<p><b>Transportation &amp; Logistics</b> Boulevard Room 2</p>
<p><b>Session Chair</b></p>	<p>Avi Levy</p>	<p>Craig Wheeler</p>	<p>Peter Wypych</p>	<p>Eric Lau</p>
<p><b>1:45 - 2:10</b></p>	<p><b>Thermal Plant Dry Fly Ash Evacuation and Transportation System - Challenges and Troubleshooting</b>  <i>Vijay K. Agarwal<sup>1</sup>, I. K. Rajdeva<sup>2</sup> and Ujjwal Chowdhury<sup>3</sup></i>  <sup>1</sup>Indian Institute of Technology Delhi, India, <sup>2</sup>Ex-NTPC, India, <sup>3</sup>NTPC, India</p>	<p><b>The Way to Reduce to Selecting Breaking Strength for Conveyor Belt: From Maximum Tension to Maximum Stress</b>  <i>Bo Wang<sup>1</sup>, Weigang Song<sup>1</sup>, Yong Gao<sup>2</sup>, Mengjie Zhao<sup>1</sup></i>  <sup>1</sup>Northeastern University, Shenyang, China, <sup>2</sup>Northern Heavy Industries Co, LTD, Shenyang, China</p>	<p><b>Prediction of Dust Emissions – An Experimental-Numerical Approach</b>  <i>Nadja Schwindt<sup>1</sup>, Daniel Schulz<sup>2</sup>, Harald Kruggel-Emden<sup>2</sup>, Eberhard Schmidt<sup>1</sup></i>  <sup>1</sup>University of Wuppertal, Germany, <sup>2</sup>Technische Universität Berlin, Germany</p>	<p><b>Design and Optimisation for Shiploaders</b>  <i>Jiahe Shen<sup>1</sup>, Gian Naldi<sup>2</sup>, Dennis Pomfret<sup>2</sup>, Craig Wheeler<sup>1</sup></i>  <sup>1</sup> The University of Newcastle, Australia <sup>2</sup> Port Waratah Coal Services, Australia</p>
<p><b>2:10 - 2:35</b></p>	<p><b>Deduction of Material Characteristics from the Relation between Slug Velocity and Stationary Layers</b>  <i>Oqanjn Orazovic<sup>1</sup>, Aleksej Lavrinec<sup>1</sup>, Kenneth Williams<sup>1</sup>, Mark Jones<sup>1</sup>, George Klinzing<sup>2</sup></i>  <sup>1</sup>The University of Newcastle, Australia, <sup>2</sup>University of Pittsburgh, USA</p>	<p><b>Belt Conveying Workshop</b>  Boulevard Room 2</p>	<p><b>The Effects of Reverse Jet Pulse Over-Pressurisation on Dust Filter Performance</b>  <i>Richard J Farnish, Abdelhafid Beladi, Stefan Zigan</i>  University of Greenwich, UK</p>	<p><b>Upgrading Rolleston Coal Handling Facility</b>  <i>Lindsay Ford<sup>1</sup>, Russell Jackson<sup>2</sup>, Brad A. Allsopp<sup>3</sup></i>  <sup>1</sup> Glencore Coal Assets, Australia, <sup>2,3</sup> WSP Australia</p>
<p><b>2:35 - 3:00</b></p>	<p><b>Bends Pressure Drop in Horizontal and Vertical Dilute Phase Pneumatic Conveying Systems</b>  <i>Naveen M. Tripathi, Dimitri Portniakov, Avi Levy, Haim Kalman</i>  Ben-Gurion University of the Negev, Israel</p>	<p><b>Belt Conveying Workshop</b>  Boulevard Room 2</p>	<p><b>Challenges and Solutions of Dust Suppression During Bulk Materials Unloading into intake Hoppers</b>  <i>Olha Lyeskakova</i>  Mideco, Australia</p>	<p><b>A Multi-Agent System with Reinforcement Learning for Railway Traffic Management</b>  <i>Allan M. C. Bretas<sup>1</sup>, Alexandre Mendes<sup>1</sup>, Martin Jackson<sup>2</sup>, Riley Clement<sup>2</sup>, Claudia Sanhueza<sup>1</sup>, Stephan Chalup<sup>1</sup></i>  <sup>1</sup> The University of Newcastle, Australia <sup>2</sup> Hunter Valley Coal Chain, Australia</p>
<p><b>3:00 - 3:30</b></p>	<p style="text-align: center;"><b>Afternoon Tea (reception area)</b></p>			
<p><b>Session 3</b></p>	<p><b>Pneumatic &amp; Hydraulic Conveying</b> Boulevard Room 1</p>	<p><b>Biomass, Energy &amp; Environment</b> Paradise Room 2 &amp; 3</p>		
<p><b>Session Chair</b></p>	<p>George Klinzing</p>	<p>Dusan Ilic</p>		
<p><b>3:30 - 3:55</b></p>	<p><b>Velocities and Pressures Related to Single Plug Flow in Horizontal Pipe</b>  <i>Anubhav Rawat, Haim Kalman</i> Ben-Gurion University of the Negev, Israel</p>	<p><b>Dust Workshop</b> Paradise Room 2 &amp; 3</p>		
<p><b>3:55 - 4:20</b></p>	<p><b>The Pressure Relationships of the Particle Exchanges in Horizontal Slug Flow Pneumatic Conveying</b>  <i>Oqanjn Orazovic<sup>1</sup>, Aleksej Lavrinec<sup>1</sup>, Kenneth Williams<sup>1</sup>, Mark Jones<sup>1</sup>, George Klinzing<sup>2</sup>, W. Clarke<sup>3</sup></i>  <sup>1</sup>The University of Newcastle, Australia, <sup>2,3</sup>University of Pittsburgh, USA</p>	<p><b>Dust Workshop</b> Paradise Room 2 &amp; 3</p>		
<p><b>4:20 - 4:30</b></p>	<p style="text-align: center;"><b>Conference Closure</b> Boulevard Room 1</p>			