

07:00 REGISTRATION

08:00 Welcome and introduction *RJ Jewell, Paste 2018 Seminar Chair, Australian Centre for Geomechanics, Australia*

## KEYNOTE ADDRESS AND THICKENING AND FILTRATION (1)

CHAIR *AB Fourie, The University of Western Australia, Australia*

TECHNICAL SESSION SPONSOR

08:10 KEYNOTE: Improving the sustainability of residue management practices *D Cooling, Alcoa Corporation, Australia*08:55 How thick is thick enough? *LD Munro, DD Smirk, Residue Solutions Pty Ltd, Australia*09:15 High-density thickening for large production rates: main challenges *S Barrera, Delfi Ingenieria SpA, Chile; J Engels, Tailpro Consulting, Chile*

09:35 Discussion

09:45 MORNING BREAK

## THICKENING AND FILTRATION (2)

CHAIR *L Boxill, BASF Canada Inc., Canada*

TECHNICAL SESSION SPONSOR

10:30 Mexican iron ore mine – surface paste tailings system development: a case study *L Botham, Clifton Associates Ltd., Canada; J Johnson, WesTech Engineering, Inc., USA*10:50 FLSmidth Colossal filter – demonstration plant *J Chaponnel, T Wisdom, FLSmidth USA Inc., USA*11:10 Tailings filtration: risk reduction through understanding and designing for variability *RG de Kretser, Acclarium Tailings and Solid-liquid Separation Consulting, Australia*11:30 Performance optimisation of paste thickening at the Yara Siilinjärvi plant *E Ruhanen, Yara Siilinjärvi, Finland; M Kosonen, S Kauvosaari, B Henriksson, Outotec Oyj, Finland*

11:50 Discussion

12:00 LUNCH – POSTER SESSIONS AT 12:30

LUNCH SPONSOR



## DEPOSITIONAL PRACTICES AND EXPERIENCES

CHAIR *M Davies, Teck Resources Ltd., Canada*

TECHNICAL SESSION SPONSOR

13:20 Some comments on thickened tailings and beach slopes *TG Fitton, Fitton Tailings Consultants, Australia*13:40 Understanding factors affecting the stability of inline polymer-amended tailings *A Costine, F Benn, P Fawell, CSIRO Mineral Resources, Australia; M Edraki, T Baumgartl, Sustainable Minerals Institute, Australia; J Bellwood, BASF plc, UK*14:00 A geological principle for the density of thickened tailings *D Reid, The University of Western Australia, Australia; M Jefferies, formerly Golder Associates UK Ltd, UK*14:20 Yara pipeline transportation of thickened tailings *E Vlot, Weir Minerals Netherlands B.V., The Netherlands; M Riihimäki, Weir Minerals Netherlands B.V., Finland*

14:40 Discussion

14:50 AFTERNOON BREAK

## TRANSPORTATION (1)

CHAIR *A Paterson, Paterson & Cooke Consulting, South Africa*15:20 Non-invasive sensor network to map stationary bed heights and moving dunes along pipelines larger than NB150 *H Ilgner, C Kruger, Council for Scientific and Industrial Research, South Africa*15:40 A comparison between various pump systems for high flow rate tailings pipelines *H Krimpenfort, FELUWA Pumpen GmbH, Germany*16:00 Effect of additives on suspension pipe flow *LJW Graham, G Short, A Chryss, K Constanti-Carey, J Wu, CSIRO Mineral Resources, Australia*16:20 Shear settling in laminar open channel flow: analytical solution, measurements and numerical simulation *AM Talmon, Deltares and Delft University of Technology, The Netherlands; L Sittoni, E Meshkati Shahmirzadi, JIJ Hanssen, Deltares, The Netherlands*

16:40 Discussion

16:50 DAY ONE CLOSE

## KEYNOTE ADDRESS AND BEACH PROFILES

CHAIR *F Schoenbrunn, FLSmidth USA Inc., USA*

TECHNICAL SESSION SPONSOR

Outotec

- 09:00 KEYNOTE: Beach prediction experience to date: further development and review of the stream power-entropy approach *Gl McPhail, Water, Waste and Land Australia Pty Ltd, Australia*
- 09:45 Designing the Siilinjärvi thickened tailings storage facility *TG Fitton, Fitton Tailings Consultants, Australia; B Henriksson, Outotec Oyj, Finland; E Ruhanen, Yara Siilinjärvi, Finland*
- 10:05 Stochastic modelling of beach profiles including the influence of thickener performance *KD Seddon, B Pirouz, S Javadi, ATC Williams Pty Ltd, Australia*
- 10:25 Discussion
- 10:35 MORNING BREAK

## GEOTECHNICAL ASPECTS

CHAIR *P Fawell, CSIRO Mineral Resources, Australia*

TECHNICAL SESSION SPONSOR

ArmorPIPE<sup>®</sup>  
TECHNOLOGIES

- 11:10 Geotechnical effects of polymer treatment on tailings – state of knowledge review *D Reid, AB Fourie, The University of Western Australia, Australia*
- 11:30 Evaluating the shear resistance and ultimate dewatering performance of polymer-treated tailings *L Boxill, BASF Canada Inc., Canada; A Costine, P Fawell, CSIRO Mineral Resources, Australia; M Catling, BASF Corp., USA; J Bellwood, BASF plc, UK*
- 11:50 Assessment of self-weight consolidation of flocculated fluid fine tailings under various environmental conditions *B Fisseha, GW Wilson, University of Alberta, Canada; P Simms, Carleton University, Canada*
- 12:10 Case study – SIMEC Mining Big Baron Pit successful tailings dewatering and management using WaterShed polymer *F Verdoorn, B Owens, SIMEC Mining, Australia; K Gibbs, Nalco Water, Australia*
- 12:30 Discussion
- 12:40 Presentation from BASF, Paste 2018 Seminar Principal Sponsor *TBA, BASF plc, UK*

12:50 LUNCH

## TRANSPORTATION (2)

CHAIR *P Slatter, ATC Williams Pty Ltd, Australia*

- 13:50 Pulsation-free hydraulic driven swing tube piston pump *E Vlot, R Keijers, Weir Minerals Netherlands B.V., The Netherlands*
- 14:10 Some observations regarding non-Newtonian turbulent flow and transition, especially in relation to the Wilson–Thomas (1985) theory *AD Thomas, Slurry Systems Pty Ltd, Australia*
- 14:30 Tailings transport on high yield stress requirements: turbulent or laminar flow? *R Yáñez, C Tapia, Golder Associates S.A., Chile*
- 14:50 Effect of particle size, blend ratio and some selective bio-additives on rheological behaviour of high concentration iron ore slurry *PK Senapati, JK Pothal, R Barik, CSIR-Institute of Minerals and Materials Technology, India; R Kumar, National Mineral Development Corporation, India; SK Bhatnagar, Ministry of Steel, India*
- 15:10 Discussion

15:20 AFTERNOON BREAK

## BACKFILL

CHAIR *D Stone, Minefill Services Inc., USA*

- 15:50 Garpenberg mine – 10 years of mining with paste backfill *C Eriksson, A Nyström, Boliden Mines, Sweden*
- 16:10 Harvesting tailings from an active tailings storage facility: success and challenges, Frog's Leg mine, Evolution Mining *V Gopalakrishnan, Evolution Mining, Australia; T Nester, J Mgumbwa, Operational Geotechs Pty, Australia; W Holtzhausen, Evolution Mining, Australia*
- 16:30 Application of clay-rich full plant tailings paste backfill technology *AX Wu, J Wang, S Wang, University of Science and Technology Beijing, China; X Yang, F Zhou, Jiashi Tonghui Copper Mine Co., Ltd, China*
- 16:50 Discussion
- 17:00 DAY TWO CLOSE

\*The programme is subject to change. For updates, please visit [www.paste2018.com](http://www.paste2018.com)

## SEMINAR DINNER - WEMBLEY GOLF COURSE

THURSDAY 12 APRIL 2018 | AMBROSE ROOM, WEMBLEY GOLF COURSE, WESTERN AUSTRALIA

Venue: Ambrose Room, Wembley Golf Course  
200 The Boulevard, Wembley Downs, WA 6019

Date: Thursday 12 April 2018

Time: 6:30pm – 10pm

Surrounded by lush green lawns and natural bushland, the Ambrose Room at the Wembley Golf Course is the setting for the Paste 2018 Seminar Dinner, allowing delegates and guests to enjoy a relaxed networking opportunity with a view.

Spaces are limited. Register via the form on the back page or visit [www.paste2018.com](http://www.paste2018.com)



## KEYNOTE ADDRESS AND OPERATIONAL EXPERIENCES

CHAIR *F Sofrà, Rheological Consulting Services Pty Ltd, Australia*

TECHNICAL SESSION SPONSOR



- 09:00 KEYNOTE: International tailings management guidelines: recent developments *M Davies, Teck Resources Ltd., Canada*
- 09:30 Operational challenges of thickened tailings planning at Centinela Mine *CA Calderón, EH Cortés, Minera Centinela, Chile; JA Martínez, MA Palape, MineBridge Software, Chile; CA Cooper, MineBridge Software, Canada*
- 09:50 Successful transitioning of a conventional slurry tailings storage facility for central thickened discharge *DA Accadia, FW Gassner, Golder Associates Pty Ltd, Australia*
- 10:10 Discussion
- 10:20 MORNING BREAK

## OPERATIONS AND OPTIONS

CHAIR *D Reid, The University of Western Australia, Australia*

TECHNICAL SESSION SPONSOR



- 10:50 Characterisation of unsaturated geotechnical properties of filtered magnetite tailings in a dry stack facility *N Amoah, Karara Mining Ltd, Australia; W Dressel, Wave International, Australia; AB Fourie, The University of Western Australia, Australia*
- 11:10 Implementation of spigot discharge systems for high-density tailings at Sierra Gorda Sociedad Contractual Minera, Chile *J Engels, Tailpro Consulting, Chile; H Gonzalez, G Aedo, Sierra Gorda Sociedad Contractual Minera, Chile; GI McPhail, Water, Waste and Land Australia Pty Ltd, Australia*
- 11:30 Analysis of dewatering and desaturation of generic field deposition scenarios for thickened tailings *S Qi, P Simms, Carleton University, Canada*
- 11:50 Dewatering options for management of fine gold tailings in Western Australian Goldfields *JJ Moreno, S Kendall, SRK Consulting Australasia Pty Ltd, Australia; A Ortiz, Paterson & Cooke Australia Pty Ltd, Australia*
- 12:10 Discussion
- 12:20 LUNCH

## NEW DEVELOPMENTS (1)

CHAIR *GI McPhail, Water, Waste and Land Australia Pty Ltd, Australia*

- 13:20 Tailings dewatering by pressure filtration: process optimisation and design criteria *F Kaswalder, D Cavalli, Aqseptence Group Srl, Italy; A Hawkey, Diemme Filtration, Australia; A Paglianti, University of Bologna, Italy*
- 13:40 A conceptual cost comparison of alternative tailings disposal strategies in Western Australia *A Carneiro, AB Fourie, The University of Western Australia, Australia*
- 14:00 Imaging and monitoring tailings dam walls with ambient seismic noise *T de Wit, G Olivier, Institute of Mine Seismology, Australia*
- 14:20 GeoWaste™ – continuous co-mingled tailings for large-scale mines *T Wisdom, FLSmidth USA Inc., USA; M Jacobs, Goldcorp Inc., Canada; J Chaponnel, FLSmidth USA Inc., USA*
- 14:40 Discussion
- 14:50 AFTERNOON BREAK

## NEW DEVELOPMENTS (2)

CHAIR *TG Fitton, Fitton Tailings Consultants, Australia*

- 15:20 Operational strategies to improve paste plant performance *J Palmer, Outotec Pty Ltd, Australia*
- 15:40 Pitfalls in interpretation of cone penetration test data recovered from unsaturated geomaterials *AR Russell, UNSW Sydney, Australia; D Reid, The University of Western Australia, Australia*
- 16:00 Modern polyethylenes for wear and scaling applications *E Lakous, Pipe and Buoy Pty Ltd, Australia*
- 16:20 Discussion
- 16:30 Closing address *RJ Jewell, Paste 2018 Seminar Chair, Australian Centre for Geomechanics, Australia*
- 16:45 DAY THREE CLOSE

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## POSTER SESSION | 12:30 – 13:10 WEDNESDAY 11 APRIL

	Poster no.
Compressive strength behaviour of sulphur tailings paste backfill: effects of binders and additives <i>AX Wu, GZ Jiang, Y Wang, YM Wang, HJ Wang, C Li, University of Science and Technology Beijing, China</i>	1
Tailings beach slopes as a dimensionless parameter of non-Newtonian flows <i>T Errázuriz, Golder Associates S.A., Chile</i>	2
Case study: project start-up for thickened graphite tailings, storage and water recovery strategies <i>A Chafy, M Tidswell, Syrah Resources Lda, Mozambique; C Lane, Land &amp; Marine Geological Services Pty Ltd, Australia</i>	3