



[#ComputationalModelling19](#)

Monday June 10th

17.00-18.00 Welcoming wine and cheese function and pre-registration (accompanying guests welcome)

Tuesday June 11th

08.15 Registration desk opens
Tea, coffee and fruit juice

09.00 Opening Remarks
J. Wills (MEI, UK)

09.15 *Technical Session 1*
Chairmen: B.I. Pålsson (Luleå University of Technology, Sweden) and L. Cisternas (Universidad de Antofagasta, Chile)

09.15 **Keynote Lecture: Recent developments and future of modelling in mineral processing using particle methods**
P. Cleary (CSIRO Data61, Australia)

10.00 **Mineral processing simulators: state-of-the-art and future challenges**
J. Segura-Salazar and P.R. Brito-Parada (Imperial College, UK)

10.30 Coffee

11.15 **Some limitations and disadvantages of linear circuit analysis**
L.A. Cisternas, R. Acosta-Flores (Universidad de Antofagasta, Chile) and E.D. Gálvez (Universidad Católica del Norte, Chile)

11.45 **Particle-induced wear simulator in complex moving geometries**
L. Ip, J.R. Percival, M. Piggott and S.J. Neethling (Imperial College, UK)

12.15 **Stochastic Discrete Element Modelling of granular filling processes for industry application: can we formulate a standardized approach?**
S. Kirsch (Robert Bosch Packaging Technology B.V., The Netherlands and Technical University Dresden, Germany)

12.45 Lunch

14.00 *Technical Session 2*
Chairman: M.P. Schwarz (CSIRO Mineral Resources, Australia)

14.00 **Tailoring ball mill feed size distribution to optimise product size distribution for leaching purposes**
N. Chimwani, T. Mohale (University of South Africa, South Africa) and M. Bwalya (University of Witwatersrand, South Africa)

14.30 **Modelling of a stirred media mill including the physical interactions between pulp, charge and mill structure**
S. Larsson, B.I. Pålsson, M. Parian and P. Jonsén (Luleå University of Technology, Sweden)

15.00 **A study of how mill end-liners are affected by mode of mill operation using DEM**
M. Bwalya (University of Witwatersrand, South Africa) and N. Chimwani (University of South Africa, South Africa)

15.30 **Procedure for quantitative evaluation of mineral liberation**
M.S. Madiba, F.K. Mulenga and D. Hildebrandt (University of South Africa, South Africa)

16.00 **Traversing a tumbling mill: an ore particle's perspective**
O. Ogunmodimu, D. Weatherley and M.S. Powell (JKMRC, Australia)

16.30 Coffee

17.30 Optional guided walk of Falmouth Coastal path, finishing with drinks at Chain Locker Inn. Meet on sea-front outside Falmouth Hotel. Accompanying guests welcome

Wednesday June 12th

- 08.00 Registration desk opens
Tea, coffee and fruit juice
- 08.30 *Technical Session 3*
Chairmen: S. Neethling (Imperial College, UK) and C. Bergmann (Mintek, South Africa)
- 08.30 **A review on correction methods to solve limited representativeness in mineralogical analysis of measured liberation data**
M.S. Madiba, F.K. Mulenga and D. Hildebrandt (University of South Africa, South Africa)
- 09.00 **The effect of regrinding on the design of flotation circuits**
L.A. Cisternas, R. Acosta-Flores (Universidad de Antofagasta, Chile) and E.D. Gálvez (Universidad Católica del Norte, Chile)
- 09.30 **Direct numerical simulation of collisions between particles and bubbles in homogeneous isotropic turbulence**
Dongdong Wan (Shandong University and Southern University, China), Songying Chen (Shandong University, China), Lian-Ping Wang and Guichao Wang (Southern University of Science & Technology, China)
- 10.00 **Modelling and measurement of multi-phase hydrodynamics of Outokumpu flotation cell**
M.P. Schwarz, P.T.L. Koh, J. Wu, B. Nguyen and Y. Zhu (CSIRO Mineral Resources, Australia)
- 10.30 Coffee
- 11.15 **CFD multiphase investigation of a phosphate flotation cell**
A. Hadane (Mohammed V University in Rabat and Mohammed 6th Polytechnic University, Morocco), L. Khamar (Mohammed 6th Polytechnic University and Sultan Moulay Slimane University, Morocco), S. Benjelloun (Mohammed 6th Polytechnic University, Morocco) and A. Nounah (Mohammed V University in Rabat, Morocco)
- 11.45 **Design of polymetallic flotation circuit based on optimization**
L.A. Cisternas and Y.L. Botero (Universidad de Antofagasta, Chile)
- 12.15 **Short range hydrodynamic effects on the bubble-particle collision efficiency in mineral flotation systems**
M.P. Schwarz, P. Witt (CSIRO Mineral Resources, Australia), S. Li, Y. Feng and C. Sun (University of Science and Technology, China)
- 12.45 Lunch
- 14.00 *Technical Session 4*
Chairman: P. Cleary (CSIRO Data61, Australia)
- 14.00 **Atomistic simulations of surface physical-chemistry phenomena applied to froth flotation**
Y. Foucaud, M. Badawi, L. Filippov, I. Filippova and S. Lebègue (Université de Lorraine, France)
- 14.30 **Model predictive control of a rotary kiln for fast electric demand response**
D. Machalek and K. Powell (University of Utah, USA)
- 15.00 **Development of a coupled DEM-SPH method to simulate agglomeration and spheronization of powder mixture**
A. Eslamian, C. Peng and E. Monaco (ESS Engineering Software Steyr GmbH, Austria)
- 15.30 **A novel predictive automation methodology for mine de-watering and intermediate product transportation interacting with the smart grid**
D. Machalek, A. Young, P. Rogers and K. Powell (University of Utah, USA)
- 16.00 **A novel approach to thickener rake motor sizing using CFD**
J. Jacobs and C. Kujawa (Paterson & Cooke Ltd, USA)
- 16.30 Summary and closing thanks
A.J. Wills (MEI, UK)
- 16.40 Farewell wine (and coffee) function