

**19th International Conf. on Transport and Sedimentation of Solid Particles
Cape Town, 24-27 September, 2019**

Conference Preliminary Programme, (June 2019)

24 September 2019 – Tuesday

08.30	09.30	Registration		
09.30	09.45	Opening session – Chair: Rainer Haldenwang Welcome: Jerzy Sobota (Wroclav University) and Chris Nhlapo (Vice Chancellor CPUT) Technical Session I – Chair: Rainer Haldenwang	Hydraulic Conveying I	Pres.1-3
09.45	10.10	A Thomas: Deposition of Wide Size Distribution, Bingham Plastic Slurries in Turbulent Pipe Flow	No. 1	
10.10	10.35	J Furlan, R Visintainer, A Sellgren, V Matousek and L Pullum: Pipe loop testing of a mixture containing fine, dense solids with magnetic properties	No.	
10.35	11.00	V Matoušek and S Zrostlík: Evaluation of local turbulent support of particles in intense transport of contact load	No.	
11.00	11.30	Coffee Break		
		Technical Session II – Chair: Jerzy Sobota	Hydraulic Conveying II	Pres.4-6
11.30	11.55	T Jones and J Ganeshalingam: Centre of Concentration in Particle-Bearing Liquids	No. 2	
11.55	12.20	P Slatter: The design of hydro_transport systems to facilitate sustainable industrial practice	No.	
12.20	12.45	V Alexandrov and I Trufanova: The Kachkanarsky MCC iron ore processing tailings slurry hydraulic transport parameters	No.	
12.45	13.35	Lunch break		
		Technical Session III – Chair: Vaclav Matousek	Hydraulic Conveying and Case Studies	Pres.7-10
13.35	14.00	G Stozik, and R Jendruš: Operation of gravitational hydrotransport pipeline systems in coal mines	No. 3	
14.00	14.25	GJF Smit, GPJ Diedericks and J Lencart e Silva: Evaluation of modelling methodologies to simulate dredge disposal: a case study	No.	
14.25	14.50	PK Senapati, JK Pothal, R Barik, CBN Roone Pradhan, R Kumar, S Basu: Prediction of pressure drop and optimization of operational pipe flow parameters for hydraulic transportation of concentrated iron ore fines slurries	No.	
14.50	15.15	N Heywood: A review of frictional pressure gradient reduction for horizontal laminar pipe flow of non-Newtonian slurries with gas injection	No.	
15.15	15.45	Coffee Break		
		Technical Session IV – Chair: Pavel Vlasak	Dredging and Fittings losses	Pres.11-14
15.45	16.10	SA Miedema, C Van Rhee, B Nieuwboer: Scale laws for spillage in cutterheads in dredging	No. 4	
16.10	16.35	M Khahledi, R Haldenwang, V Fester and R Chhabra: Non-Newtonian fluids discharge through circular and square orifices from a tank	No.	
16.35	17.00	A Bartosik, and T Wojtyniak: Prediction of frictional losses in slotted sieves	No.	
17.00	17.25	T Mohajane, M Khahledi, R Haldenwang, V Fester and R Chhabra: Effect of round orifice aspect ratios on non-Newtonian fluids discharge from tanks	No.	
17.30	19.30	Welcome Reception – Hotel School (conference venue)		

25 September 2019 – Wednesday

8.00		<i>Registration</i>		
		Technical Session V – Chair: Paul Slatter	Hydraulic Conveying III	Pres.15-18
8.20	8.45	M Jovanović and V Matoušek: The effect of longitudinal slope on solids transport and friction in particle-laden flow above stationary deposit in pipe	No. 5	
8.45	9.10	A Thomas, S Whitton and N Cowper: The Effect of Entrained Micro Bubbles of Air on Slurry Pipeline Flow Behaviour and Design	No.	
9.10	9.35	J Xia, H Ren and Y Fu: Investigation of pressure variation in long distance slurry pipelines through transport cycle	No.	
9.35	10.00	V Matoušek, Z Chára, J Konfršt, J Krupička, and P Vlasák: Anomalous pressure drop in settling slurry flow through pipe of negative slope	No.	
10.00	10.30	<i>Coffee break</i>		
		Technical Session VI – Chair: Arno Talmon	Instrumentation	Pres.19-22
10.30	10.55	A Adler, A Sutherland, and R Kotze: Location of bed interface in settling slurry pipe flow using ERT	No. 6	
10.55	11.20	S Beg, S Bhaskar, M Mohsin, DR Kaushal: Experimental investigation of velocity distribution inside invert trap using 2D PIV method	No.	
11.20	11.45	R Yan, R Sharma, H Viumdal and S Mylvaganam: Soft-Sensing with ECT in particulate transport with focus on bubble characterization	No.	
11.45	12.10	V Berman, S Kril, P Vlasak and E Bournaski: Some aspects of using electro - diffusion method for diagnostics of kinematics structure of solid –liquid flow in pipelines	No.	
12.15	13.15	<i>Lunch</i>		
		Technical Session VII – Chair: Allan Thomas	Pneu-Hydr Conveying	Pres.23-26
13.15	13.40	H Kalman, D Portnikov, OG Gabrielibk and NM Tripathib: What do pneumatic conveying and hydraulic conveying have in common?	No. 7	
13.40	14.05	N Santaof, D Portnikov and H Kalman: Experimental study on particle velocity, acceleration length in pneumatic and hydraulic conveying systems	No.	
14.05	14.30	N Heywood and P Slatter: Deration of Centrifugal Pumps for non-Newtonian slurries	No.	
14.30	14.55	P Vlasak, Z Chara, V Matousek, M Kesely, J Krupicka and J Konfrst: Local concentration distribution of settling slurry flow in inclined pipe sections	No.	
14.55	15.25	<i>Coffee break</i>		
		Technical Session VIII – Chair: Pete Goosen	Modelling I	Pres.27-30
15.25	15.50	GV Messa, S Malavasi, J Zhang and SA Shirazi: Numerical prediction of the impact erosion produced by dense slurry jets	No. 8	
16.15	16.50	A Talmon: Mathematical analysis of channelisation in non-Newtonian laminar deposition flow	No.	
16.50	17.15	DD Silavwe, SG Wallis, and IC Brink: On the influence of numerical methods for the advection dispersion model on estimated longitudinal dispersion coefficients	No.	
17.25	17.50	C van Rhee and P Dobbe: CFD simulation of shear settling in Non-Newtonian Flow	No.	
18.00	18.45	Conference Committee meeting		
19.00	21.30	<i>Conference Dinner – Hotel School (Restaurant)</i>		

26 September 2019 – Thursday

Technical and Cultural Tour – Paterson & Cook laboratories and trip around Cape Peninsula including Cape Point.

27 September 2019 – Friday

8.00 **Registration**

Technical Session VIII – Chair: Nigel Heywood

Rheology
and Miscellaneous Pres.31-34

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|------|-------|--|-------|
| 8.20 | 8.45 | M Gruszczynski, J Błotnicki, S Czaban and T Tyminski: The effect of solid components on the rheological properties of copper ore tailings | No. 9 |
| 8.45 | 9.10 | HP Singh, AV Singh, and DJ Kaushal: Effect of chemical additive quick lime on the rheology of coking coal slurry | No. |
| 9.10 | 9.35 | B Zengeni, D Nekhavhambe and P Goosen: Sensitivity of non-Newtonian slurry viscous properties to temperature | No. |
| 9.35 | 10.00 | T Senfter, B Stern, M Senn, M Berger, M Pillei, A Bockreis, W Rauch, and M Kraxner: Field study on the removal of solid impurities in wastewater treatment plants by implementing a modified hydrocyclone | No. |

10.00 10.30 **Coffee break**

Technical Session IX – Chair: Trevor Jones

Sedimentation Pres.35-38

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| 10.30 | 10.55 | C Mc Leod, O Sawadogo, and G Basson: Optimization of sand trap and settler designs for efficient deposition of suspended sediment | No. 10 |
| 10.55 | 11.20 | K Kiringu, and G Basson: Removal of fine non-cohesive sediment by swirl/ vortex settling basin at small river abstraction works | No. |
| 11.20 | 11.45 | E Bournaski and I Ivanov: Suspended sediments and water flow of the Mehta River in Bulgaria | No. |
| 11.45 | 12.10 | G Basson, C Mc Leod, and L van der Spuy: Hydraulic design and physical model optimisation of sustainable river abstraction works on alluvial rivers with sediment management features for potable water supply in South Africa | No. |

12.15 13.15 **Lunch**

Technical Session X – Chair: Haim Kalman

Modelling II Pres.38-41

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| 13.15 | 13.40 | T Schouten, GH Keetles and C van Rhee: Suspended pipeflow with Openfoam | No. 11 |
| 13.40 | 14.05 | F Plewa, and G Strozik and M Popczyk: Prediction of flow parameters of mixtures for filling of longwall cavings in the light of laboratory measurements | No. |
| 14.05 | 14.30 | R Nsanzubuhoro, B Maja, M Stander and P Goosen: Assessment of a two-layer model for laminar flow of slurries comprising of coarse fraction in non-Newtonian carrier fluid | No. |

14.30 15.00 **Coffee break**

Technical Session XI – Chair: Veruscha Fester

Hydraulic Conveying IV Pres.42-43

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|-------|-------|---|--------|
| 15.00 | 15.25 | S Beg and DR Kaushal: Experimental investigation of static settled concentration of multi-sized coking coal-water slurry | No. 12 |
| 15.25 | 15.50 | Y Levin, A Ullmann, D Portnikov and H Kalman: Simple Pick-up velocity measurements procedure and defining non-settling particles using Rheometer | No. |

15.50 16.00 **Conference Closing – Chair: Rainer Haldenwang**