Provisional Programme

Wednesday 6th June 2018

07:00 - 07:50  Conference registration – Alpine Meadows

07:00 - 08:00  Delegate’s breakfast – Chinook Restaurant

08:00 – 08:10  Conference Chairman Welcome
   Dr Tom Danielson, Conocophillips, USA

Tom Danielson has a BSc (University of Minnesota) and a PhD (University of Massachusetts), both in chemical engineering. Tom started his career at ConocoPhillips in 1991, in Conoco’s Production Research department; his career focus has been on multiphase flow and related flow assurance phenomena. Over the course of his career, Tom has written over 100 internal reports, and dozens of external papers for journals and conference proceedings. Tom has served as the technical monitor to both domestic and international JIPs, including the LEDAFlow JIP - a 16-year partnership between ConocoPhillips, Total, SINTEF, and Kongsberg Digital.

08:10 - 08:30  Opening Presentation
   J A R Muir, Retired BHR Group CEO, UK
So how did it all begin?

SESSION 1: Modelling in the Field – Part 1
SESSION CHAIRMAN; Professor Cem Sarica, TUFFP, The University of Tulsa, USA

08:30 - 09:00  Keynote Presentation
   Emeritus Professor, Khalid Aziz, Energy Resources Engineering, Stanford University, USA
Developments in Multiphase Flow in Pipes and the Impact of Jim Brill on this Field

09:00 - 09:25  Surveillance and optimization of unpiggable lines through real time modeling
   B L Keinath, S R Hickman, ExxonMobil, USA

09:25 - 09:50  A comprehensive engineering simulator for SAGD process optimization and real-time monitoring
   P Kalghatgi, D Erickson, D Golczynski, Wood Automation & Control, Flow Assurance and Process Solutions, USA

09:50 - 10:15  Pipeline management system provides virtual multi-phase flow metering to deepwater operations for operational decision-making
   O van Wolfswinkel, Schlumberger, The Netherlands; M Espeland, J Zhao, Schlumberger, Norway
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<th>Time</th>
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<td>10:15</td>
<td>Refreshment break – Exhibition room</td>
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| 10:45  | **SESSION 2: Diverse Multiphase**  
**SESSION CHAIRMAN; TBC**  
10:45 - 11:10 Experimental investigation of vertical downward two-phase flow in annulus  
*R P Coutinho, P J Waltrich, Louisiana State University, USA*  
11:10 - 11:35 Investigation of churn/annular and pseudo-slug flow characteristics before and after pipe elbows  
*A Asgharpour, P Zahedi, S A Shirazi, B S McLaury, The University of Tulsa, USA; R Vieira, MSI International Inc., USA; M Parsi, DNV GL North USA, Inc. – North America Oil & Gas, USA*  
11:35 - 12:00 Multiphase flow in flexible pipes: simulations and small scale experiments  
*J Vieiro, O J Nydahl, Norwegian University of Science and Technology, Norway; Z Wang, Southwest Petroleum University, China*  
12:00 - 12:05 Exhibitor’s presentation - Kongsberg  
12:05 – 13:00 Lunch – Glacier Salon  
13:00 - 13:30 **Keynote Presentation**  
Trevor John Hill, Flow Assurance Consultant, UK  
Research in multiphase flow developed into new global discipline of flow assurance - an oil industry perspective  
13:30 - 13:55 Studies of parameters that influence hydrate plugging tendencies in a gas condensate subsea tieback  
*Y Wang, C A Koh, L E Zerpa, Colorado School of Mines, USA*  
13:55 - 14:20 Evaluation of Anti-Agglomerant hydrate inhibitors in gas-dominated system under different flow regimes  
*A Sinquin, M Gainville, C Cassar, IFP Energies nouvelles, France; J Boxall, Chevron Australia Pty Ltd, Australia; D Estanga, Chevron Energy Technology Company, USA*  
14:20 - 14:45 Measurements of dispersant additive on hydrate/ice slurry transport  
*A Melchuna, A K Sum, Colorado School of Mines, USA; P Glénat, Total Exploration-Production, France; M Rivero, Total E&P Research and Technology, USA*  
14:45 – 14:50 Exhibitor’s presentation – Tridiagonal Solutions  
14:50 – 15:15 Refreshment break – Exhibition room  
15:15 – 16:40 **SESSION 4: Sand Transport and Erosion**  
**SESSION CHAIRMAN; Dr Ergun Kuru, University of Alberta, Canada**  
15:15 - 15:40 Measurements and modelling of spatial particle size distribution in a horizontal slurry pipeline  
*M Huard, K F Adane, A Fuhr, InnoTech Alberta, Canada*  
15:40 - 16:05 CFD simulations and experiments of sand erosion for liquid dominated multiphase flows in an elbow  
*T A Sedrez, Y R Rajkumar, S A Shirazi, The University of Tulsa, USA; K Sambath, H J Subramani, Chevron, USA*  
16:05 - 16:30 Threshold particle concentration in single-phase and multiphase flow sand transport in pipelines  
*S Sajeev, B S McLaury, S A Shirazi, The University of Tulsa, USA*  
16:30 - 16:55 Effect of particle size on the near wall turbulence characteristics and the critical velocity required for the particle removal from the sand bed deposited in horizontal pipelines  
*S K Arnipally, M M Hirpa, M Bizhani, E Kuru, University of Alberta, Canada*  
16:55 - 17:00 Exhibitor’s presentation – Schlumberger
Thursday 7th June 2018

07:00 - 08:00 Delegate’s breakfast – Chinook Restaurant

SESSION 5: Experimental
SESSION CHAIRMAN: TBC

08:00 - 08:30

Keynote Presentation
Emeritus Professor Yehuda Taitel, School of Mechanical Engineering, Tel-Aviv University, Israel
Flow in Multiple Parallel channels of evaporating fluid

08:30 - 08:55 Experimental investigation of two-phase flow regime in an inclined pipe
C Vieira, M Kallager, M Vassmyr, N La Forgia, Z Yang, Norwegian University of Science and Technology, Norway

08:55 - 09:20 Asymmetry issues in drag reduction experiments
L C Edomwonyi-Out, University College London, UK, P Angeli, Ahmadu Bello University, Nigeria

09:20 - 09:45 The effect of a surfactant on slugs in a flowline-riser system
E J Pronk, Delft University of Technology, The Netherlands; J H Ellepola, Shell Projects & Technology, The Netherlands; R A W M Henkes, Delft University of Technology and Shell Projects & Technology, The Netherlands

09:45 – 10:15 Refreshment break – Exhibition room

SESSION 6: Liquid Loading
SESSION CHAIRMAN: Dr Eduardo Pereyra, The University of Tulsa, USA

10:15 - 10:45 Invited Speaker Presentation
Gunnar Staff, Schlumberger Norway Technology Center, Norway
Understanding liquid accumulation in inclined pipes during ramp-down
G Staff, C Lawrence, Schlumberger Norway Technology Center, Norway; H Holm, Statoil ASA, Norway

10:45 - 11:00 Existence of slug flow in vertical co-current two-phase flow
D Roullier, H Karami, E Pereyra, C Sarica, The University of Tulsa, USA

11:10 - 11:35 Liquid loading in annuli, the effect of eccentricity
J M C van ‘t Westende, J Kurian, TNO, Heat Transfer and Fluid Dynamics, The Netherlands

11:35 - 12:00 Investigation of the effect of gas entrainment on slug characteristics in actual fields using the slug capturing technique
R I Issa, J Castagna, Multiphase Simulation Ltd, UK

12:00 - 12:25 A new method of predicting wellbore load up
R Shea, M Guner, G Yuan, Schlumberger, USA

12:25 - 13:30 Lunch – Glacier Salon
SESSION 7: Modelling in the Field – Part 2
SESSION CHAIRMAN; Professor Cem Sarica, TUFFP, The University of Tulsa, USA

P Dhoorjaty, D Erickson, R Kowta, Wood Automation & Control, USA

13:55 - 14:20 High CO₂ content effect on the flow of crude oils in production transient operations
M J Rempto, M A Pasqualette, E M G Fontalvo, J N E Carneiro, ISDB FlowTech, Brazil; R Fonseca, J R P Ciambelli, Petrobras, Brazil; S T Johansen, B T Løvfall, SINTEF Industry, Norway

14:20 - 14:45 Instantaneous liquid and gas leakage flow during plunger lifting process in vertical wells
K Zhao, B Bai, Xi’an Jiaotong University, China

14:45 - 15:10 Multiphase optimization of gas kick transient characteristics in drilling applications
H Karami, University of Oklahoma, USA; B Akbari, Louisiana State University, USA

15:10 - 15:40 Refreshment break – Exhibition room

SESSION 8: Flow Assurance – Part 2
SESSION CHAIRMAN; Dr Bahadir Gokcal, ConocoPhillips, USA

13:40 - 16:10

Invited Speaker Presentation
Jefferson L Creek, Colorado School of Mines, USA
Slurry Flow of Hydrates as a Multiphase Flow Problem

16:10 - 16:35 Experimental study of wax deposition under two-phase gas-oil stratified flow
Y Chi, N Daraboina, C Sarica, The University of Tulsa, USA; S Zhou, The University of Tulsa, USA and Changzhou University, PR China

16:35 - 17:00 Wax deposition testing in a large-scale flow loop
R Venkatesan, Chevron Energy Technology Company, USA; R Tanti, V Subramani, D Vedapuri, Tridiagonal Solutions Inc., USA; E Akparu, K Johnson, Chevron Africa and Latin America Exploration and Production Company, USA

19:00

Conference Dinner
The Bison Restaurant & Terrace

Dress code – smart casual

Dinner Drinks sponsored by;
Friday 8th June 2018

07:00 - 08:00  Delegate’s breakfast – Chinook Restaurant

SESSION 9: Experiments in Modelling
SESSION CHAIRMAN: TBC

08:00 – 08:30  

**Keynote Presentation**
Emeritus Professor René Oliemans, Director Multiphase Flow BV, TU Delft, The Netherlands
The history of multiphase pipe flows science and technology. Research response to industrial pull.

08:30 - 08:55  
Liquid entrainment in gas at high pressure. Part 2: experimental data and model improvement
F Viana, Southwest Research Institute®, USA; I Mantilla, Chevron Energy Technology Company, USA; R Mohan, O Shoham, The University of Tulsa, USA

08:55 - 09:00  
Stretch break

SESSION 10: Viscosity Effects
SESSION CHAIRMAN: TBC

09:00 - 09:25  
Pseudo slug flow in viscous oil systems – experiments and modelling with LedaFlow
J Kjølaas, I E Smith, C Brekken, SINTEF, Norway

09:25 - 09:50  
Experimental and modelling study of the wall shear stress profile in horizontal pipes for highly viscous two-phase slug flow
T Kim, E Pereyra, C Sarica, The University of Tulsa, USA

09:50 – 10:15  
Refreshment break – Exhibition room

SESSION 11: Multiphase Modelling
SESSION CHAIRMAN; Mack Shippen, Schlumberger, USA

10:15 - 10:45  

**Invited Speaker Presentation**
Omar K. Matar, Imperial College London, UK
(One possible) future of multiphase flow modelling and simulation

10:45 – 11:10  
Thermal behavior in wells
T J Danielson, B Gokcal, ConocoPhillips Co., USA

11:10 – 11:35  
Numerical simulation of roll waves in pipelines using the two-fluid model
B Sanderse, S Dubinkina, Centrum Wiskunde & Informatica, Amsterdam, The Netherlands; S Misra, C W Oosterlee, Centrum Wiskunde & Informatica, Amsterdam, and Delft University of Technology, The Netherlands; R A W M Henkes, Delft University of Technology and Shell Technology Centre Amsterdam, The Netherlands

11:35 – 12:00  
Onshore gathering systems: multiphase flow modeling accuracy challenges
E Kempton, G Hegde, E Smith, Assured Flow Solutions, USA

12:00  
Conference close with Chairman’s comments
Lunch – Glacier Salon

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A company registered in England No 07274578