Conference Programme

Sunday 7th September 2025

17:00 – 18:30 **Early Evening Conference Registration**

Meet your peers in the hotel lobby before the Conference and collect your delegate pack.

Monday 8th September 2025

09:00 – 10:00 **Conference Morning Registration with refreshments in the exhibition room**

Chairman's Welcome

Ian Kopperman, Managing Director, Pontem Analytics, UK

10:00 – 10:05

Ian has over 20 years of worldwide oil and gas project management and technical experience His wide offshore and onshore project experience encompasses flow assurance and production chemistry, along with process engineering, and project management. He has proven capabilities in business growth, management and performance improvement with success in leading, and building, dynamic engineering and technical teams and delivering innovative solutions for business expansion.

Ian is delighted to chair the conference for his second time as it looks to broaden the content as we move towards the digital world.

10:05 – 10:10 ***In memoriam*** **– Alex Hunt, by Dr Martin Watson, Chief Flow Assurance Engineer, Wood PLC, UK**

Opening Keynote: Diogo Almeida, Head of Business Development, Industrial – Hydrogen & Renewable Fuels, Galp, Portugal

"Galp - Navigating through energy transition"

10:10 – 10:50

Diogo Almeida holds a Master's degree in Chemical Engineering from Instituto Superior Técnico in Lisbon. He has 20 years of experience at Galp, working across the energy ecosystem. Over the years, he has taken on various roles in the oil value chain and corporate strategy. Since June 2021, he has led Hydrogen & Renewable Fuels Business Development. In this role, he focuses on driving Galp's energy transition by developing green hydrogen and low-carbon fuel projects.

Session 1: Experimental

Session chair: Ian Kopperman, Pontem Analytics, UK

10:50 – 11:15	**Experimental characterization of gas-liquid flow in steeply downward inclined pipes** *G. Ualiyeva, E. Ay Dilsiz, E. Pereyra, C. Sarica, R. Coutinho; The University of Tulsa, USA, J. Cai; ExxonMobil Upstream Integrated Solutions Company, USA*
11:15 – 11:40	**Cap bubble-to-slug and slug-to-churn flows transitions in gas-liquid vertical downward pipe flow** *A. Arabi, R. L. Höhn, Y. Stiriba, J. Pallares; Universitat Rovira i Virgili, Tarragona, Spain*
11:40 – 12:05	**Experimental study of liquid entrainment and accumulation curve in a high-pressure pipeline using real hydrocarbon fluids** *N.R. Kesana, H. Andersen, E. Grammeltvedt, P.S. Johansson; Equinor, Norway, A. Vestvik, O. Rinde; Gassco, Norway*
12:05 – 12:10	**Exhibitor presentation: Worley**

12:10 – 13:10 Lunch break

Sponsored by: Worley

Session 2: Slugging - Part 1

Session chair: Dr. Marco Montini, Eni, Italy

13:10 - 13:45	**Experimental study and modelling analysis of hydrodynamic forces on pipe bends in high-pressure multiphase flow** *A. M. Klinkenberg, S. Orre; Equinor, Norway, S. Belfroid; TNO, The Netherlands, A. S. Tijsseling; Eindhoven University of Technology, The Netherlands*
13:45 – 14:10	**Liquid loading in a gas production well** *R.S. Esteves, J.F.C Lorenzeti, T. R. Takahashi, V. A. P. Arraes, G. R. de Azevedo, M. L. de Matos, Petrobras, Brazil*
14:10 – 14:35	**Pressure instabilities in deep offshore production line – an application case to better understand the mechanisms** *J-B. Flutte, R. Khiari, C. Candelier, TotalEnergies, France*
14:35 – 14:40	**Exhibitor presentation: Kongsberg**

14:40 – 15:10 Refreshment break

Session 3: Data analytics, I.M., M.L .and A.I.

Session chair: Dr. Alessandro Speranza, KBC Engineering, UK

15:10 – 15:35	**Applicability of computer vision for flow characterization under slug and near-slug conditions** *M. E. Karagoz, C. Nogueira Sondermann, E. Pereyra, C. Sarica, The University of Tulsa, USA*
15:35 – 16:00	**Computational investigation of the performance of oil and water separation tanks** *D.-Jr Peng, Engineering Advanced Analysis, Offshore, Energy, Worley, NL; D. Ibrahimi, G.E. Varelis, Technology and Innovation, Offshore Energy, Worley, UK*
16:00 – 16:25	**A hybrid machine learning and mechanistic modeling of particulate transport in multiphase flow** *Q. Wang, M. Laghari, R. Vieira, S. A. Shirazi, S. Karimi The University of Tulsa, USA*

16:25 – 16:50	**Performance of subsea pseudo dry gas applications for a deepwater field with long tieback** *P. T. Bhaskoro; PETRONAS Research, Malaysia, J. Bt. Johar; PETRONAS Carigali, Malaysia, C. F. Torres; PETRONAS Reseaach, Malaysia, L. Wollebaek, H. Lutro, T. Vanvik; Turbulent Flux, Norway G. B. Falope; Heriot Watt University, UK, T. Wood, L. Liebana, L. Thomas; Worley UK, B.W. E. Norris; Department of Chemical Engineering, The University of Western Australia, Australia*
16:50 – 17:15	**Parametric study of oil-water dispersion separation in horizontal pipelines using a mechanistic model** *N. Evripidou, Cyprus University of Technology, Cyprus*

17:15 – 17:25 Stretch break

Session 4: Fluids and production chemistry - Part 1

Session chair: Dr. Dag Biberg, Technology Advisor, SLB, Norway

17:25 – 17:50	**A simulation tool for asphaltene deposition behavior in oil production systems** *E. Al-Safran, A. Aql; Petroleum Engineering, Kuwait University, M. Ghasemi; Stratum Reservoir, M. Shamsaldeen, B. Al-Hamad; Kuwait Oil Company, Kuwait*
17:50 – 18:15	**Reducing emulsion viscosity uncertainty impact at the design phase calculations of a deepwater heavy oil project** *V. Benito-Iglesias, C. van der Geest, P. Sanz-Sanz, S. Gómez-Álvarez, Repsol Technology Lab, Spain; Á. Vivas, Repsol E&P, Spain*
18:15 – 18:20	**Exhibitor presentation: SLB**

18:20 – 19:20 Welcome reception
Sponsored by: SLB

Tuesday 9th September 2025

Session 5: Hydrate management

Session chair: Dr. Shaun Johnston, Independent, UK

08:30 – 08:55	**Prevention of hydrate formation in WAG well injecting water in Brazilian pre-salt fields** *T. R. Takahashi, J. F. C. Lorenzeti, R. S. Esteves, V. A. P. Arraes; Petrobras, Brazil*
08:55 – 09:20	**Hydrate blockages in subsea deadlegs, field experience versus simulations** *A. Laruelle; A/S Norske Shell, Norway, B.-F. Chang, Shell Global Solutions, Myanmar; G. Groote, A/S Norske Shell, Norway; S.S. Manley, Shell Global Solutions International, The Netherlands, Ø. Koldal, Orlen Upstream Norway, Norway*
09:20 - 09:45	**Taking benefits of hydrates induction properties to move toward operational excellence – practical example of a cold restart in West of Africa** *C. Candelier, N. Lesage, T. Saint Pierre, TotalEnergies, France*
09:45 – 10:10	**Verification and validation of a hydrate deposition model against field cases for oil production wells** *J. P. S Oliveira, J.V. Barbosa, J. N. E. Carneiro; ISDB FlowTech, R. L. F. Castello Branco; HAI – Hybrid AI, E. Hayashi, C.V. Barreto; ESSS, R. L. A. Pinto; Petrobras, Brazil*
10:10 – 10:15	**Exhibitor presentation: ESSS O&G**

10:15 – 10:45 Refreshment break
Sponsored by: SLB

Session 6: Flow assurance

Session chair: Terry Wood, Director, Pipelines and Subsea and Flow Assurance SME, Worley, UK

10:45 – 11:10	**Flow Assurance enabling the startup of a large deepwater offshore production system** *C. Garcia, V. Sinha, S. Wang, D. Penmetsa, Wood, Production Optimization, USA*
11:10 – 11:35	**Cold Flow – an innovative and aggressive design approach unlocking new era for flow assurance!** *C. Candelier, C. Drouilly, V. Richon, A. Fidel Dufour, C. Chalaron, TotalEnergies, France*
11:35 – 11:40	**Exhibitor presentation: Wood.**

11:40 – 12:40 Lunch break

Session 7: Slugging - Part 2

Session chair: Dr. Peter Sassan Johansson, Equinor, Norway

12:40 – 13:05	**Fatigue life assessment of an in-service subsea riser tower subjected to flow induced vibration** C. Candelier, J. Sarrasin, A. Cassot, TotalEnergies, France; B. Eidsvik, G. Ulland, Oceaneering, Norway; M. Lewis, Xodus Group, UK
13:05 – 13:30	**Performance of a new multiphase gravity separator inlet device under slug flow conditions** *E. Elsaadawy, Saudi Aramco, KSA*
13:30 - 13:55	**Flow instabilities in two-phase and three-phase flowline-riser systems** *J. Kjølaas, P. R. Leinan, SINTEF Industry, Norway; R. Belt, TotalEnergies S.E., Pôle d'Etudes et de Recherche de Lacq (PERL), France; V. Richon, TotalEnergies EP Norge AS, Norge; N. Passade-Boupat, TotalEnergies S.E., Pôle d'Etudes et de Recherche de Lacq (PERL), France*
13:55 – 14:00	**Exhibitor presentation: METIS Africa**

14:00 – 14:30 Refreshment break
Sponsored by: SLB

Session 8: Advances in modelling

Session chair: Dr. Jørn Kjølaas, SINTEF, Norway

14:30 – 14:55	**Predicting surge waves in gas-condensate pipelines using long-wave stability analysis** *D. Biberg, K. Sinkov, M. B. Kirkedelen, SLB Norway Technology Center, Norway; P. S. Johansson, M. Nordsveen, T. K. Kjeldby, Equinor, Norway*
14:55 – 15:20	**A model to enable pseudo dry gas simulations backed by experimental data** *B. W. E. Norris, S. Sakurai, Z. M. Aman; The University of Western Australia, Australia; P. T. Bhaskoro; PETRONAS Research, Malaysia, G. B. Falope, PETRONAS Centre of Excellence in Subsurface Engineering & Energy Transition, UK; T. Wood, L. Liebana, L. Thomas; Worley, UK*
15:20 – 15:45	**A new model for gas-condensate flow with oil–water dispersion** *D. Biberg, K. Sinkov, M. B. Kirkedelen, SLB Norway Technology Center, Norway; P. S. Johansson, M. Nordsveen, T. K. Kjeldby, Equinor, Norway*

15:45 – 15:55 Stretch break

15:55 – 16:20	**Comprehensive multiphase flow models comparison in ultra deepwater production systems** *J. Trujillo, S. Morgadinho, M. Ferreira, E. Quintos, E. Barros, P. Bacelar; Galp, Nordsveen, T. K. Kjeldby, Equinor, Norway*
16:20 – 16:45	**Automated workflows for flow assurance simulations troubleshooting** *M. Montini, A. Di Lullo, A. Tiozzo, A. Della Pietà; Eni S.p.A., Italy; T. Mantegazza, Eniprogetti S.p.A., Italy*

Session 9: Fluids and production chemistry - Part 2

Session chair: Prof. Ruud Henkes, Delft University of Technology, The Netherlands

16:45 – 17:10	**An early solid deposition sensor for production line monitoring** *L. D. Tenardi, B. W. E. Norris, K. Jeong; The University of Western Australia, AU, E. F. May; Future Energy Exports Cooperative Research Centre, AU, P. L. Stanwix, The University of Western Australia, AU.*
17:10 – 17:35	**Application of low-field nuclear magnetic resonance to study emulsion inversion point and stability** *S. Simon, Ugelstad Laboratory, NTNU, Trondheim Norway; G. H. Sørland, Anvendt Teknologi AS, Trondheim, Norway; R. Belt, TotalEnergies, PERL Lacq, France; N. Passade-Boupat, PERL Lacq, France; V. Richon, TotalEnergies EP Norge AS, Stavanger, Norway*

Conference Dinner: 19:30

Sponsored by: ESSS Oil and Gas

Join us for an unforgettable evening under the stars as the conference dinner unfolds al fresco on the stunning poolside patio of the Crowne Plaza Hotel. With the open sky above, it's the perfect setting to dine, mingle and celebrate in style..

The Best Paper Award will be presented during the Conference Dinner.

Best Paper Award: Sponsored by Wood.

Wednesday 10th September 2025

Session 10: CO_2 Transportation and storage

Session chair: Dr. Martin Watson, Wood PLC, UK

08:30– 08:55	**Simulations of fast transients for two-phase CO_2 flow in pipes** *R.A.W.M. Henkes,Delft University of Technology and Shell Projects & Technology, The Netherlands; J.E. Ellepola, A. Rao, Shell Projects & Technology, The Netherlands*
08:55 – 09:20	**Validation of a new transient solver for simulation of multiphase CO_2 flow in pipelines** *R. H. Nemoto, A. Brigadeau; SLB, Norway Technology Center, Z. Yang; Equinor ASA, Norway, L. Rønning, T. Vincent-Dospital, J. Ø. H. Bakke; SLB, Norway Technology Center, Norway*

09:20 – 09:50 Refreshment break

Session 11: Data analytics in operations

Session chair: Dr. Roel Belt, TotalEnergies, France

09:50 – 10:15	**Analysis of the Heidrun oil field data** *M. Nordsveen, A. A. Ayati; Equinor ASA, Norway*
10:15 – 10:40	**Data-driven monitoring of subsea wax deposition: a hybrid approach to flow assurance** *T. Newnham, Pontem Analytics, UK; A. Yule, Pontem Analytics, USA; A. Priyadarshi, Pontem Analytics, UK; I. Kopperman, Pontem Analytics, UK*

10:40 – 11:05	**Operational experience and performance of multidimensional leak detection system in Johan Sverdrup multiphase pipelines** *L. Hagesæther, S. B. Joramo-Hustvedt; Equinor ASA, Norway, G. Gupta, M. Espeland, C. Trudvang, R. Colmenares; SLB, Norway*

11:05 – 12:05 Brunch

Session 12: Multiphase flow

Session chair: Dr. Erich Zakarian, Woodside Energy, Australia

12:05 – 12:30	**Multiphase flow split, between myth and mystery** *C. Chauvet, M. J. Watson, Wood PLC, UK*
12:30 – 12:55	**A novel statistical ensemble average model for developing hydrodynamic slug flow in long pipelines** *A. Soedarmo, Z.G. Xu, T. Brenna, I. Koshelkov, J. Sogn, K. Sinkov, S. Dayarathna, L. Rønning, SLB, Norway*
12:55 – 13:20	**Development and validation of a liquid-liquid mechanistic flow model for pipe cleaning** *T. R. Gessner, O. M. França Jr, T. G. M. dos Santos, Petrobras, Brazil*
13:20 – 13:45	**Flow regimes in high flow rate low liquid loading flows** *P. Sassan Johansson, A. Valle, F. Könz, T. Kindsbekken Kjeldby; Equinor, V. Richon, R. Belt; Total Energies, O. J. Rinde, A. Vestvik; Gassco, Norway*

13:45: Chairman's closing remarks

Conference farewells and refreshments 13:55 – 14:30

On behalf of the organising committee of the Multiphase 2025 Conference, we extend our deepest gratitude to all our sponsors, exhibitors, and contributors. Your continued support and engagement plays a vital role in making this event a resounding success.

Your commitment to advancing the field of the multiphase arena has helped foster meaningful discussions, innovative insights, and a vibrant exchange of ideas. We are truly grateful for your partnership and look forward to continuing this journey together.

Thank you for being an essential part of this year's conference!

Meet the session chairmen

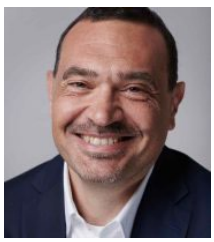
Session 1: Experimental

Ian Kopperman, Managing Director, Pontem Analytics, UK
Ian Kopperman has over 20 years of worldwide oil and gas project management and technical experience encompassing offshore, onshore and subsea projects, related to flow assurance, production chemistry, subsea and process engineering, and project management. Proven capabilities in business growth, management and performance improvement with success in leading, and building, dynamic engineering and technical teams and delivering innovative solutions for business expansion.

Session 2: Slugging - Part 1

Dr. Marco Montini, Head of flow Assurance, Eni, Italy
Marco Montini holds a degree in Physics and a PhD in Mechanical Engineering from Imperial College, specializing in multiphase flow simulations. Following his studies, he joined FEESA as a flow assurance consultant and developer of the Maximus software. Over the past 12 years, he has held various roles within Eni, spanning the engineering and production departments. He is currently the head of the flow assurance group in the upstream production department, overseeing troubleshooting and production optimization projects for all Eni-operated assets. Recently, he was appointed as Eni's subject matter expert for flow assurance and gathering systems optimization.

Session 3: Data analytics, I.M., M.L .and A.I.



Dr. Alessandro Speranza, Global Technology Portfolio Manager, KBC Engineering, UK
Alessandro Speranza is a Senior Staff Consultant at KBC, serving as Senior Technology Portfolio Manager. He oversees strategy, execution, and market positioning across KBC's software portfolio, acting as a key link between senior leadership and product teams to ensure alignment in strategy and messaging.
He holds a Master's in Theoretical Physics (University of Florence) and a PhD in Mathematics (King's College London), with over 20 years of experience in mathematical and computational modeling of multiphase flows, phase behavior, and industrial applications. Prior to KBC, Alessandro managed technology transfer projects at the University of Florence.

Session 4: Fluids and production chemistry - Part 1

Dr. Dag Biberg, Technology Advisor, SLB, Norway
Dag Biberg is a Technology Advisor at SLB Norway Technology Center in Oslo. He holds a PhD in Mathematical Modelling of Multiphase Pipe Flows and a Master's degree in Fluid and Structural Mechanics, both from the University of Oslo. He began his career as a Research Scientist at the Institute for Energy Technology in Norway and later became Chief Scientist at SPT Group before assuming his current role. Dag has developed several models for commercially available multiphase flow simulators, including the OLGA HD Stratified Flow Model. He has led developments for the OLGA multiphase flow simulator through joint industry projects sponsored by major oil companies worldwide, such as the Horizon JIPs, HD Power and the OLGA verification and improvement project. He received the Statoil-Hydro Research Prize for his work on multiphase flow and transport and has published over 20 papers in international journals and conference proceedings, as well as several patents. His primary research interests include gas condensate systems, turbulent boundary layers and wakes, large waves, stratified, churn and annular flows, transition criteria, shocks, and flow instabilities.

Session 5: Hydrate management

Dr. Shaun Johnston, Independent, UK

Shaun Johnston is an independent consultant with over a decade of experience in the energy sector, spanning traditional oil and gas and energy transition projects. He holds a PhD in Chemical Engineering from Imperial College London and began his career in Flow Assurance with Wood in Australia, later leading their UK office.

Currently, Shaun leads a global team focused on Flow Assurance, dynamic simulation, and real-time operational solutions for industrial assets. He is passionate about advancing asset design and operations for greater efficiency and sustainability. Shaun is based near London, UK.

Session 6: Flow assurance

Terry Wood, Director, Pipelines and Subsea and Flow Assurance SME, Worley, UK

Terry Wood is the Flow Assurance SME and Engineering Director at Worley, bringing over 25 years of expertise in oil and gas and the transport of energy transition fluids such as CO_2 and hydrogen. He leads a global team of pipeline, subsea, and flow assurance engineers, providing technical assurance and strategic leadership across complex projects. Terry is a trusted advisor in subsea processing technologies, contributing to cutting-edge internal and external developments, and is a regular speaker at major industry conferences. His experience spans flow assurance assessments for onshore and ultra-deepwater systems (up to 3,000m), with a focus on mitigation strategies including subsea processing and artificial lift. Terry also plays a key role in operational readiness, developing procedures that minimize disruption and ensure rapid system recovery.

Session 7: Slugging – Part 2

Dr. Peter Sassan Johansson, Principal Researcher, Equinor, Norway

Peter Sassan Johansson is a Principal Researcher at Equinor's Research Centre in Trondheim, Norway. He holds a doctoral engineer degree within simulation and modelling of turbulent flows from the Norwegian University of Science and Technology. Main areas of research are multiphase flow in gas condensate systems, with focus on field data, surging flows, minimum flow, low liquid loading systems and general model uncertainty. Recently, slug flow in deep water risers has also become a research area.

Session 8: Advances in modelling

Dr. Jørn Kjølaas, Senior Research Scientist, SINTEF, Norway

Jørn Kjølaas holds a Master's in theoretical physics (NTNU, 2001) and a PhD in multiphase flow (2007). He is a senior research scientist at SINTEF's Multiphase Flow Laboratory, specializing in multiphase pipe flow. His expertise includes experimental design, model development, and flow phenomena such as churn flow, emulsions, and instabilities.

Jørn has played a key role in developing the LedaFlow simulator, implementing most hydraulic closure laws, and received SINTEF's Outstanding Research Award in 2015. He has authored/co-authored 16 papers for the Multiphase Production Technology conference series since 2011.

Session 9: Fluids and production chemistry - Part 2

Professor Ruud Henkes, Delft University of Technology / Shell Projects and Technology, The Netherlands

Ruud Henkes obtained Master's Degree Aerospace Engineering (with honours) in 1985 at Delft University of Technology, and a PhD degree (with honours) in Fluid Flow and Heat Transfer in 1990 at the same university. Associate Professor Aerodynamics in Delft until 1997, when he joined the multiphase flow team of the Shell Technology Centre in Amsterdam. Since then, various roles as team lead and Principal Technical Expert Fluid Flow at Shell. Combined with part-time full professorship multiphase flow at Delft since 2008, turning to the role of Scientific Director of the J.M. Burgerscentrum for Fluid Mechanics since 2021.

Session 10: CO2 Transportation and storage

Dr. Martin Watson, Chief Flow Assurance Engineer, Wood PLC, UK
Martin Watson has been solving and explaining Flow Assurance problems in the oil and gas industry for over 23 years. This includes being a co-founder of FEESA (developer of Maximus), expert witness work on Deepwater Horizon, investigating novel production system technologies and leading Flow Assurance teams on a wide range of Oil and Gas projects. His background gives him an understanding of the limitations of current modelling methods and how best to apply them to real problems. He also gives a course on Flow Assurance and Process Engineering at Imperial College, London; teaching students how the theories of fluid mechanics and heat transfer can be practically applied in the Oil and Gas Industry.

Session 11: Data analytics in operations

Dr. Roel Belt, Multiphase Flow & Separation team leader, TotalEnergies, France
Roel Belt is a researcher at TotalEnergies' Research Centre in Lacq, France, within the Physical Chemistry & Analysis department. He leads there the Multiphase Flow & Separation laboratory. He holds a PhD from Delft University of Technology and his main areas of research are multiphase flow in pipes (from theoretical considerations to practical applications) and the behaviour of emulsions and foams.

Session 12: Multiphase flow

Dr. Erich Zakarian, Flow Assurance Lead, Woodside Energy, Australia
Erich Zakarian is a Flow Assurance engineer with 25 years of experience in Oil & Gas field development, support to operations, Flow Assurance risk management, multiphase flow modelling, and dynamic simulation.
This experience includes the supervision of the flow assurance scope for offshore megaprojects at Woodside (Sangomar and Browse) and Total (Shtokman). Before joining Woodside 15 years ago, Erich worked for Total and Schlumberger.

ISAVFT LTD extend their sincere gratitude to our session chairmen, whose contribution is essential to the success of this conference. By guiding the discussions, fostering dialogue and ensuring the smooth flow of each session, they help create an environment where ideas can be shared openly and thoughtfully. Your commitment of time and expertise is greatly appreciated and it is through this spirit of collaboration that the Multiphase community continues to thrive. We are delighted to have you with us and look forward to the valuable exchanges and insights that your sessions will inspire.