Welcome

We would like to welcome you to the Second Conference on ‘Forward Modelling of Sedimentary Systems – From Desert to Deep Marine Depositional Systems’.

This conference follows on from a previous successful meeting and aims to further advance our ability to accurately model depositional processes in 3D at a variety of temporal and spatial scales from source to sink in order to predict facies and property distributions in a stratigraphic context. Academic specialists and theoreticians as well as industry practitioners will be included as they are mutually dependent in driving forward key technology developments. Additionally keynote speakers will introduce thematic sessions and there will be ample time for informal discussions and contact between delegates.

Enjoy the conference!

Scientific Committee

Allard W. Martinius (chair) Statoil ASA
Ernest Hansen Complex Flow Design
Quintijn Clevis Shell Norge
Poppe de Boer Utrecht University

Conference Overview

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<td>08:30 – 17:30 hrs</td>
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<td>Icebreaker Reception</td>
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<td>Tuesday 26 April</td>
<td>09:00 – 17:20 hrs</td>
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<td>Thursday 28 April</td>
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<td>Conference</td>
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About Trondheim

Trondheim was founded by Viking King Olav Tryggvason in AD 997 and holds a special place in Norwegian culture and history. The city was the nation’s first capital. The name Trondheim can be translated into ‘the home of the strong and fertile ones’.

Venue

The conference will be hosted in the oldest hotel in Trondheim, the Thon Britannia. The salons, ballroom halls and conference rooms offer a charming historical atmosphere.

Address:
Dronningens gate 5
7011 Trondheim
Norway

Technical Programme

Oral & poster presentations - Tuesday 26 April

Britannia Hall

OPENING SESSION

09:00 Welcome

09:05 Tu K01 - Keynote Speech - Validation of Numerically Generated Stratigraphic Architecture - N. Mountney (University of Leeds)

TERRESTRIAL DEPOSITS

N. Mountney (University of Leeds) & Q. Clevis (Shell)

09:45 Tu A01 - Geomodelling of Aeolian Reservoir Analogues - A Virtual-outcrop Based Study of the Jurassic Page Sandstone Formation - C.S. Pierce* (University of Aberdeen), J. Howell (University of Aberdeen), H. Rieke (DEA) & D. Healy (University of Aberdeen)

10:10 Tu A02 - New Modelling Acceleration Technique for Process-based Models in Geological Time-scale - L. Li* (Delft University of Technology), J.E.A. Storms (Delft University of Technology) & D.J.R. Walstra (Delft University of Technology)

11:05 Tu A03 - Dynamic Modelling of Meandering Fluvial Systems at the Reservoir Scale, FLUMY Software - B. Grappe (MINES ParisTech, PSL Research University), I. Cojan* (MINES ParisTech, PSL Research University), F. Ors (MINES ParisTech, PSL Research University) & J. Rivoirard (MINES ParisTech, PSL Research University)

11:30 Tu A04 - Reservoir Modelling of Paleochannels Based on Seismic Trend - T.V. Olneva (Gazpromneft-STC) & E. Milei* (NIS)

11:55 Tu A05 - Improved Subsurface Property Prediction in The Netherlands by Integrating Stratigraphic Forward Modelling - R.A.F. Dalman* (TNO), P. Karamitopoulos (TNO), Q. Sacchi (Politecnico di Torino), G.J. Weltje (University of Leuven), H. Verweij (TNO) & E. Salina Borello (Politecnico di Torino)

12:20 Tu A06 - Towards an Open-source Web-based Delft 3D GeoTool - J.E.A. Storms* (Delft University of Technology), D. Walstra (Delft University of Technology), L. Li (Delft University of Technology), H. van der Vegt (Delft University of Technology), W. de Boer (Delftares), H. van Putten (Delftares) & A. Forzioni (Delftares)
Britannia Hall

POSTER INTRODUCTIONS

12:45
Po 01 - A Novel Workflow for Building Multiple Point Statistics
Training Images from Virtual Outcrops - J.R. Mullins* (University of Aberdeen), J.A. Howell (University of Aberdeen), S.J. Buckley (Centre for Integrated Petroleum Research) & C. Kehl (Centre for Integrated Petroleum Research)

Po 02 - The Volga-Ural Province - Sedimentary Tunnel-type Geological Model of Reservoir Compaction and Complex Rheology Deformat - V.I. Popkov (SamGTU & SamaraNIPIneft) & V.I. Astafiev* (SamGTU)

Po 03 - Effect of Harvested Wood Management on the Sediment Production in Natural Forests - A. Hashemi* (Islamic Azad University) & S. Rahimzadeh (Gazvin University)

Po 04 - Integration of Mechanical Compaction and Stratigraphic Modelling - A. Diaz Aguado* (Repso), E. Ibanez (Repso), C. Pellan (Repso) & L. Fontanelli (Repso)

Po 05 - Modelling 3D Synrift Sediment Infill Patterns of Synthetic Faults - J. Cunningham* (University of Stavanger), R. Syahrul (Statoil) & C. Townsend (University of Stavanger)

Po 06 - Drawing the Line, when Do we Need Process-based Models? - T. Vermaas (Deltareas), A. Forzoni* (Delft University of Technology) & J.E.A. Storms (Delft University of Technology)

Po 07 - Process-based Modelling of Sediment Distribution in Fluvial Crevasse Splays Validated by Outcrop Data - A.B. Sandén (Delft University of Technology), M.E. Donselaar (Delft University of Technology), K.A. van Toorenenburg (Delft University of Technology), H. van der Vegt (Delft University of Technology) & G.J. Veltkamp (KU Leuven)

13:05 Lunch break (sponsored by Statoil)

SEDIMENT GRAVITY FLOWS

J.T. Eggenhuisen (Utrecht University) & J. Peakall (University of Leeds)

14:05 Tu B01 - Process-based Modelling of Turbidity Currents - From Computational Fluid-dynamics to Depositional Signature - A.J. Vellinga* (University of Southampton), M.J.B. Cartigny (National Oceanography Centre), E.W.M. Hansen (Complex Flow Design AS), P.J. Tallinga (National Oceanography Centre), M.A. Clare (National Oceanography Centre), E.J. Sumner (University of Southampton) & J.T. Eggenhuisen (Utrecht University)

14:30 Tu B02 - High-resolution Simulations of Turbidity Currents Interacting with Complex Topography - E.M. Meiburg* (UC Santa Barbara), M.M. Nasr-Azadani (UC Santa Barbara), E. Biegert (UC Santa Barbara) & B. Vowinckel (UC Santa Barbara)

14:55 Tu B03 - Numerical Simulations of Sedimentation and Compaction of Turbiditic Sand at Reservoir Scale in the Peira Cava Sub Basin - R. Basani* (Complex Flow Design), T.E. Aas (Statoil), E.W. Hansen (Complex Flow Design) & J. Howell (University of Aberdeen)

15:20 Coffee break (sponsored by Geomodeling) & poster session (Foyer)

15:50 Tu B04 - Particle-laden Gravity Currents in Non-axisymmetric Lock-exchange Configurations - L. Espath (PUCRS), E. Francisco (PUCRS), C. Moser (PUCRS), S. Laizet (Imperial College London) & J. Silvestrini* (PUCRS)

16:15 Tu B05 - New Flow-capacity and Multi-lithology Process-based CATS Model for Low-density Turbidity Currents at Reservoir Scale - V. Teles* (IFPEN), P. Joseph (IFPEN), B. Chauveau (IFPEN), F. Maktouf (IFPEN) & T. Mulder (University of Bordeaux)

16:40 Tu K02 - Keynote Speech - Taking Physical Modelling of Deepwater Depositional Systems Forwards - J.T. Eggenhuisen* (Utrecht University), J. de Leeuw (Utrecht University), F. Pohl (Utrecht University) & M.J.B. Cartigny (National Oceanography Center)

17:20 End of day 1

Oral presentations - Wednesday 27 April

Britannia Hall

FROM MATHEMATICAL MODELLING TO NUMERICAL CODE

J.P.M. Syvitski (University of Colorado at Boulder) & J.E.A. Storms (Delft University of Technology)

09:00 We K03 - Keynote Speech - Modelling of Sediment Transport in the Gulf of Mexico due to the Influence of Hurricanes - J.P.M. Syvitski (University of Colorado-Boulder), H.G. Arango (Rutgers University), C.K. Harris (University of California), E.H. Meiburg (University of California), C.J. Jenkins (University of Colorado-Boulder), E.W.H. Hutton (University of Colorado-Boulder), G. Auda (U.S. Department of the Interior) & F. Xing (The Water Institute of the Gulf)

09:40 We C01 - A Numerical Implementation of Landscape Evolution Models - M. Lebrun* (CNRS), J. Darbon (ENS CACHAN) & J.M. Morel (ENS CACHAN)

10:05 We C02 - Combining Forward Stratigraphic Modelling with Seismic Reconstruction to Improve Reservoir Characterization - H.A. Madhoo* (Schlumberger), A. Acevedo (Schlumberger), D. Tetzlaff (Schlumberger) & J. Tveiten (Schlumberger)

10:30 We C03 - Potential of FLUMY, a Meandering Fluvial Process-based Model, to Simulate Submarine Channels - M. Lemay* (MINES ParisTech, PSL Research University), I. Cojan (MINES ParisTech, PSL Research University), F. Bros (MINES ParisTech, PSL Research University) & J. Rivoirard (MINES ParisTech, PSL Research University)

10:55 Coffee break (sponsored by Geomodeling) & poster session (Foyer)
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<th>Time</th>
<th>Session</th>
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<tr>
<td>11:25</td>
<td>We C04 - Using a Forward Model as Training Model for 3D Stochastic Multi-well Correlation - J. Edwards* (Université de Lorraine), F. Lallier (Total E&amp;P UK) &amp; G. Caumont (Université de Lorraine)</td>
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<tr>
<td>11:50</td>
<td>Th D05 - Analysis Tools to Quantify the Variability in Deltaic Geological Models Using Delft 3D Simulation Results - H. van der Vegt** (Delft University of Technology), J.E.A. Storms (Delft University of Technology), D. Walstra (Delft University of Technology) &amp; N.C. Howes (Shell)</td>
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<tr>
<td>12:15</td>
<td>Th D06 - Field Scale Automated Calibration and Sensitivity Analysis of Forward Stratigraphic Models - A. Barrois* (Beicip-Franlab), R. Richet (Beicip-Franlab) &amp; B. Murat (Beicip-Franlab)</td>
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<td>12:40</td>
<td>Lunch break (sponsored by Statoil)</td>
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<td>13:40</td>
<td>Th D07 - Gridless Simulation of Complex Lithofacies Relationships - Y. Zagayevskiy* (Halliburton), G. Bardy (Halliburton), G. Shi (Halliburton), Y. Pandey (Halliburton), R.M. Srivastava (Halliburton), J.M. Yarus (Halliburton) &amp; D. Garner (Halliburton)</td>
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<td>14:05</td>
<td>Th D08 - A SPH-based Modelling of the BIG’95 Debris Flow - R. Silva Jacinto* (Ifremer), G. Lastras (Universitat de Barcelona) &amp; M. Canals (Universitat de Barcelona)</td>
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<td>14:55</td>
<td>Coffee break (sponsored by Geomodeling)</td>
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<tr>
<td>15:25</td>
<td>Th K07 - Keynote Speech - Mixed Cohesive Sediment Flows and Deposits - An Experimental Perspective - J. Baas (Bangor University)</td>
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<tr>
<td>16:05</td>
<td>Discussion &amp; wrap-up</td>
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<td>17:05</td>
<td>End of day 3</td>
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**Oral presentations - Thursday 28 April**

**Britannia Hall**

**CARBONATES, SEDIMENT DISTRIBUTION PATTERNS AND NUMERICAL MODELS**  
J. Baas (Bangor University) & P. de Boer (Utrecht University)

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<td>09:00</td>
<td>Th K06 - Keynote Speech - Physical Modelling of Submarine Channel Deposits - Towards First Order Prediction - J. Peakall (University of Leeds)</td>
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<td>09:40</td>
<td>Th D01 - 2D and 3D Synthetic Seismic Modelling of Outcropping Carbonate System of the Maiella Mountain (Central Apennines-Italy) - V. Mascolo* (University of Chieti Pescara), G. Ruscidelli (University of Chieti Pescara) &amp; I. Lecomte (NURSAR/University of Oslo)</td>
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<td>10:05</td>
<td>Th D02 - Coupled Stratigraphic and Diagenetic Forward Modelling as Input to Seismic Simulation for a Better Understanding of Carbonate Reservoirs - C. Lanteaume* (CEREGE), F. Fournier (CEREGE), J. Borgomano (CEREGE) &amp; M. Pellerin (Total)</td>
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<tr>
<td>10:30</td>
<td>Th D03 - Integrated Forward Stratigraphic Model of a Passive Margin, from Key Seismic Observations to Petroleum System Assessment - C. Pellant* (Repso) &amp; L. Fontanelli (Repso)</td>
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<tr>
<td>10:55</td>
<td>Coffee break (sponsored by Geomodeling) &amp; poster session (Foyer)</td>
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<tr>
<td>11:25</td>
<td>Th D04 - Understanding Glacier-induced Wind-driven Circulation Patterns in Strynvalnet Fjord (Norway) and their Implications for Fjord-infill Patterns - J.E.A. Storms* (Delft University of Technology), M. Schoenmakers (Delft University of Technology), L. Hansen (Norges Geologiske Undersøkelse), N. Waidmann (University of Oslo) &amp; A. Beylich (Norges Geologiske Undersøkelse)</td>
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**Foyer**

**MODELLING DEMONSTRATIONS**  
E. Hansen

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<td>Modelling Demonstrations</td>
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The Technical programme is sponsored by

**Statoil**

**Field Trip**

25 April 2016  
08:30 - 17:30 hrs

Field trip leader: Sverre Henriksen (Statoil Research Center, Trondheim Norway)

Thanks to Statoil, on Monday 25 April, a pre-conference Field trip is organized to the Caledonides of central Norway. The Caledonides are especially well known for their fragmented ophiolite assemblages and, in some areas, the overlying, richly fossiliferous, Ordovician, low-grade meta- sedimentary rocks. The basin contains thick succession of conglomerates, shales and turbidite sandstone units. Although well known for their palaeontology, the Ordovician basal successions in this part of Norway have received comparatively little attention with regard to their sedimentology and overall development.

On-site registration is possible but subject to availability. Please note that registration for the field trip has to be done separately from the conference registration. More information is available at the registration desk.
Social Programme

Icebreaker Reception
25 April 2016
18:00-19:30 hrs

To complement the conference, an icebreaker reception will be organized on Monday evening in Café To Tårn, located next to the beautiful Nidaros Cathedral. From the Thon Britannia Hotel, it is only a 10 minute walk.

Address:
Bispegata 5, Nidarosdomens Besøkscenter
7013 Trondheim, Norway

Conference Dinner
27 April 2016
18:00-22:00 hrs

The conference dinner will be held in Restaurant Kommandanten, at the Kristiansten Fortress: A historical site, build in 1685 to protect Trondheim against attacks from the east. Transportation is not included. From the conference venue, it is a 20 minute walk to Kristiansten Fortress.

Address:
Kristiansten Festning
7016 Trondheim, Norway

The Conference Dinner is sponsored by

Statoil

Event papers on EarthDoc

EarthDoc is EAGE’s online geoscience database and enables you to browse through thousands of event papers and journal articles online. EAGE members have free access to EarthDoc (www.earthdoc.org).

The event papers of the Second Conference on Forward Modelling of Sedimentary Systems are also available online. Go to www.earthdoc.org and log in with your EAGE membership number.

Sponsoring

We would like to thank our sponsors for their generous support.

Dedicated Sponsors

Partner Association

International Association of Sedimentologists

IAS is a truly international association. It has about 2000 members from approximately 100 countries and National Correspondents in more than 50 countries. IAS publications include volumes of the journals ‘Sedimentology’, ‘The Depositional Record’, ‘Basin Research’ and ‘Petroleum Geology’.

Contact

Please visit the conference website, www.eage.org/event/forward-modelling-2016 for the latest updates. For any questions about the Second Conference on Forward Modelling of Sedimentary Systems, please contact the EAGE Europe Office at +31 88 995 5055 or send an e-mail via conferences@eage.org.