

# From Depositional Systems to Sedimentary Successions on the Norwegian Continental Shelf

Stavanger Forum, 4th–6th May 2010

Program



NORWEGIAN  
PETROLEUM SOCIETY

# From Depositional Systems to Sedimentary Successions on the Norwegian Continental Shelf

The Norwegian Petroleum Society is pleased to announce a three day conference on the sequence stratigraphy of the Norwegian Margin to be held in Stavanger in May 2010. This meeting follows on from previous successful NPF events on this subject, building further on advances in our understanding of the role of climate and tectonics in controlling sediment delivery from source to sink, and its impact on stratigraphic architecture and petroleum exploration offshore Norway.

The Norwegian Continental margin stretches for c. 2500 km from the North Sea in the south to the Barents Sea in the north and includes hydrocarbon plays ranging from Devonian to Pleistocene in age. Reservoir types vary from alluvial fans to deepwater fans, in almost every climate type from arid through humid to glacial, in tectonic settings ranging from intra-montane through compressional/transpressional to extensional/transensional basins, and passive margins. The Norwegian margin has it all, with a huge remaining potential and a high quality database of seismic and well log information available.

This range of depositional systems and tectonic settings provides an exciting challenge for petroleum geologists trying to understand and predict stratigraphy and lithological properties. The initial focus of sequence stratigraphy on eustasy as the key control on depositional architecture has evolved to encompass tectonic, climatic and geomorphologic controls on sediment delivery and preserved stratal architecture. The development of this understanding and its impact on our understanding of the Norwegian Continental shelf is the focus of this meeting. Special attention will be given to the integration of both analogue studies and processed based models with the insights gained from the interpretation and visualization of high quality subsurface case studies.

Abstracts are invited from both industry and academia dealing with methodology, analogue depositional

systems and case studies from the Norwegian Continental Shelf. The presentations will be organised into the following topics:

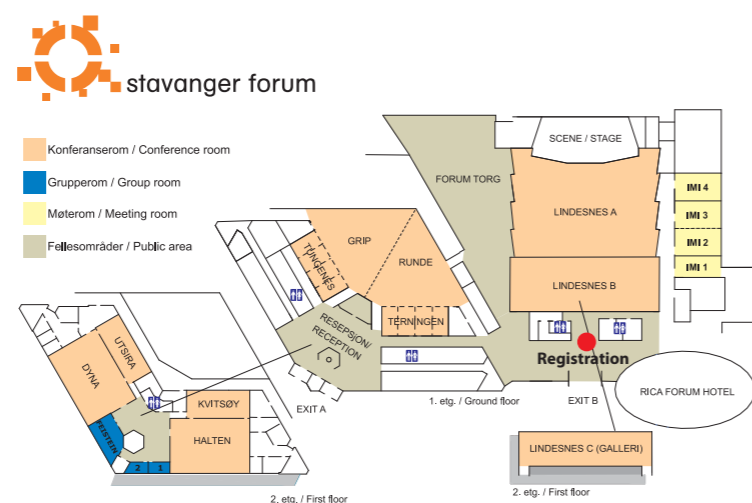
**Day 1** focuses on the tectonic impact on depositional systems. Key talks deal with the stratal evolution and the impact of climate as well as hinterland and basin tectonics including salt movements. Norwegian sector studies include Jurassic sequences in the Central North Sea, South Viking Graben, the Northern North Sea, as well as younger deep marine systems from the Vøring basin and the Dønna Terrace. An exciting example of slope/apron system from the Albian of Northern Spain will also be presented. Posters and core, virtual outcrops, and seismic stratigraphy workshops supplements the theme of the day. Cores for day 1 are from the Triassic illustrating both the key reservoirs and also the very different climate and regional setting of that age.

**Day 2** has the climatic impact as a theme. Key note talks focus on passive margins stratigraphic development. Norwegian offshore examples takes us through the climate and its impact from the Triassic to the Cenozoic and includes both clastic and carbonate systems. New ideas can be generated by listening to talks dealing with examples

from the Czech republic, Oregon and France. Towards the end of the day the conference steps up to the autogenic theme with talks on "slump pumping" and other slope processes.

In the workshops; Jurassic and chalk field cores are on display. A stratigraphic modeling workshop has been arranged and contains some very interesting examples of software and case studies. Fresh posters and the virtual outcrop session will add to the climatic theme.

**On day 3** we dive deep into the subject of autogenic processes and learnings from stratigraphic modelling. The role of autostratigraphy in fluvial, deltaic and shallow marine systems is considered in key talks, and in case studies from the Brent Group and the Rhine Delta. Autogenic processes in deep marine settings is also explored with both modeling studies and a North Sea example. In the last session, we learn how tectonic, climatic, eustatic, and autogenic controls interact. Sequence stratigraphic examples from the Barents Sea and the North Viking Graben are presented. Cores on display are from Cretaceous and Paleogene deep marine strata. Fresh posters will be on display whereas as the stratigraphic modelling workshop and the seismic stratigraphy workshops will be repeated.



Konferanse- & utstillingscenter / Conference and exhibition centre

## Poster sessions (room Terningen and Tungnes)

### Poster session 1.

**Kinematics of normal growth faulting and implications for syn-rift sedimentation**  
Christopher A-L. Jackson, Dept. of Earth Science and Engineering

**Rift Basin Sequence Stratigraphy - Ups & downs of Base-level & Rift -margins**  
Rodmar Ravnås, A/S Norske Shell

**Sheltered tidal deltas within an active fault-block setting. A case study of the Cook Formation (Pliensbachian-Toarcian) in the Northern North Sea (Norway) based on cores, borehole images and logs for sedimentological interpretation**  
Atle Folkestad, Statoil  
Zbynek Veselovsky, Eriksfjord (Stavanger)  
Paul Roberts, Statoil

**Cenozoic transtensional to transpressional basin development at the sheared Western Barents Sea - Svalbard Margin**  
Karen Leever, Dept. of Geosciences, University of Oslo  
Jan Inge Faleide, Dept. of Geosciences, University of Oslo  
Roy H. Gabrielsen, Dept. of Geosciences, University of Oslo

**The Upper Jurassic Rogn Sandstones on the Draugen Field - The Characterisation & Modelling of Fault-Block Fringing Syn-rift Shorelines and Deltas in a Large Wave-Dominated Embayment**  
S. Perry, A/S Norske Shell  
D. Grant, A/S Norske shell  
C. Harvey, A/S Norske Shell  
R. Ravnås, A/S Norske Shell

**Prediction of Upper Cretaceous Turbidites in the Vøring Basin - A Successful Marriage of Rift Basin Sequence Stratigraphic Models with a Source-to-Sink Approach**  
R. Ravnås, A/S Norske Shell  
M. Seger, A/S Norske Shell  
M. Norton, A/S Norske Shell  
C. Harvey, A/S Norske Shell  
H. Campbell, A/S Norske Shell  
O. Stodle, A/S Norske Shell  
Marianne Steinberg, A/S Norske Shell  
Hilde Braut, A/S Norske Shell

### Poster session 2.

**Deltaic subsidence due to compaction, isostasy and tectonics: Rates at syn-depositional time-scales (Holocene, Netherlands)**  
Kim Cohen, Utrecht University, and Deltares Geology, Geological Survey of The Netherlands, The Netherlands  
Sanneke van Asselen, Utrecht University, Dept. of Physical Geography, The Netherlands

**The fluvial-tidal transition zone: Application of outcrop analogue studies to fluvial systems on the Norwegian Continental Shelf**  
Allard W. Martinus, Statoil  
Stuart Gowland, Ichron Ltd., UK  
Kevin J. Keogh, Statoil  
Simon Leary, Statoil  
Andrew Taylor, Ichron Ltd., UK

**Factors controlling stratigraphy and the use of uniformitarianism when interpreting the stratigraphic record**  
Tor O. Sømme, University of Bergen  
William Helland-Hansen, University of Bergen

**Physics-based numerical modelling of Morphology and stratigraphy of river-data**  
N. Geleynse, Delft Technical University, The Netherlands  
J.E.A. Storms, Delft Technical University The Netherlands

**D.J.R. Walstra, Delft Technical University, The Netherlands**  
M.J.F. Stive, Delft Technical University, The Netherlands

**Linked Turbidite-Debrite Beds in Deep-sea Fan Systems - Character of Outer Fan deposits along the Eastern Margin of the Palaeocene Forties Fan, UK and Norwegian Central North Sea**  
Chris Davis, Geological Services, Shell International Ltd., UK  
Peter Haughton, UCD School of Geological Sciences, University College Dublin, Ireland  
William McCaffrey, School of Earth and Environment, University of Leeds, UK

### Poster session 3.

**Tide-dominated deposits of the Eocene Dir Abu Lifa member (Western Desert, Egypt): An analogue study of heterolithic tidal reservoirs**

B. Legler, Dept. of Earth Science and Engineering, Imperial College, UK  
H.D. Johnson, Dept. of Earth Science and Engineering, Imperial College, UK  
G.J. Hampson, Dept. of Earth Science and Engineering, Imperial College, UK  
M.D. Jackson, Dept. of Earth Science and Engineering, Imperial College, UK  
C. A-L. Jackson, Dept. of Earth Science and Engineering, Imperial College, UK  
E. El-Barkooky, Dept. of Geology, Cairo University & shell Egypt, Egypt  
R. Ravnås, A/S Norske Shell  
D. Alsop, Shell International Exploration  
X. Le Varlet, Bapetco, Cairo, Egypt

**The impact of tectonics on facies and sequences over a range of space and time scales: examples from the Bohemian Cretaceous Basin, Central Europe**  
David Ulicny, Geophysical Institute, Academy of Sciences of the Czech republic, Czech Republic

**The development of stacked basin-floor fans in the Eocene of Spitsbergen**  
Sten-Andreas Grundvåg, Dept. of Earth Science, University of Bergen

**Contemporaneous Early to earliest-Middle Jurassic paralic sedimentary successions on Jameson Land, central East Greenland and Halten Terrace, offshore mid-Norway - similarities and dissimilarities**  
Juha Matti Ahokas, Dept. of Geosciences, University of Oslo  
Allard W. Martinus, Statoil  
Johan Petter Nystuen, Dept. of Geosciences, University of Oslo

**Three-dimensional architecture of the Middle Jurassic Pelion Formation, East Greenland - an analogue for the Garn Formation**  
Torben Olsen, (Statoil) Presently with Noreco  
Jan Einar Ringås, Statoil  
Erlend Eldholm, Statoil  
Ingvare Strømsøyen, Statoil

**Allogenic and autogenic controls in sandbody distribution and stratigraphic architecture on a subtropical coastal plain: Blackhawk Formation, Wasatch Plateau, Utah**  
Gary Hampson et al.

**An outcrop analogue database for the reservoirs of the NCS**  
Howell Bergen Group

(room Lindesnes A)

## Program before lunch, May 4<sup>th</sup>

### The impact of tectonics on depositional systems and successions

- 09.00 - 09.10 **Opening and welcome**  
*Rodmar Ravnås, A/S Norske Shell (Chairman)*
- 09.10 - 09.35 **BASIN-SCALE SOURCE-TO-SINK VIEW**  
**Autogenic and allogenic controls on sedimentary systems as demonstrated by analogue modelling**  
*George Postma, Utrecht University, The Netherlands*
- 09.35 - 09.55 **Integration of tectonic modelling with Source-to-Sink sediment routing systems**  
*Ian Lunt, Statoil*  
*Jakob Skogseid, Statoil*  
*Emma Finch, University of Manchester*
- 09.55 - 10.15 **Contrasted relative sea-level change/sediment supply ratio from the North Sea to the Norwegian Sea and the Barents Sea during Middle Jurassic times**  
*Thierry Jacquin, Geolink*  
*Matthieu Gaudin, Geolink*
- 10.15 - 10.45 **Coffee/Tea**
- 10.45 - 11.05 **The impact of structural evolution on Hugin Formation Development: Quad 15, South Viking Graben, Norwegian North Sea**  
*Christopher Jackson, Dept. of Earth Science and Engineering, Imperial College, UK*  
*Gary Hampson, Dept. of Earth Sciences & Engineering, Imperial College, UK*  
*Eirik Larsen, Rocksource ASA*
- 11.05 - 11.25 **The development of asymmetric Jurassic sequences in the Northern North Sea from syn-sedimentary tectonics.**  
*Atle Folkestad, Statoil*  
*Tore Odinsen, Statoil*  
*Edel Areklett, Statoil*  
*Haakon Fossen, University of Bergen*
- 11.25 - 11.45 **Facies Tracts in the Lower-Mid Jurassic (Tilje and Ile) of the Dønna Terrace: Distinguishing Sequence Stratigraphic Patterns from Tectonically-Forced Physiographic Changes**  
*Francois LaFont, Total SA, France*  
*Alexis Capron, Total SA, France*  
*Laurent Schulbaum, Total E&P Norge AS*
- 11.45 - 14.00 **Lunch**

## Workshop, May 4<sup>th</sup> (room Grip)

Virtual Outcrop		Seismic Stratigraphy Interpretation Tools	
12:10-12:35	Joanna Morris et al.	12:10-12:35	Noomane Keskes
12:35-13:00	Gary Hampson et al.	12:35-13:00	B. Savary-Sismondini et al.
13:00-13:25	David Hodgetts et al.	13:00-13:25	Geert de Bruin
13:25-13:50	John Howell et al.	13:25-13:50	M. Steiberg et al.

The virtual geology workshop will demonstrate sequence stratigraphy and reservoir architectures of six selected outcrop analogs - all chosen because of their relevance to Norwegian shelf subsurface reservoirs.

## Program before lunch, May 5<sup>th</sup>

### The impact of climate on depositional systems and successions

- 09.00 - 09.25 **COLD, & WET, WARM & DRY**  
**The dynamic Chalk Sea: Teh depositional effects of a collapsed shelf-break front, erosional contour current systems and dry borderlands**  
*Finn Surlyk, Geological Institute, University of Copenhagen.*
- 09.25 - 09.45 **Depositional systems and sequence development contrasted by climatic differences: the Triassic of the North Sea, Mid-Norwegian shelf, Svalbard and the Barents Sea**  
*Johan Petter Nystuen, University of Oslo*  
*Atle Mørk, Sintef*  
*With contribution from B.A. Lundschieen, T. Høy, R. Riis (OD), M.B. E. Mørk (NTNU) I.B. Hynne, R. Sande Rød (NTNU & UIS, E. Glørstad-Clark og flere fra UiO*
- 09.45 - 10.05 **Dryland terminal fluvial systems and architecture, Central North Sea Triassic**  
*Tom McKie, Shell UK Exploration and Production, UK*
- 10.05 - 10.25 **Climate vs. Tectonic induced variations in Cenozoic sediment supply from western Scandinavia**  
*Bartosz Goleadowski, Dept. of Earth Science, Aarhus University, Denmark*  
*Søren B. Nielsen, Dept. of Earth Science, Aarhus University, Denmark*  
*Ole R. Clausen, Dept. of Earth Science, Aarhus University, Denmark*

## Workshop, May 5<sup>th</sup> (room Grip)

Virtual Outcrop	
12:10-12:35	John Howell et al.
12:35-13:00	David Hodgetts et al.
13:00-13:25	Gary Hampson et al.
13:25-13:50	Joanna Morris et al.

The stratigraphic modelling workshop will demonstrate the applicability of a wide range of available stratigraphic modelling software packages, with an application scope and focus varying from basin scale infilling to process sedimentology.

## Program before lunch, May 5<sup>th</sup>

- 10.25 - 10.55 **Coffee/Tea**
- 10.55 - 11.15 **Channel development in Maastrichtian age Chalk of the Norwegian North Sea: Evidence of erosional bottom currents and implications for Chalk facies models.**  
*M. Gennaro, University of Bergen*  
*J. Wonham, Total E&P Norge AS*
- 11.15 - 11.35 **The Normandy (NW France) Chalk: analogue for North Sea chalk complex reservoirs**  
*Eric Lasseur, BRGM, France*
- 11.35 - 11.55 **An unconventional Source-to-Sink Setting - The Siri Fairway System, Norwegian-Danish North Sea**  
*J.B. Svendsen, DONG Energy, Denmark*  
*J.P.V. Hansen, Norwegian energy Company ASA*  
*H. Friis, Dept. of Earth Sciences, University of Aarhus, Denmark*
- 11.55 - 14.00 **Lunch**

## (room Runde)

Stratigraphic Modelling	
12:10-12:35	Didier Granjeon
12:35-13:00	E. Finch et al.
13:00-13:25	Dirk-Jan Walstra et al.
13:25-13:50	R. Basani et al.

The applicability of these softwares in addressing basin-fill scenarios and reducing subsurface uncertainties will be demonstrated from selected examples from producing fields, near-field exploration and frontier basin exploration.

## Program before lunch, May 6<sup>th</sup>

### Autogenic processes and products - learnings from numerical modelling

- DELTA MODELLING**
- 09.00 - 09.25 **Process -based modeling of fluvio-deltaic and shallow-marine depositional systems and its application in subsurface analysis**  
*Joep Storms, Delft Technical University, The Netherlands*
- 09.25 - 09.45 **Multi-scale stratigraphic forward modeling of the Middle Jurassic Brent Group: Application to reservoir prediction of the Visund field**  
*L. Seiffert, Total E&P Norge AS*  
*D. Haller, Total E&P Norge AS*  
*D. Granjeon, Institut Francais du Petrole, France*  
*K. Church, Dept. of Earth Sciences, Imperial College, UK*
- 09.45 - 10.05 **Decoupling allogenic forcing from autogenic processes: Experimental stratigraphy**  
*Kim Wonsuck, University of Texas, Austin, USA*  
*Andrew Petter, University of Texas, Austin, USA*  
*David Mohrig, Tulane University, New Orleans, USA*  
*Chris Paola, University of Minnesota, Minneapolis, USA*
- 10.05 - 10.25 **External forcing and emergence in fluvial systems: results from a fluvial system and model compared with observations from the Holocene Rhine-Meuse delta**  
*Derek Karssenbergh, Dept. of Physical Geography, Utrecht University, The Netherlands*  
*Esther Stouthamer, Dept. of Physical Geography, Utrecht University, The Netherlands*  
*John S. Bridge, Dept. of Geological Sciences, Binghamton University, USA*
- 10.25 - 10.55 **Coffee/Tea**
- TURBITE MODELLING**
- 11.15 - 11.35 **From Coalesced basin floor fans to a multi-storey channel complex: Late Paleocene to early Eocene evolution of sand fairways in Blocks 25/2 and 25/3, Norwegian North Sea**  
*Bjørn Kåre Lotsberg Bryn, Norwegian Energy Company ASA*  
*Mark Ackers, Norwegian Energy company ASA*
- 11.35 - 11.55 **Simulation of the impact of tectonics and climate on sedimentary successions using stratigraphic forward models - Applications to turbiditic systems and extensional - compressional basin**  
*Didier Granjeon, Institut Francais du Petrole, France*
- 11.55 - 14.00 **Lunch**

## Workshop, May 6<sup>th</sup> (room Runde)

Stratigraphic Modelling	
12:10-12:35	R. Basani et al.
12:35-13:00	Dirk-Jan Walstra et al.
13:00-13:25	E. Finch et al.
13:25-13:50	Didier Granjeon

The latest breakthrough in sequence stratigraphic seismic interpretation software packages will be demonstrated in yet another workshop - the Seismic Stratigraphy Interpretation Tools workshop - where corporate and vendor software packages will be on display.

## (room Lindesnes A)

### Program after lunch, May 4<sup>th</sup>

- UPPER JURASSIC SALT & RIFT THEME**
- 14.00 - 14.25 **Rift Basin Tectono-Sedimentary Models: Local versus Regional Variability in Salt- and non-Salt-influenced Rifts**  
*Rob Gawthorpe, Manchester University, UK*
- 14.25 - 14.45 **Middle-Upper Jurassic salt-controlled depositional models of the Norwegian Central Graben**  
*E. Baudia, Statoil*  
*C. Gil, Statoil*  
*L.N. Jensen, Statoil*
- 14.45 - 15.05 **Tectonic control on sedimentation, erosion and redeposition in Upper Jurassic age sandstones of the Central North Sea**  
*J. Wonham, Total E&P Norge AS*  
*L-M. Moskvil, Total E&P Norge AS*  
*M.-C. Thomas, Total E&P Norge AS*  
*A. Vassel, Total E&P Norge AS*
- 15.05 - 15.35 **Coffee/Tea**
- 15.35 - 15.55 **Refining the depositional model for the Late Cretaceous deep marine deposits in the Skarv Area, Dønna Terrace, offshore Mid-Norway**  
*Eva Maria Traa, BP Norge*
- 15.55 - 16.15 **The Ormen Lange turbidite systems – sandy slope fans in a starved basin**  
*A. Cook, A/S Norske Shell*  
*D. Grant, A/S Norske Shell*  
*C. Harvey, A/S Norske Shell*  
*R. Ravnås, A/S Norske Shell*
- 16.15 - 16.35 **Albian depositional systems along the faulted Basque-Cantabrian northern margin as an analogue to slope-apron fan systems occurring on the western side of the Klakk Fault complex**  
*Yohann Poprawski, Université Joseph Fourier, Laboratoire de Géodynamique des Chaînes Alpines, Maison des géosciences, France*  
*Thierry Jacquin, Geolink, France*  
*Christophe Basile, Université Joseph Fourier, France*  
*Massimo Rossi, Eni E&P Division, Italy*  
*Matthieu Gaudin, Geolink, France*
- 16.35 **End of conference day 1**
- 18.45 - **Buses leaving Stavanger Forum for Conference dinner**
- 19.00 **Conference dinner at Sola Strand Hotel**

## (room Lindesnes B)

Triassic Core Workshop  
Tectonic Poster Session

### Program after lunch, May 5<sup>th</sup>

- GREENHOUSE CLIMATES & SEA-LEVEL CHANGES**
- 14.00 - 14.25 **30 Years of Sequence Stratigraphy - What have we learnt and what's next?**  
*William Helland-Hansen, University of Bergen*  
*Tor Sømme, University of Bergen*
- 14.25 - 14.45 **High and low-frequency clastic cycles in the mid-Cretaceous: implications for greenhouse glacio-eustasy and the choice of sequence bounding surfaces**  
*David Uličny, Geophysical Institute, Academy of Sciences of the Czech republic, Czech Republic*
- 14.45 - 15.05 **Eocene Tye Forearc Basin, Oregon: outsize Greenhouse fans at the base of shelf-margin clinoforms**  
*Manasij Santra, Jackson School of Geosciences, University of Texas at Austin, USA*
- 15.05 - 15.35 **Coffee/Tea**
- STEP-UP TO AUTOGENIC THEME**
- 15.35 - 15.55 **The "Slump pump" - slumping and fluid flushing in the Møre basin, Mid Norway**  
*Rikke Bruhn, DONG Energy Norge AS*  
*RMP GeoExploration AS*
- 15.55 - 16.15 **Late Mesozoic and Cenozoic asymmetrical depositional systems in the North Sea in relation to uplift of southern Norway**  
*E.M. Jarsve, Dept. of Geosciences, University of Oslo*  
*R.H. Gabrielsen, Dept. of Geosciences, University of Oslo*  
*J.P. Nystuen, Dept. of Geosciences, University of Oslo*
- 16.15 - 16.35 **Reinterpretation of the Lower Castlegate Sst (Book Cliffs, Utah) based on autostratigraphic ideas of spatial sedimentation patterns**  
*Andrew L. Petter, University of Texas, Austin, USA*  
*Ronal J. Steel, University of Texas, Austin, USA*  
*David Mohrig, University of Texas, Austin, USA*  
*Tetsuji Muto, Graduate School of Science and Technology, Nagasaki University, Japan*  
*Cornel Olariu, University of Texas, Austin, USA*  
*Paula J. Robinson, University of Aberdeen, Scotland*
- 16.35 **End of conference day 2**

## (room Lindesnes B)

Jurassic Core workshop  
Chalk Core workshop  
Tectonic & Climate Poster Session

### Program after lunch, May 6<sup>th</sup>

- DELTA AUTOSTRATIGRAPHY**
- 14.00 - 14.25 **Principles of autostratigraphy: Large-scale autogenesis of river deltas in response to dynamic sea level forcing**  
*Tetsuji Muto, Graduate School of Science and Technology, Nagasaki University, Japan*  
*Ron J. Steel, Dept. of Geological Sciences, University of Texas at Austin, USA*  
*John B. Swenson, Dept. of Geological Sciences, University of Minnesota Duluth, USA*  
*Andrew L. Petter, Dept. of Geological Sciences, University of Minnesota Duluth, USA*
- 14.25 - 14.45 **Autogenic Process Change in Modern Deltas: Lessons for the Ancient**  
*Cornel Olariu, Jackson School of Geosciences, The University of Texas at Austin, USA*  
*Ron J. Steel, Jackson School of Geosciences, The University of Texas at Austin, USA*
- 14.45 - 15.05 **Avulsion and its implications for fluvial-deltaic architecture: insights from the Rhine-Meuse delta**  
*E. Stouthamer, Dept. of Physical Geography, Faculty of Geosciences, Utrecht University, The Netherlands*  
*M.J.P. Gouw, Dept. of Physical Geography, Faculty of Geosciences, Utrecht University, The Netherlands*  
*K.M. Cohen, Deltares, Geological Survey of The Netherlands, The Netherlands*
- 15.05 - 15.35 **Coffee/Tea**
- SEISMIC STRATIGRAPHY**
- 15.35 - 15.55 **Paleocene to Lower Eocene deep-water depositional systems in the Norwegian North Sea: a 3D seismic case study from the eastern margin of the North Viking Graben**  
*Evelina Dmitrieva, Dept. of Earth Science and Engineering, Imperial College, UK*  
*Christopher Jackson, Dept. of Earth Science and Engineering, Imperial College, UK*  
*Mads Huuse, School of Earth, Atmospheric and Environmental Sciences, University of Manchester, UK*
- 15.55 - 16.15 **Sequence stratigraphy of epicontinental successions - with examples from the Triassic and the Cretaceous of the Barents Sea and Svalbard**  
*Evy Glørstad-Clark, Dept. of Geosciences, University of Oslo*  
*Ivar Midtkandal, Dept. of Geosciences, University of Oslo*  
*Jan Inge Faleide, Dept. of Geosciences, University of Oslo*  
*Johan Petter Nystuen, Dept. of Geosciences, University of Oslo.*
- 16.15 - 16.35 **Concepts in predicting lithology in prograding systems from high-resolution seismic imaging: Examples from the Arctic Barents Sea**  
*S. Bullimore, Statoil*  
*G.B. Larsen, Statoil*  
*I. Laursen, Statoil*  
*K. Sollid, Statoil*

## End of conference (room Lindesnes B)

Cretaceous-Paleogene Turbidite Core Workshop  
Autogenic & Modelling Poster Session  
Outcrop Focus on Poster Session

## Core Workshop (room Lindesnes B)

The core workshop will focus on different topics each day with Triassic non/marine and climatic themes for Day 1, a revival of Jurassic marginal marine reservoirs during Day 2, and two parallel sessions on Cretaceous chalk and Cretaceous to Paleogene turbidites, respectively, during Day 3.

**During Day 1 - the Triassic Day** - selected cores from key wells of the contrasting climatic provinces of the North Sea, Mid Norway and Barents Sea will be on display. The cores illustrate a wide range of non-marine to marginal-marine depositional environments, ranging from arid inland settings via fluvial and lacustrine to humid delta plains and delta fronts.

**During Day 2** we will revisit the marginal-marine reservoirs from the Lower, Middle and Upper Jurassic of the North Sea, Mid Norway and Barents Sea, allowing a comparison of sequence and sedimentary architectures in marginal marine and deltaic reservoirs formed in different tectonic settings and influenced by contrasting basin physiographies.

**Day 3** is split into two sessions: One session focuses on recent developments in Upper Cretaceous chalk sedimentology and stratigraphy. The other is devoted to reservoir architectures and stratigraphic connotations of the smaller to extensive turbidite fan systems in the Upper Cretaceous and Lower Paleogene of the North Sea, Møre Margin, and the Vøring Basin.

## Core workshop

### Program, May 4th room Lindesnes B

#### Theme: The Triassic on the Norwegian Continental Shelf

- 12:15 - 12:45 **The Triassic of the Lunde Formation in the Northern North Sea: facies and climate**  
*J. P. Nystuen, A. Ryseth, A. Kjemperud, R. Müller and E. Schomacker*
- 12:45 - 13:00 **The Triassic of the Central North Sea**  
*T. McKie*
- 13:00 - 13:15 **Stratigraphic development of the Statfjord Formation of the northern North Sea**  
*P. Sandbakken and C. Elfenbein*

### Program, May 5th room Lindesnes B

#### Theme: The Middle and Upper Jurassic on the Norwegian Continental Shelf

- 12:15 - 12:30 **The middle Jurassic Tarbert Formation from the Oseberg South Field and further regional implications**  
*T. Løseth and S. Bullimore*
- 12:30 - 12:45 **Sheltered tidal deltas within an active fault-block setting: the Cook Fm (Pliensbachian-Toarcian), Northern North Sea**  
*A. Folkestad, Z. Veselovsky and P. Roberts*
- 12:45 - 13:00 **The Upper Triassic to Lower Jurassic Åre Fm on Haltenbanken (Heidrun Field)**  
*M. Brekken*
- 13:00 - 13:15 **The variety of sedimentary facies in the Tilje Formation of the Donna Terrace (Victoria)**  
*F. LaFont, A. Capron and L. Schulbaum*
- 13:15 - 13:30 **Sedimentation at the Triassic – Jurassic boundary: SW Barents Sea**  
*A. Ryseth*
- 13:30 - 13:45 **The Callovian-Oxfordian Fensford Fm on Brage: Rift margin and intra-rift sourced depositional system**  
*I. Sharp, T. Dreyer, H. Fjellbirkeland, T. Sperre and M. Whittaker*

### Program, May 6th room Lindesnes B

#### Theme: Paleocene and Cretaceous turbidites and chalk on the Norwegian Continental Shelf

- 12:15 - 12:30 **Characterisation of dense zones in the chalk, Central Graben, North Sea**  
*F. Walgenwitz, B. Caline, M. Gennaro and J.P. Wonham*
- 12:30 - 12:45 **The Campanian Nise and Maastrichtian Springar formations, examples from selected cores**  
*M. Jill Vaksdal*
- 12:45 - 13:00 **Examples of linked turbidite-debrite beds, eastern margin Palaeocene Forties Fan, UK and Norwegian Central North Sea**  
*C. Davies, P. Houghton and B. McCaffrey*
- 13:00 - 13:15 **Paleocene to Eocene deep water deposits in the Northern North Sea**  
*B.K. Lotsberg Bryn and E. Imsland Wathne*
- 13:15 - 13:30 **The Ormen Lange Turbidite Systems – Turbidite Reservoir Hierarchy, Architectures and their Controlling Factors**  
*R. Ravnås, C. Pirmez, C. O'Byrne, J. MacEachern and C. Harvey*
- 13:30 - 13:45 **Reservoir and petrophysical characteristics of the Lysing sandstone in the Skarv area, Dønna Terrace, offshore Mid – Norway**  
*P. C. Mjelde*

## Virtual outcrop workshop

### Program, May 4th room Grip

- 12:10-12:35 **Constraining Permo-Triassic fluvial architecture and their related quantification using a 3D lidar dataset: Iberian Ranges, Spain.**  
*Joanna Morris et al., University of Durham*
- 12:35-13:00 **Characterisation of stratigraphic architectures and their impact on fluid flow in shallow and marginal marine reservoir analogues.**  
*Gary Hampson et al., Imperial College, London*
- 13:00-13:25 **Structure, stratigraphy and geocellular outcrop models of synrift depositional systems from the Miocene of the Suez Rift.**  
*David Hodgetts et al., University of Manchester*
- 13:25-13:50 **Large-scale virtual outcrops as analogues for the reservoirs of the NCS.**  
*John Howell et al., University of Bergen*

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*Joanna Morris et al., University of Durham*



## Seismic Stratigraphy Interpretation Tools

### Program, May 4th room Runde

- 12:10-12:35 **Geotime™: a tool for Seismic Stratigraphy analysis.**  
*Noomane Keskes, Sismage Team Total (France)*
- 12:35-13:00 **Extrema Technology for Seismic Stratigraphy Interpretation**  
*B. Savary-Sismondini et al., Schlumberger*
- 13:00-13:25 **OpendTect SSIS (Sequence Stratigraphic Interpretation System)**  
*Geert de Bruin, dGB Earth Sciences*
- 13:25-13:50 **Seismic Stratigraphy Interpretation Tools: GeoLeaf (Shell)**  
*M. Steiberg et al., Geoleaf (Shell)*

### Program, May 6th room Grip

- 12:10-12:35 **Seismic Stratigraphy Interpretation Tools: GeoLeaf (Shell)**  
*M. Steiberg et al., Geoleaf (Shell)*
- 12:35-13:00 **OpendTect SSIS (Sequence Stratigraphic Interpretation System)**  
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*Noomane Keskes, Sismage Team Total (France)*



## Stratigraphic Modelling

### Program, May 5th room Runde

- 12:10-12:35 **Simulation of the impact of tectonics and climate on sedimentary successions using stratigraphic forward model – Applications to turbiditic systems and extensional-compressional basin.**  
*Didier Granjeon, Institut Français du Pétrole*
- 12:35-13:00 **Source-to-Sink Modelling of Rift Basin Tectonics and Sedimentation**  
*E. Finch et al., University of Manchester*
- 13:00-13:25 **Process-based numerical modelling of wave reworking of a river dominated delta**  
*Dirk-Jan Walstra et al., Delft University of Technology*
- 13:25-13:50 **Towards a better understanding of deep-water turbiditic systems: laboratory experiments and numerical modelling**  
*R. Basani et al., Complex Flow Design AS*

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# Practical information

**Place:** Stavanger Forum, Stavanger, Norway  
**Phone no:** +47 51 59 81 00  
**Fax:** +47 51 55 19 15  
**Web:** www.stavanger-forum.no  
**Organizer:** Norwegian Petroleum Society (NPF)

**Final date of pre-registration:**  
24th of April 2010.

**NB! Registrations can be done after this date**

**Conference fee:**  
**Before 01.03.2010**  
**NPF personal members:** NOK 8.000,-  
plus 25% vat  
**Non-NPF-members** NOK 8.500,-  
plus 25% vat  
**Academics** NOK 3.500,-  
plus 25% vat

**After 01.03.2010**  
**NPF personal members** NOK. 9.000,-  
plus 25% vat  
**Non-NPF-members** NOK. 9.500,-  
plus 25% vat  
**Academics** NOK. 5.000,-  
plus 25% vat

**One day conference tickets:**  
NOK. 5.000,- plus 25%vat (Including Coffee/tea, lunch and conference paper (CD)).

**Cancellation fee** NOK. 900,-  
plus 25% vat

**Hotel reservation**  
Please use kundeservice@finnhotell.no  
Due to high demand for accommodation we urge you to contact kundeservice@finnhotell.no as soon as you know you will attend this event.

**The fee includes:**  
Coffee/tea  
Lunches  
Conference dinner - (Conference dinner will be held at Sola Strand Hotel, Stavanger)  
Conference papers (CD)  
Workshops

**Payment:**  
All delegates will receive an invoice from Norwegian Petroleum Society (NPF)

**University students:**  
Students, senior year/Master, are free to attend the conference by application. In order to apply for grant to cover travel and accommodation costs, please contact: Elisabeth Lorange, NPF,  
e-mail: [elisabeth.lorange@npf.no](mailto:elisabeth.lorange@npf.no)

The grants are sponsored by:

**Cancellations:**  
Cancellation must be received in writing by the 24th of April 2010 and will be subject to a NOK. 900,- cancellation fee unless a substitute delegate is offered. After this date, the full registration fee will apply, however, substitutions will still be accepted. Substitutions for registered delegates may be made at any time but we would appreciate prior notification.

**Programme changes:**  
It is sometimes necessary to change timing of the programme. The conference organizer will not be liable for any such unavoidable changes. If you receive duplicates of this brochure with different or incorrect addresses, please send us, NPF a message indicating the changes and we will update our records.

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