

DHRTC Summer School, Week 32 – Technical University of Denmark, Lyngby

Preliminary Programme

Some days have different starting points; please see the programme for specific times.

	Sunday 05/08 Accommodation at Hotel Postgarden	Monday 06/08 DTU (101, room S09) Introduction to the Danish mature fields	Tuesday 07/08 DTU (101, room S09) Scale and corrosion	Wednesday 08/08 Field trip, Stevns Klint Geology	Thursday 09/08 DTU (101, room S09) Chemistry in mature fields	Friday 10/08 DTU (101, room S01) Characterization of petroleum mixtures and EOR	Saturday 11/08 DTU (101, room S09) Geophysics	Sunday 12/08 Departure for Esbjerg
08.00				Departure for Stevns Klint. Meet up at the parking lot in front of building 101A.				
08.45		Welcome						
09.00-11.00		9.00-10.30: The improvement in oil and gas recovery from the Danish chalk fields is a story about technological evolution <i>Ole Jørgensen</i> 10.30-10.45: Coffee break 10.45-11.45: Today more than 50 years after start of production, DUC is chasing every bbl of oil in the most cost effective way possible <i>Lars Malcolm</i> 11.45-12.30: Advanced seismic analysis helps to locate bypassed oil and gas <i>Henriette Steinhart</i> <i>Alex Calvert</i>	9.00-9.15: Introduction to today's programme 9.15-10.45: General introduction to scale and corrosion and occurrence in the Danish North Sea Fields <i>Kitt Ravnkilde</i> 10.45-11.00: Coffee break	Departure for Stevns Klint Field trip to Stevns Klint <i>Peter Frykman</i>	Chemistry in Mature Fields Wettability, interfacial tension and surface tension at the molecular level <i>Theis Sølling</i>	Petroleum mixtures: - Where are the fluids of interest stored? - Sampling the fluids - How does the reservoir fluid behave under pressure, temperature - Categories of the fluids <i>Klaus Potsch</i>	Introduction to Geophysics and Geostatistics <i>Klaus Mosegaard</i> <i>Thomas Hansen</i>	
11.00-12.30			Introduction to chemistry of ionic compounds in solution <i>Karen Feilberg</i>		Instrumentation and methods for studies of surface chemistry <i>Theis Sølling</i>	Petroleum mixtures: <ul style="list-style-type: none"> Phase behavior of the fluids Production schemes Production problems Black oil approach Compositional approach Discussion: What do we need to know? <i>Klaus Potsch</i>	Geophysical modeling. Theory and exercises. <i>Klaus Mosegaard</i> <i>Thomas Hansen</i>	
12.30-13.30		Lunch (Cantina in 101)	Lunch (Cantina in 101)		Lunch (Cantina in 101)	Lunch (Cantina in 101)	Lunch (Cantina in 101)	

13.30-15.00		13.30-15.00: Total DK technology strategy supports mature fields excellence <i>Hans Henrik Kogsboll</i>	13.30-14.45: Corrosion mechanisms, experimental studies of corrosion types, monitoring and mitigation <i>Rajan Ambat</i> 14.45-15.00: Coffee break		Chemical traces and tracer tests. General mechanisms of production chemicals in mature fields <i>Theis Sjølling</i> Presentation on Dynamics of Liquid-Liquid Interfaces: application to reservoir fluid production and surface treatment <i>Simon Ivar Andersen</i>	Enhanced Oil Recovery: <ul style="list-style-type: none"> Why do we need EOR What methods for EOR exists EOR problems Discussion: What do we need to know? <i>Alexander Shapiro</i>	Geostatistics. Theory and exercises. <i>Klaus Mosegaard Thomas Hansen</i>	
15.00-16.30		15.00-15.15: Coffee break 15.15-16.30: Improved oil and gas recovery through research based innovation at DHRTC <i>Morten Williang Jeppesen</i>	Barium and Strontium scales, carbonate scales, monitoring and mitigation (including exercises in Excel, remember your laptop) <i>Philip Fosbøl</i> 16.30: Wrap up and goodbye for today		Digital rock physics: Applications of CT scanning <i>Theis Sjølling</i>	Enhanced Oil Recovery: Exercises/discussion Exercises with the thermodynamic software <i>Alexander Shapiro Klaus Potsch</i>	Putting it all together: Creating a reservoir model from geophysics and geostatistics. <i>Klaus Mosegaard Thomas Hansen</i>	

DHRTC Summer School, Week 33 – Aalborg University - Esbjerg

Preliminary Programme

	Sunday 12/08	Monday 13/08	Tuesday 14/08	Wednesday 15/08	Thursday 16/08	Friday 17/08	Saturday 18/08
	Arrival and accommodation at Danhostel Esbjerg	Aalborg University (Esbjerg) C1 – room 117	Aalborg University (Esbjerg) C1 – room 117 Monitoring and Automation in offshore Oil & Gas exploitation and production	Excursion Esbjerg Port	Aalborg University (Esbjerg) C1 – room 117 Seismic acquisition, processing and interpretation. Petrophysical welllogs	Aalborg University (Esbjerg) C1 – room 117 Assignment in groups	Aalborg University (Esbjerg) C1 – room 117 Assignment – Results and discussions
08.30				8.30-10.00: FINMUS (Fiskeri & Søfartsmuseet i Esbjerg). Mærsk sponsored Oil & Gas exhibition: "50 years O&G sector"			
08.45		Welcome	Topside process systems (facilities and operations)				
09.00-10.45		1. General info of Oil and Gas EDU and R&D activities at AAU 2. Introduction on topside operations <i>Jens Bo Holm-Nielsen</i>	Process monitoring and control (topside separation, slugging flows in pipelines and risers, gas-lift production wells, injection water treatment, produced water treatment) <i>Zhen Yu</i>	10.30-12.00: SemcoMaritime – Large contractor in	Reflection seismics: Theory, usability and pitfalls Reflectionseismics: How to do? <i>Ole Rønø Clausen</i>	Group work on assignment	Group work on assignment

		<i>Jens Muff</i>		the O&G sector	<i>NN</i>		
				12.00-12.30: Lunch at SemcoMaritime			
				12.30-14.00: Port of Esbjerg – from oil rigs to large scale offshore wind projects			
11.00-12.30		- Overview of Topside Gas/Oil/Water Separation Units - Process Design of Separation Train - Issues on Oil/Water Separation <i>Marco Maschiatti</i>	Emerging & advanced real-time monitoring and control techniques (Oil-in-Water, TSS, dissolved-oxygen, microscopy tech, fluorescence tech, tomography tech, MIMO control, MPC control, robust control) <i>Zhen Yu</i>	14.30-16.00: Total Engineering office in Esbjerg. Reconstruction of the Tyre Gas field and more.	Geological interpretation and use of Petrophysical well logs <i>Ole Rønø Clausen</i> <i>NN</i>	Group work on assignment	Group work on assignment
12.30-13.30		Lunch (Cantina, building A, room 150)	Lunch (Cantina, building A, room 150)		Lunch (Cantina, building A, room 150)	Lunch (Cantina, building A, room 150)	Lunch (Cantina, building A, room 150)
13.30-15.00		Potential Applications of Membrane Technologies within Oil & Gas Production Units <i>Jens Muff</i>	Robotics for offshore OG applications (inline robot, ROVs and drones) <i>Petar Løhndorf</i>		Chalkfields in the North Sea – examples <i>Ole Rønø Clausen</i> <i>NN</i>	Group work on assignment	Presentation and discussions of results
15.00-16.30		Production Chemistry – an overview of applications and challenges <i>Rudi Nielsen</i>	Lab testing pilot plants, advanced instruments and equipment <i>Simon Pedersen</i> <i>Stefan Jespersen</i>		Startup of case study assignment: Identify a chalk reservoir, and suggest well locations <i>Ole Rønø Clausen</i> <i>NN</i>	Group work on assignment	Presentation and discussions of results