# YOUNG RESEARCHER'S DAY 2023



## Detailed Program 12 May 2023 DTU Lyngby, Building 101A, Glassalen















#### Summary

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#### **Practical Information**

The Young Researcher's Day is a great opportunity to share your research with other young researchers and learn about their studies. Here you find practical information on the event. The main session will take place at the Glassal in DTU building 101, in the canteen area. The registration will open from 08:30. There you will receive your nametag and will be pointed to where you can attach your poster, if you have one, and that has not been done prior to the event. The afternoon/evening part of the event will take place in DTU Offshore (Elektrovej 375). This part of the event is exclusively for the presenters that have registered for dinner.



The Glassal is located in the North-East quadrant of DTU (building 101), and DTU Offshore is located in the South-West quadrant (building 375). Link to the map: <u>https://bit.ly/3Jp9uzl</u>.

#### Schedule of the Event

Friday, 12 May 2023

08:30 - 09:00	Registration and icebreaker with coffee and tea
09:00 – 09:15	Welcome speech
09:15 – 10:00	Elevator pitches (round 1)
10:00 - 10:45	Poster session (round 1)
10:45 – 11:30	Elevator pitches (round 2)
11:30 – 12:15	Poster session (round 2)
12:15 – 12:45	Lunch
12:45 – 13:30	Elevator pitches (round 3)
13:30 – 14:15	Poster session (round 3)
14:15 – 14:30	Coffee break
14:30 – 15:00	Best poster award and closing of scientific session
15:00 – 15:15	Meet and walk together to building 375 (presenters only)
15:15 – 17:30	Team building (presenters only)
17:30 - 21:00	Drinks, dinner, and socializing (presenters only)

#### Posters map

Code for the posters: Round (1-3) Group (A-D) Order (1-4) RIXJ

Glassal map:



### Round 1 elevator pitches

09:15	[A.1] Hydro-Mechanical-Chemical Modelling of CO2 storage in a North Sea hydrocarbon chalk reservoir Behzad Hosseinzadeh, DTU Offshore
	<b>[B.1] Inorganic pollutants in produced water</b> Neri Bonciani, DTU Offshore
	[C.1] Chemical Fingerprinting of the Leaked Fluid in the B-Section of the oil wells of the Danish North Sea Sahar Hafizi, DTU Offshore
	<b>[D.1] Nanofilament Coatings</b> Siad Ali, Aarhus University
	[A.2] Integrated workflow for detecting flow-potential zones in shallow overburden Marcus Thomas, DTU Offshore
	<b>[D.2] Exploiting readily available biomasses in the pursuit of new molecules</b> Asger Røikjær Koue, University of Copenhagen
	[B.2] Novel oxygen scavengers for produced water reinjection Per Reichert, DTU Offshore
	[C.2] Structural damage detection using responses recorded during extreme events Luigi Caglio, DTU Construct
	<b>[D.3] Study of particle and droplet retention in Calcite coated glass micromodels</b> Tinku Saikia, NTNU
	[A.3] Exploring fractures and flow patterns in chalk Tala Maria Aabø, University of Copenhagen
	[C.3] Black tea extract for corrosion prevention of carbon steel under CO2 conditions Ghada Shaban, DTU Construct
	[D.4] Statistics and numerical simulation of extreme wave Yanyan Zhai, DTU Construct

#### [A.4] Derisking CCUS offshore Denmark

Shahjahan Laghari, The Geological Survey of Denmark and Greenland (GEUS)

[C.4] The Resilience of Scale

Isaac Løge, DTU Chemical Engineering

[B.3] Elasticity of diatomites

Ermis Proestakis, DTU Sustain

#### Round 2 elevator pitches

10:45	[D.1] Exploring fish aggregations at oil and gas platform foundations in the North Sea
	Bruno Ibanez-Erquiaga, DTU Aqua
	[A.1] Bio-Reactive Transport Modelling: Upscaling from Core to Field scale Ali Mahmoodi, DTU Offshore
	[B.1] Stability of surfactant-oil-water emulsion systems Tian Wang, DTU Offshore
	[C.1] New Reservoir Sealing Techniques: Utilizing Thermal Sensitive Polymer Gel for Low Permeability Chalk Reservoirs Hamed Movahedi, DTU Physics
	[D.2] Hydrothermal oxidation of spent H2S scavenger: from the laboratory to the pilot scale Alessandro Perrucci, Aalborg University
	[A.2] Spatial Distribution of Porosity in Chalk Peter Winkel Rasmussen, DTU Compute
	[B.2] Determination of levels of production chemicals in water phase using capillary electrophoresis Liridon Aliti, DTU Offshore
	[C.2] A modular approach to building polymer-based durable plugs Magdalena Skowyra & Maria Echarri Giacchi, DTU Chemical Engineering
	[D.3] On-site acid production

Frederick Christensen, Aarhus University

**[A.3] Injectivity impairment in deep geothermal reservoirs** Ehsan Sabooniha, DTU Offshore

**[C.3] Mechanical testing and modelling of oil&gas well cement sheath** Pablo Alberdi Pagola, DTU Construct

[D.4] Development of thin-film composite membranes for recovery of MEAtriazine Alaa Khalil, Aalborg University

[A.4] Computer simulation of the free surface in two phase flows Jesper Roland Kjærgaard Qwist, DTU Construct

**[B.3] Augmentation of Corrosion Products** Dilshad Shaikhah, University of Leeds

[C.4] Effect of impurities on corrosion behavior of L80-1Cr steel for CO2 storage applications Avinash Ingle, DTU Construct

#### Round 3 elevator pitches

12:45 **[B.1] Curve resolution methods applied to crude oil-in-water dispersions** Isabelle Viegas, DTU Offshore

> **[D.1] Determining Marine Biodegradation Kinetics of Chemical Mixtures Discharged From Offshore Oil Platforms** Mette Møller, DTU Sustain

[A.1] How does the flow potential of fracture networks change by pore pressure reduction?

Mohmmad Reza Hajiabadi, DTU Offshore

**[C.1] Investigation of Cement-Metal interface corrosion in CO2 storage** Jie Yu, DTU Construct

[D.2] MOFs preparation for H2 storage Ludovico Linzi, DTU Offshore

[A.2] CT-based modelling of chalk: an integrated framework for estimating permeability Carlos Augusto Soares Ferreira, DTU Offshore

[B.2] Model Predictive Control for Slug Flow Suppression and Water Treatment in Daily Operation of Oil Field Facilities Zhanhao Zhang, DTU Compute
[C.2] Fate and transport of subsurface fluid leaks in annular cement Saeid Barzegarkhordehbalagh, DTU Offshore
<b>[D.3] Halophyte Extract Based Biocide VS Conventional Biocide, THPS - Bechmark</b> Jakob Stein, Aalborg University Esbjerg
[A.3] Investigation of a chemical solution for mitigating the injectivity decline induced by mineral scales during PWRI applications Hamed M. Kermani, DTU Offshore
<b>[D.4] Integrating Hazard-oriented Knowledge Representation for Multilevel Flow</b> <b>Modelling in Process Hazard Identification</b> Ruixue Li, DTU Elektro
[A.4] Role of the hydromechanical properties of fault on fluid injection-induced seismicity with rate-and-state dependent friction model Tianran Ma, DTU Elektro
[B.3] Hammerstein-Wiener Model Identification of De-oiling Hydrocyclone Separation Efficiency Stefan Jespersen, DTU Elektro
[C.3] The composition of the filter cake obtained by flooding the core with produced water Maksim Kurbasov, DTU Elektro