



**EAGE**



**ECMOR | 2022**

**European Conference on the Mathematics of Geological Reservoirs**

**5-7 SEPTEMBER 2022 | THE HAGUE, THE NETHERLANDS**

**FIRST ANNOUNCEMENT  
AND CALL FOR PAPERS**

**[WWW.ECMOR.ORG](http://WWW.ECMOR.ORG)**



**“INNOVATIONS IN DIGITALIZATION,  
ARTIFICIAL INTELLIGENCE, AND AUTOMATION  
INCREASE EFFICIENCY AND PRODUCTIVITY OF  
SUBSURFACE ENERGY SYSTEMS”**

## **WELCOME TO ECMOR 2022!**

On behalf of EAGE and the ECMOR scientific committee, we are pleased to announce the organization of the European Conference on the Mathematics of Geological Reservoirs, ECMOR 2022. The conference will be held as a 3-day hybrid event with physical attendance and online elements in The Hague, The Netherlands, 5-7 September 2022.

For more than 30 years, ECMOR has been a key conference for applied mathematicians, engineers and geoscientists from academia, governmental bodies and industry working on the mathematics of hydrocarbon recovery, numerical modelling of underground geological systems and physico-chemical processes of fluid flow in subsurface porous media.

To meet the 1.5°C global warming target in the Paris Agreement, carbon emissions should achieve net zero within 2050. This calls for significant changes in the selection of energy resources, and subsurface systems will play a key role in the energy mix. These include oil/gas production, geothermal power, geo-energy for heating and cooling, H<sub>2</sub> storage, and carbon capture and storage. Innovations in digitalization, artificial intelligence, and automation deliver new opportunities to increase efficiency and productivity of subsurface energy systems.

In 2020, due to the Covid19 pandemic, ECMOR was organized as a fully virtual event with around 200 participants from over 20 countries and 6 continents. Positive participant and organizational experiences have led us to apply a hybrid format to ECMOR 2022. Physical attendance is expected for full paper presentations, poster presentations can be delivered either physical or online.

We look forward to receiving your abstracts and to seeing you in The Hague!

**Mickaele Le Ravalec & Ralf Schulze-Riegert**  
Co-chairs, ECMOR 2022



## ABOUT ECMOR

Every two years, the ECMOR conference gathers applied mathematicians and geoscience engineers from both academia and industry to focus on recent advances in geological and reservoir modelling. The ECMOR conferences started more than 30 years ago in a sequence of meetings across Europe and continue a tradition of combining high-quality mathematical and computational science with engineering applications. The ECMOR conference provides a forum for researchers and engineers from academia, governmental bodies and industry to meet in an informal atmosphere and to discuss key technical and mathematical challenges in modelling and predicting the behaviour of geologic reservoirs and subsurface energy systems.

## SCIENTIFIC COMMITTEE

Ahmed Elsheikh	Heriot-Watt University
Alberto Cominelli	Eni
Arne Skorstad	Resoptima
Dayal Gunasekera	Schlumberger
Dominique Guérillot	Terra 3E SAS
Edel Reiso	Equinor
Hadi Hajibeygi	Delft University of Technology
Jeroen Vink	Shell
Louis Durlofsky	Stanford University
Michael-Peter Suess	Eberhard Karls University Tübingen
Mickaele Le Ravalec*	IFP Energies Nouvelles
Pallav Sarma	Tachyus
Pierre Samier	TotalEnergies
Ralf Schulze-Riegert*	Schlumberger
Roland Masson	Université Côte d'Azur
Stephan Matthai	University of Melbourne
Taufik Ait-Ettajer	Repsol

\* Co-chairs

## ABOUT THE HAGUE

The Hague, the seat of Dutch Government, is a city on the frontier of major developments in science and engineering. In The Netherlands, The Hague is known as the centre of the generation of energy. Many initiatives in the city actively support the development of sustainable solutions, ensuring the transition to renewable forms of energy in the near future. Coupled with a vibrant culture and great food, The Hague provides the perfect location for the ECMOR 2022 conference.

## ABOUT THE VENUE

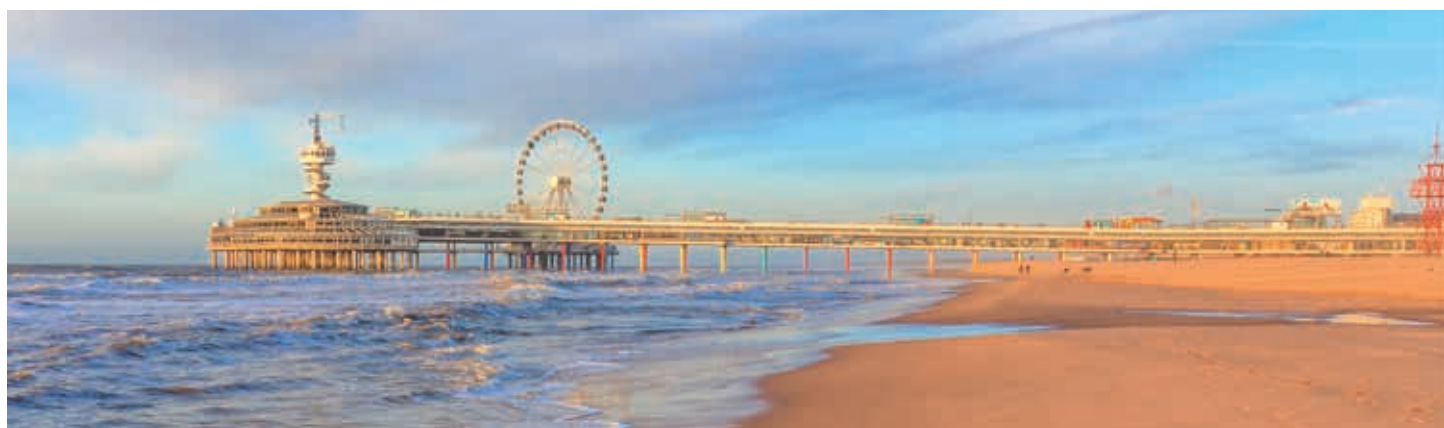
The Hague Conference Centre New Babylon is situated right next to The Hague Central Station, in the heart of the city. Its location is within 30 minutes from both Schiphol International Airport and The Hague/Rotterdam Airport.

The venue's modern facilities and ideal location offer a uniquely appealing environment for our conference.

## FORMAT OF THE CONFERENCE

ECMOR 2022 will address the changing travel behaviour and constraints of participants due to the (hopefully aftermath of the) pandemic and related consequences. We believe that participants will generally benefit from a physical presence during the conference. For those not able or willing to travel, ECMOR 2022 offers options for an online participation under a modified conference format:

- Accepted abstracts require a full paper submission for presentations;
- Paper submissions do not require physical attendance at the conference;
- Oral presentations will require onsite presence of the presenting author;
- Poster presentations can be delivered in an online format or in person on site;
- Accepted oral presentations will be moved to an online poster format in case presenters cannot travel as planned;
- All accepted full paper will be published on EAGE's EarthDoc database;
- Authors of selected papers will receive an opportunity to publish their contribution in a special edition of the Computational Geoscience Journal.



## CONFERENCE OVERVIEW

5 September 2022	Technical Programme
5 September 2022	Networking Reception
6 September 2022	Technical Programme + Conference Dinner
7 September 2022	Technical Programme

## TOPICS

We invite all applied mathematicians, engineers and geoscientists to contribute to the technical programme, to share results, experiences and new ideas during the ECMOR conference. The Call for Abstracts deadline is 1 February 2022. For more information on submitting your abstract, please refer to [www.ecmor.org](http://www.ecmor.org).

The technical programme of ECMOR 2022 consists of oral and poster presentations on a broad selection of topics.

### PHYSICAL MODELLING

1. Rock fluid interaction and surface effects
2. Fluid properties and compositional modelling
3. Pore scale modelling
4. Flow and mechanics of fractured media
5. Geomechanics, compaction and subsidence
6. Geochemical modelling
7. EOR
8. CO<sub>2</sub> sequestration
9. Energy storage and geothermal

### COMPUTATIONAL METHODS

1. Mesh generation and discretization scheme
2. Linear and nonlinear solvers
3. Upscaling and multiscale methods
4. Reduced order modelling
5. Statistical and stochastic methods
6. High-performance computing
7. Machine learning and data-driven/hybrid methods

### UNCERTAINTY QUANTIFICATION AND OPTIMIZATION

1. Geostatistics and reservoir characterization
2. Modelling of geological uncertainties
3. Data assimilation and history matching
4. Risk and uncertainty analysis
5. Optimization and planning
6. Closed-loop reservoir management, smart fields
7. Response surfaces and machine learning surrogate modelling
8. AI approaches to reservoir management and control



## SUBMISSION GUIDELINES

The Call for Abstracts deadline is 1 February 2022. To submit a paper or any additional information, please refer to the event website.

## IMPORTANT DATES

Abstract Submission Deadline	1 February 2022
Early Registration Deadline	15 May 2022
Full Paper Submission Deadline	1 June 2022
Regular Registration Deadline	31 August 2022
ECMOR 2022	5-7 September 2022

## SOCIAL PROGRAMME

To complement the conference, a networking reception will be organized as well as a conference dinner at a special location. Keep a close eye on our website to check the most up-to-date information about the social programme of ECMOR 2022.

## SPONSORING

ECMOR 2022 offers excellent sponsoring opportunities to create high visibility for your brand. For more information about sponsoring, please refer to the 'Sponsor Guide' that is available on the conference website or contact us via [europe@eage.org](mailto:europe@eage.org).

## CONTACT

Please visit the ECMOR 2022 website at [www.ecmor.org](http://www.ecmor.org) for the latest updates. For any questions about ECMOR 2022, please contact the EAGE Europe Office via [europe@eage.org](mailto:europe@eage.org) or call us at +31 88 995 5055.

EUROPE OFFICE  
+31 88 995 5055  
[EAGE@EAGE.ORG](mailto:EAGE@EAGE.ORG)

RUSSIA & CIS OFFICE  
+7 495 640 2008  
[MOSCOW@EAGE.ORG](mailto:MOSCOW@EAGE.ORG)

MIDDLE EAST/AFRICA OFFICE  
+971 4 369 3897  
[MIDDLE\\_EAST@EAGE.ORG](mailto:MIDDLE_EAST@EAGE.ORG)

ASIA PACIFIC OFFICE  
+60 3 272 201 40  
[ASIAPACIFIC@EAGE.ORG](mailto:ASIAPACIFIC@EAGE.ORG)

LATIN AMERICA OFFICE  
+57 1 7449566 EXT 116  
[AMERICAS@EAGE.ORG](mailto:AMERICAS@EAGE.ORG)

HEAD OFFICE • PO BOX 59 • 3990 DB HOUTEN • THE NETHERLANDS • +31 88 995 5055 • [EAGE@EAGE.ORG](mailto:EAGE@EAGE.ORG)



join us on social media!