

2ND EDITION: AAPG GEOSCIENCES TECHNOLOGY WORKSHOP GEOLOGICAL PROCESS-BASED FORWARD MODELING



TECHNICAL PROGRAM COMMITTEE

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WORKSHOP OUTLINE

Today's oil and gas industry encounters two major challenges. In order to secure global energy supply increasing exploration and production from complex stratigraphic-diagenetic conventional and unconventional plays remains highly important. At the same time, Carbon Capture and Storage (CCS) poses new technological challenges that will impact both the industry and academia for decades to come. Both areas require a similar approach to subsurface analysis, e.g. prediction and risking of reservoir heterogeneity and seal integrity. Currently, prediction and risking rely primarily on stochastic geostatistical approaches, which have seen an impressive development over the last few decades. However, exploration and production from complex plays as well as CO₂ storage in depleted reservoirs and saline aquifers have revealed higher levels of uncertainty in geostatistical reservoir models.

Reasons include:

- Statistical models do not fully capitalize on the geological information available
- Prediction and risk assessment usually apply a single statistical approach
- Different geostatistical approaches produce varying predictive models
- Surface geological studies (analogues) have proven highly pronounced rock heterogeneity
- Multiple, concurrent processes with various feedback mechanisms control reservoir quality
- Physical-chemical properties of CO₂ in its various states differ from hydrocarbons

In order to meet current and future challenges of hydrocarbon exploration and production as well as CO₂ storage, the industry needs to develop new, additional approaches to reservoir, seal, source rock and storage prediction. The key requirement for reducing uncertainty and risk in is a rigorous understanding and quantification of geological processes and controls.

Fundamental research in geological process-based numerical forward modeling started in the 1980s in academia and industry. However, the exploration industry has only recently started to more widely deploy process-based modeling. The initial focus has been on depositional modeling using diffusion, Navier-Stokes, Navier-Stokes and Fuzzy Logic and hybrid geometric approaches, but more recently a diverse range of approaches is being adopted. They include fuzzy logic, cellular automata and various other reduced-complexity modeling approaches that produce output information on petrofacies, depositional environment, and textural porosity. Forward modelling is also being applied to diagenetic processes using reaction-transport modeling (RTM) or reduced complexity proxy rules and on geomechanical modeling usually using finite element or discrete fracture network modeling based on post-burial mechanical stratigraphy and local/regional stress patterns. Process-based geological forward modeling has shown highly promising results for reservoir quality, seal integrity and sweet spot prediction in complex play and initially also storage settings.

Many challenges persist, including:

- Calibration of numerical input parameters specific to age, climate and structural settings
- How to use physical experiments and outcrop-reservoir analogue studies for model verification
- Automated input parameter optimization
- Multi-scale process-based models from basin to play and intra-well scale
- Linking and integrating modeling approaches for depositional, diagenetic and structural modeling
- Integrating textural, diagenetic and fault/fracture-related poroperm models
- Sensitivity analysis and quantitative risk assessment of multiple modeling realizations
- Volumetric assessment of CO₂ storage capacity
- Effective implementation in existing standard industry workflows

The 2nd edition of the workshop builds on the results of the 1st edition, which was held on May 23-25, 2022 in Abu Dhabi. It is expected to review and discuss technology developments in geological process-based forward modeling achieved during the last 2 years. Perspectives for future technology developments and implementation in industry workflows will be updated and or adapted as deemed necessary. The additional focus on CO₂ storage and other sustainability-related application for geological process-based forward modeling will considerably extend the scope of the 2nd edition of the workshop. The workshop will bring together invited experts and interested researchers from both industry and academia. We will concentrate on geological process-based forward modeling rather than on geostatistical modelling, flow simulation, chemical modeling or hydrocarbon systems modeling. 5 sessions spread over a period of 2 1/2 days will be dedicated to key challenges in process-based geological forward modeling, finishing with a concluding session to define the best practical way forward.

WORKSHOP GUIDELINES

FORMAT

The workshop will be 3 days, consisting of oral presentations, poster presentations and breakout sessions where participants can discuss and investigate a specific theme that is of mutual interest. The first day will feature an inaugural keynote speech by a high-profile professional from the industry.

ATTENDANCE

Registrations are invited from all relevant disciplines with experience and/or knowledge of the subject areas being addressed in the workshop. Registrations will be accepted on a first-come, first-served basis.

CALL FOR POSTER ABSTRACTS

You are invited to prepare a poster for presentation at the workshop. If you are interested in participating, please send a short abstract to cnavarro@aapg.org by 29 April 2024. All posters will be produced as pull-up banners and delivered by AAPG. There will not be any other format available for poster display.

REGISTRATION TYPES & FEES

Fees are inclusive of onsite documentation, coffee breaks and luncheons.

\$1,850 AAPG Non-Member Fee
\$1,850 Join and Save
\$1,650 AAPG Member Fee
\$1,550 Committee/Presenter
\$850 AAPG Young Professional Non-Member Fee
\$750 AAPG Young Professional Member Fee
\$500 Academia Fee
\$350 AAPG Student Non-Member (Masters)
\$250 AAPG Student Member (Masters)

*Please be advised that fees are non-inclusive of 5% VAT.

**To avail a Member rate you must be an active member of AAPG.

***To register as a Young Professional you must be under the age of 35 with less than 10 years of work experience.

REGISTRATION DEADLINE

To guarantee your seat, please make sure to register by 20 May 2024.

CANCELLATION POLICY

AAPG will refund the tuition, less a \$100 processing fee, if the request is received no later than 30 days prior to the workshop. Cancellations must be made in writing. The registrar will accept cancellation notices by telephone, but all such notices must be followed up by fax or e-mail. No refund will be made for cancellations received less than 30 days prior to a workshop being given. Nonpayment of tuition does not constitute automatic cancellation. If no cancellation notice is received by 30 days prior to a workshop, participants are liable for full tuition. AAPG reserves the right to cancel a workshop if enrollment is insufficient to ensure proper effectiveness. Substitutions for individuals can be made at any time. A paid enrollment may be transferred one time to a future workshop if the request is received prior to the 30-day cut-off date.

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SPONSORSHIP PACKAGES



FOR MORE INFORMATION VISIT
middleeast.aapg.org

AAPG MIDDLE EAST

Platinum Sponsor

US\$ 17,500

- Company logo in the workshop brochure.
- Company logo in all email broadcasts sent to AAPG members to promote the event.
- Company mention in all social media posts.
- Company logo and sponsorship title plus a link included on the AAPG website under 'Event Sponsors'.
- Prominent logo on all onsite sponsorship acknowledgement displays.
- Verbal acknowledgement by the Workshop Chairs at the opening of the event.
- Company logo displayed on common slide between technical sessions.
- Company logo included in the onsite technical program.
- Company logo included in the registration confirmation emails.
- Three (3) complimentary registrations to attend the workshop.
- Opportunity to have 1 table top stand set up in the ballroom pre function area for all 3 days of the event with a 42" screen to showcase company products, demos and platforms.

Gold Sponsor

US\$ 15,500

- Company logo in the workshop brochure.
- Company logo in all email broadcasts sent to AAPG members to promote the event.
- Company mention in all social media posts.
- Company logo and sponsorship title plus a link included on the AAPG website under 'Event Sponsors'.
- Prominent logo on all onsite sponsorship acknowledgement displays.
- Verbal acknowledgement by the Workshop Chairs at the opening of the event.
- Company logo displayed on common slide between technical sessions.
- Company logo included in the onsite technical program.
- Company logo included in the registration confirmation emails.
- Two (2) complimentary registrations to attend the workshop.
- Opportunity to have 1 table top stand set up in the ballroom pre function area for 2 days of the event with a 42" screen to showcase company products, demos and platforms.

Silver Sponsor

US\$ 12,500

- Company logo in the workshop brochure.
- Company logo in all email broadcasts sent to AAPG members to promote the event.
- Company mention in all social media posts.
- Company logo and sponsorship title plus a link included on the AAPG website under 'Event Sponsors'.
- Prominent logo on all onsite sponsorship acknowledgement displays.
- Verbal acknowledgement by the Workshop Chairs at the opening of the event.
- Company logo displayed on common slide between technical sessions.
- Company logo included in the onsite technical program.
- Company logo included in the registration confirmation emails.
- One (1) complimentary registration to attend the workshop.
- Opportunity to have 1 table top stand set up in the ballroom pre function area for 1 day of the event with a 42" screen to showcase company products, demos and platforms.

Workshop Dinner

US\$ 14,000

- Company logo in the workshop brochure.
- Company logo in all email broadcasts sent to AAPG members to promote the event.
- Company mention on all social media posts.
- Company logo and sponsorship title plus a link included on the AAPG website under "Event Sponsors".
- Prominent logo on all onsite sponsorship acknowledgement displays.
- Verbal acknowledgement by the Workshop Chairman at the dinner.
- Company logo displayed on common slide between technical sessions.
- Company logo in the onsite technical program.
- Company logo included in the registration confirmation emails.
- Company logo displayed on table tent cards throughout the dinner.
- Opportunity to invite 10 guests to the dinner.

Luncheons

PER LUNCHEON / 3 PACKAGES ARE AVAILABLE US\$ 5,000

- Company logo in the workshop brochure.
- Company logo in all email broadcasts sent to AAPG members to promote the event.
- Company mention in all social media posts.
- Company logo and sponsorship title plus a link included on the AAPG website under 'Event Sponsors'.
- Prominent logo on all onsite sponsorship acknowledgement displays.
- Verbal acknowledgement by the Workshop Chairs at the opening of the event.
- Company logo displayed on common slide between technical sessions.
- Company logo included in the onsite technical program.
- Company logo displayed on tent cards during the luncheon.

Coffee Break Sponsor

PER day / 3 PACKAGES ARE AVAILABLE US\$ 3,500

- Company logo in the workshop brochure.
- Company logo in all email broadcasts sent to AAPG members to promote the event.
- Company mention in all social media posts.
- Company logo and sponsorship title plus a link included on the AAPG website under 'Event Sponsors'.
- Prominent logo on all onsite sponsorship acknowledgement displays.
- Verbal acknowledgement by the Workshop Chairs at the opening of the event.
- Company logo displayed on common slide between technical sessions.
- Company logo included in the onsite technical program.
- Company logo displayed on tent cards during the coffee breaks.

Delegate Bag

US\$ 7,500

- Company logo in the workshop brochure.
- Company logo in all email broadcasts sent to AAPG members to promote the event.
- Company mention in all social media posts.
- Company logo and sponsorship title plus a link included on the AAPG website under 'Event Sponsors'.
- Prominent logo on all onsite sponsorship acknowledgement displays.
- Verbal acknowledgement by the Workshop Chairs at the opening of the event.
- Company logo displayed on common slide between technical sessions.
- Company logo included in the onsite technical program.
- Delegate bags distributed to all workshop attendees to be branded with company logo*

*Bags to be sourced and provided by AAPG

*Sponsorship to be confirmed no less than 2 months prior to the workshop start date

Delegate Bag Insert Sponsor [exclusive]

US\$ 3,000

- Verbal acknowledgement by the Workshop Chairs at the opening of the event.
- Company logo and sponsorship title plus a link included on the AAPG website under 'Event Sponsors'.
- Company logo included in the onsite technical program.
- Company has the exclusive opportunity to include their promotional material in the workshop delegate bag which is distributed to all attendees.

Delegate Bag Insert Sponsor [non-exclusive]

US\$ 1,500

- Verbal acknowledgement by the Workshop Chairs at the opening of the event.
- Company logo and sponsorship title plus a link included on the AAPG website under 'Event Sponsors'.
- Company logo included in the onsite technical program.
- Company has the opportunity to include their promotional material in the workshop delegate bag which is distributed to all attendees (non-exclusive).

Lanyards Sponsor

US\$ 6,000

- Company logo in the workshop brochure.
- Company logo in all email broadcasts sent to AAPG members to promote the event.
- Company mention in all social media posts.
- Company logo and sponsorship title plus a link included on the AAPG website under 'Event Sponsors'.
- Prominent logo on sponsorship acknowledgement displays.
- Verbal acknowledgement by the Workshop Chairs at the opening of the event.
- Company logo displayed on common slide between technical sessions.
- Company logo in the onsite technical program.
- Lanyards distributed to all workshop attendees to be co-branded with AAPG and sponsor company logo*

*Lanyards to be sourced and provided by AAPG

Workshop Abstract Sponsor

US\$ 2,000

- Verbal acknowledgement by the Workshop Chairs at the opening of the event.
- Company logo and sponsorship title plus a link included on the AAPG website under 'Event Sponsors'.
- Prominent company logo included on the 'Digital Abstracts' distributed to all workshop attendees.
- Company logo included in the onsite technical program.

Workshop Survey Sponsor

US\$ 2,000

- Verbal acknowledgement by the Workshop Chairs at the opening of the event.
- Company logo and sponsorship title plus a link included on the AAPG website under 'Event Sponsors'.
- Prominent company logo included on the workshop survey distributed to all attendees.
- Company logo included in the onsite technical program.

Table Top Exhibitor

US\$ 3,500

- Verbal acknowledgement by the Workshop Chairs at the opening of the event.
- Company logo and sponsorship title plus a link included on the AAPG website under 'Event Sponsors'.
- Inclusion of sponsor's logo in the onsite technical program.
- 1 table top stand set up in the ballroom pre function area for all 3 days of the event with a 42" screen to showcase company products, demos and platforms.

NOT FINDING WHAT YOU ARE
LOOKING FOR? CONTACT US!

SPONSORSHIP PACKAGES CAN BE CUSTOMIZED TO BEST SUIT
YOUR ORGANIZATION'S GOALS FOR BRAND AWARENESS.

* All prices exclude 5% VAT



27 - 29 May 2024 · Abu Dhabi, UAE

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sponsorship form

YES! OUR COMPANY WANTS TO SUPPORT THIS EVENT.
INDICATED BELOW ARE OUR SELECTIONS:

First item and amount

Second item and amount

Third item and amount

Total amount

Company name

Billing Contact person

Title/Position

Billing address (Include company billing name, if not previously mentioned)

City

Country

Email

Phone

Website

Authorized Signature

Full Name

Title

Return this form to:

Cora Navarro
AAPG Middle East & Africa

Marketing Manager

Email: cnavarro@aapg.org