

AAPG **ACE 2019**
ANNUAL CONVENTION & EXHIBITION
19 - 22 May • San Antonio

Call for Abstracts

In conjunction with:



austin
geological
society

ACE.AAPG.org

Call for Abstracts Open – Submit Today!

Submission Deadline: 11 October 2018

The Austin Geological Society and the South Texas Geological Society are proud to host the AAPG 2019 Annual Convention & Exhibition (ACE) at the Henry B. Gonzalez Convention Center in San Antonio, Texas held 19–22 May. Submit your papers today! Your research, knowledge, and expertise are what helps our geoscience community navigate towards *A Sustainable Future*.

The Technical Program Committee invites you to submit abstracts under the theme/subthemes that have direct application to the industry. In particular, abstracts that deal with the hottest, most relevant play areas, both domestic and international, are most desirable. The committee also encourages case studies that illustrate the successful implementation of new techniques and technologies. In addition, student participation is a priority – AAPG ACE is an invaluable opportunity to showcase graduate research that advances the industry.

Theme Descriptions and Subthemes for ACE 2019 Technical Program

Theme 1: Siliciclastic Systems

Theme 1 will showcase siliciclastic sedimentary plays, reservoir architectures, and facies distributions ranging from pore- to basin-scale. Emphasis will be placed on practical applications and novel techniques and workflows for understanding sedimentary systems, and how these add value in exploration and development.

Subthemes:

- ★ Source-to-sink and basin analysis
- ★ Continental sedimentary system dynamics
- ★ Paralic and shallow marine sedimentary system dynamics
- ★ Deepwater sedimentary system dynamics
- ★ Controls on reservoir quality and rock property trends
- ★ Innovative workflows to determine age, provenance and paleoclimate
- ★ New advances in mature basins
- ★ Sedimentation and tectonics - evolving accommodation in complex basins
- ★ General contributions

Theme 2: Carbonates, Evaporites, and Mixed Systems

Carbonate reservoirs hold more than half of the world's hydrocarbon reserves. Theme 2 will explore all aspects of carbonate reservoirs and applicable analogs including deposition, diagenesis, reservoir models, and pore networks.

Subthemes:

- ★ Linking systems: carbonates, source rocks, and extrinsic controls on their occurrence
- ★ Characterizing and modeling non-matrix porosity and permeability (fractures and karst) in carbonate reservoirs
- ★ Matrix-dominated pore systems: rock properties and reservoir performance
- ★ Modeling carbonate diagenesis for reservoir quality prediction
- ★ Permian Basin source-to-sink sedimentology and stratigraphy
- ★ Cretaceous carbonates of Gulf of Mexico petroleum systems
- ★ Stratigraphically mixed systems
- ★ Microbial carbonates - modern and ancient analogs for pre-salt deposits
- ★ Depositional models for carbonate and evaporite systems
- ★ General contributions

Theme 3: Geochemistry, Basin Modeling, and Petroleum Systems

Geochemistry and basin modeling provide the means to describe the evolution of the petroleum system in both conventional and unconventional plays. Theme 3 will showcase new methodologies and integrated workflows in geochemistry and basin modeling, applications for reservoir characterization, production optimization and hydrocarbon and non-hydrocarbon risk assessment.

Subthemes:

- ★ Petroleum geochemistry in reservoir characterization and production optimization
- ★ Geochemistry applications in petroleum system definition
- ★ New or developing methodologies in geochemistry
- ★ Integrated work flows in basin modeling
- ★ Fluid-rock & fluid-fluid interaction
- ★ Hydrocarbon migration and charge risk assessment
- ★ Non-hydrocarbon gases risk assessment
- ★ General contributions

Theme 4: Structure, Tectonics, and Geomechanics

Theme 4 spans all aspects of structural geology and geomechanics from exploration to abandonment. Presentations will showcase new approaches and case studies illustrating how the application of structural geology and geomechanics leads to increased reserves, improved production, lower cost and reduced risk.

Subthemes:

- ★ Petroleum geomechanics: exploration to abandonment
- ★ Understanding the impact of natural and induced fractures
- ★ Modeling deformation: analogue, geometric and numerical approaches
- ★ Petroleum system tectonics and structural styles: lithosphere to thin section
- ★ Salt-involved systems: deposition to diapirism to dissolution
- ★ Structural geology and geomechanics in unconventional reservoir development
- ★ General contributions

ACE.AAPG.org

Theme 5: Unconventional Resources

Unconventional resources have dominated growth in production over the decade and have radically changed global oil markets. Our scientific understanding of these plays has also grown exponentially. Theme 5 presentations will span broad geographies and highlight advances in understanding petroleum systems and kinetics, mobility, reservoir fluid prediction and phase behavior, reservoir facies and quality, petrophysics, pore systems, and integration of geoscience with completions and development.

Subthemes:

- ★ Advances in unconventional reservoir characterization
- ★ Advances in analytical techniques in unconventional
- ★ Evolution of the organic and inorganic matrix in unconventional reservoirs
- ★ Permian Basin: advances in understanding geologic evolution and unconventional reservoir development
- ★ The Eagle Ford Shale – Austin Chalk play
- ★ Unconventional plays of the Appalachians, Midcontinent and Rockies
- ★ International unconventional plays
- ★ General contributions

Theme 6: Energy Sustainability and the Environment

Theme 6 will showcase the science of an array of topics and issues that are critical for the future of energy and the environment. Topics for this theme will address best practices in the energy sector to meet new regulations, global energy demands, public opinion, and environmental challenges and solutions.

Subthemes:

- ★ Geologic carbon storage
- ★ Carbon lifecycle linkages: sources, sinks and economics
- ★ Applications of carbon storage learnings to subsurface characterization and hazard assessments
- ★ Water management: source, recycle, disposal and valuation
- ★ Environmental Impact – remediation and mitigation
- ★ Progress in understanding induced seismicity
- ★ General contributions

Theme 7: Geophysics – What's New and Innovative?

Theme 7 will explore new advances in geophysics at all scales and the integration of geophysical, petrophysical, and non-seismic methods to maximize returns from existing fields, explore for new opportunities, and exploit tight reservoirs.

Subthemes:

- ★ Advances in geophysics of unconventional
- ★ Geophysics and remote sensing applications in exploration
- ★ Seismic techniques in geological characterization
- ★ Integration of geologic, geomechanical and geophysical observations and models
- ★ Seismic imaging in the Gulf of Mexico
- ★ Laboratory and numerical experiments in geophysics
- ★ Integration of geology and geophysics into reservoir models
- ★ General contributions

Theme 8: Deep Integration of Data and Disciplines

Theme 8 focuses on how data enables, empowers, and challenges geoscience and business workflows. The theme will highlight the changes that new data methods (big data, data science, AI, etc.) have brought and how they create value, improve efficiency, and enhance collaboration.

Subthemes:

- ★ Successes and challenges on data integration for multi-disciplinary workflows
- ★ Sniffing out the hydrocarbons in complex datasets
- ★ Above-ground imagery to solve business challenges
- ★ The new data management: Communicating lineage, quality, and quantity to enable data science workflows
- ★ Machine learning and data analytics in the subsurface
- ★ Open source and open access
- ★ Data visualization challenges
- ★ General Contributions

Theme 9: Exploration Frontiers, Energy Minerals, and Planetary Geology

Theme 9 represents the domain of greatest uncertainty faced by the energy industry – where to invest long term, what disruptions may await, what technologies may be truly transformational, how will energy systems and minerals be coupled in the future?

Subthemes:

- ★ Emerging basins
- ★ Renewable energy integration: Geothermal, solar, wind, and biofuel
- ★ Energy and mineral resources - Earth and beyond
- ★ General contributions

Theme 10: Business, Finance, and Regulatory Framework

Theme 10 considers the financial underpinning of our industry and how resource estimation, risking, deal making, efficiency drivers, and investment decisions shape our future.

Subthemes:

- ★ Resource estimation and investment risk in onshore and offshore plays
- ★ Role of innovation in driving capital efficiencies
- ★ Integration of disciplines supporting investment decisions: Geoscience, engineering and economics
- ★ US onshore/offshore and international deal making
- ★ Economics of addressing perspectives and policy of climate change
- ★ General contributions



Theme 11: SEPM Research Symposium – A Look into the Future of Energy and Sustainability Using the Sedimentary Record

The world faces significant challenges in energy resources and sustainability, including securing petroleum resources, accessing clean water for human consumption, and mitigating rising temperatures during the 21st century. Living in a sustainable world requires a societal and ecologic balance, one that demands no more of the environment than it can sustain over the long term. Geoscientists are uniquely qualified to address these challenges given their multi-disciplinary training in the study of Earth's systems and processes over a range of time scales. Moreover, sedimentary geoscientists, who study the short-term to deep-time processes of the stratigraphic record of Earth history, have long contributed to understanding Earth-surface and biologic response to environmental change. This cumulative knowledge positions sedimentary geoscientists as important contributors to our future, from exploration and delivery of natural resources to mitigating effects of changing climate.

Our goal for the 2019 Society for Sedimentary Geology (SEPM) Symposium is to bring together a diverse group of dynamic speakers, some of who may not consider themselves sedimentary geologists *sensu stricto*, to present forward-looking research addressing the role of sedimentary geoscience in challenges in energy resources and sustainability. For example, a paleoceanographer might provide insights into ocean anoxic events, with implications for sedimentary basin analysis and petroleum systems, and/or an organic geochemist might share novel techniques in their work to improve understanding of the paleohydrologic and sedimentologic response to global climate-change events, such as the Paleocene-Eocene Thermal Maximum. We propose that the Symposium include a traditional oral session and a Presenting Interactive Content (PICO) session in which authors share their work in two-minute oral presentations, followed by presentations on screens and/or traditional posters (e.g., this format was used at the 2018 EGU meeting; <https://egu2018.eu/pico.html>).

For the traditional oral session, we propose to invite emerging leaders of three pillars of SEPM, Clastics, Carbonates, and Paleontology, to present research in their field of expertise, how their work applies to natural resources and the pursuit of sustainability, and their vision for the future of sedimentary geoscience.

Theme 12: History of Petroleum Geology

Theme 12 will showcase the evolution of major technical breakthroughs in petroleum exploration and production since the founding of the AAPG over the last 100 years, and how people of the AAPG and sister societies around the world have affected the evolution of these breakthroughs.

Theme 13: AAPG and SEPM Student Research

Undergraduates, Graduate, and Doctoral students are encouraged to submit their research to the AAPG and SEPM Student Research Poster Sessions.

AAPG's Student Research Poster session is sponsored by Shell. After the abstracts are reviewed and scored, the top 15 abstracts are selected for this session. The session will be held on Monday, 20 May 2019 and the Best Student Poster awards (ranking from 1st to 4th) will be awarded on Monday night at the Student Reception. The 15 student poster presenters are awarded a \$200 travel grant.

AAPG Student Oral Presentations are also sponsored by Shell. The top 15 highest scored student oral presentations within the technical program will be selected and judged for Best Student Oral Award. The presentations are judged (ranking from 1st to 4th) and will be awarded after the convention. The 15 students selected will also receive the \$200 travel grant.

SEPM's Student Research Poster session will also be held on Monday, 20 May 2019. SEPM will also select the top scoring abstracts for their session. The number of abstracts accepted is determined by SEPM's Executive Director and SEPM Foundation President. SEPM awards the top three presentations for a \$500 cash prize based on the judging committee reviews which are awarded at the SEPM President's Reception on Tuesday evening.

Both AAPG and SEPM will create as many additional student poster sessions from the highest scored abstracts as space allows. The additional student poster sessions will be eligible for the Braunstein Award (Best Poster).

Students are also encouraged to submit to any of the theme and subthemes within the technical program.

Plan your ACE 2019 experience with enough time to participate in a short course or field trip. The full schedule of courses and trips will be available online in December.

Submit your abstracts by 11 October 2018.

Note: The abstract site will only be open for six (6) weeks. Don't miss this opportunity to share your research knowledge, and expertise.

For more information please contact:

Terri Duncan

Technical Programs Coordinator

Tel: +1 918.560.2641

Email: tduncan@aapg.org

Rachel Piotraschke

Technical Programs Coordinator

Tel: +1 918.560.2631

Email: rp Piotraschke@aapg.org