

**EAGE**

EUROPEAN  
ASSOCIATION OF  
GEOSCIENTISTS &  
ENGINEERS



**SRM2018**

FIRST EAGE/IFPEN CONFERENCE ON  
SULFUR RISK MANAGEMENT IN E&P

FINAL ANNOUNCEMENT  
& PROGRAMME

18-20 SEPTEMBER 2018 • RUEIL-MALMAISON, FRANCE

[WWW.EAGE.ORG](http://WWW.EAGE.ORG)

# AIM OF THE CONFERENCE

EAGE and IFPEN are launching their first conference on the issue of sulfur risk management in exploration and production (E&P) operations. The conference is intended to bring together experts from a variety of scientific fields to share knowledge of current practices and discuss new approaches to predict sulfur risk in exploration and reduce its impact in production.

Sulfur in sedimentary organic matter and petroleum fluids can be problematic. It originates from the conditions prevailing in the depositional environment and subsequent diagenetic changes in the geosphere. Various geochemical processes over geological time can lead to the evolution of organic sulfur compounds and to the formation of inorganic sulfur species such as  $H_2S$ . While sulfur is a ubiquitous element in petroleum systems it is in general unwelcome in petroleum industry and needs to be addressed.



## ABOUT THE CONFERENCE

In order to consider the main issues related to the sulfur risk in E&P operations, the conference will be divided into separate sessions to reflect the level of interest in each topic. In this way, discussion of the various issues may trigger the emergence of novel approaches and methodologies for the predicting of the sulfur risk in exploration, and for the development of technical innovations for reducing sulfur impact in production.

Principal topics of the conference sessions will be: E&P challenges for fields with high sulfur and H<sub>2</sub>S content, future challenges for development and production of H<sub>2</sub>S and sulfur-bearing fluids, and new analytical tools for characterization of petroleum sulfur compounds.

The event will be organized around a balance of invited keynote lectures, oral presentations and networking sessions.

## TECHNICAL COMMITTEE

Pierre Adam	University of Strasbourg
Alon Amrani	The Hebrew University
Pim van Bergen	Shell
François Gelin	Total
Isabelle Kowalewski *	IFPEN
Robert Marriott	University of Calgary
Armelle Riboulleau	University of Lille
Ingun Skjevraak	Equinor
Artur Stankiewicz *	Schlumberger
Clifford C. Walters	ExxonMobil

\* Co-chair

## VENUE

**IFP Energies nouvelles**  
1 & 4 avenue de Bois-Préau  
92500 Rueil-Malmaison  
France

## LOCATION

### Rueil-Malmaison, France

Situated 12.6 kilometers west of Paris. It is 30 minutes from the center of Paris by public transport (RER A). Rueil-Malmaison is near La Défense, the main business district of Paris, where major energy companies and service providers are located. An imperial city, Rueil is famous for the Château de la Malmaison, which was one of the residences of Napoleon Bonaparte and the Empress Josephine. Rueil also offers more than 500 ha of green spaces, such as the Malmaison Forest, or the Bois-Préau Park, which can be reached quickly from the campus. Lastly, Rueil is also known for its banks of the Seine, which inspired 19th-century impressionist painters such as Renoir and Monet.



## TECHNICAL PROGRAMME

### Oral Presentations | Tuesday 18 September 2018

#### AMPHITHEATER SEQUOIA

**14:00** Registration & Welcome Coffee

**14:30** Welcome Address

**14:45** Keynote Lecture - **Biogeochemistry of Sulfur: an Overview** - J. Werne (University of Pittsburgh)

#### Novel Methods and Technologies in Sulfur Characterization

**15:30** **Tu SRM 01 - Why H<sub>2</sub>S Can Be Overlooked in Early Stage of Field Development** - J.H. de Kok<sup>1\*</sup>, W.J. van Strien<sup>1</sup>, R. Malekzadeh<sup>1</sup>, A. Hofmann<sup>1</sup>, B. Challenger<sup>2</sup>  
<sup>1</sup>SGS Subsurface Consultancy, <sup>2</sup>SGS Petrotechnical Inspection (M) Sdn. Bhd.

**15:55** **Tu SRM 02 - Sulfur Isotope Analysis of Organic Sulfur Compounds in Natural Gas Samples and Pyrolysis Experiments** - A. Amrani<sup>1\*</sup>, W. Said-Ahmad<sup>1</sup>, N. Luu<sup>2</sup>, T. Jaksier<sup>2</sup>, C. Turich<sup>3</sup>, A. Stankiewicz<sup>3</sup>  
<sup>1</sup>Hebrew University of Jerusalem, <sup>2</sup>Air Liquide, Delaware Research & Technology Center, <sup>3</sup>Schlumberger

**16:20** **Tu SRM 03 - Rock-Eval Sulfur & GEOWORKS software** - A. Wattripont<sup>1\*</sup>, N. Bouton<sup>1</sup>, J. Espitalie<sup>1</sup>, R. Antonas<sup>1</sup>, G. Constantinou<sup>1</sup>  
<sup>1</sup>Vinci Technologies

**16:45** Coffee Break

**17:15** **Tu SRM 04 - Coupled Abiotic and Biotic Sulfurization Processes during Microbial Sulfate Reduction with Alkyl Substrates** - V. Grossi<sup>1\*</sup>, I. Antheaume<sup>1</sup>, C. Cravo-Laureau<sup>2</sup>  
<sup>1</sup>Laboratoire de Géologie de Lyon, <sup>2</sup>Institut des Sciences Analytiques et de Physico-Chimie pour l'Environnement et les Matériaux

**17:40** **Tu SRM 05 - Pyritic Sulphur and Organic Sulphur Quantification in Organic Rich Sediments Using Rock-Eval** - A. Aboussou<sup>1\*</sup>, V. Lamoureux-Var<sup>1</sup>, T. Wagner<sup>2</sup>, D. Pillot<sup>1</sup>, I. Kowalewski<sup>1</sup>, C. März<sup>2</sup>, B. Garcia<sup>1</sup>  
<sup>1</sup>IFP Energies nouvelles, <sup>2</sup>Lyeil Centre, Heriot-Watt University, <sup>3</sup>University of Leeds

**18:05** **Tu SRM 06 - Quantitative and Specific Recovery of Organic and Mineral Sulfur for Multi-isotope Analysis** - I. Jovicic<sup>1\*</sup>, V. Grossi<sup>1</sup>, P. Adam<sup>2</sup>, F. Gelin<sup>3</sup>, I. Antheaume<sup>1</sup>, M. Ader<sup>4</sup>, P. Cartigny<sup>4</sup>  
<sup>1</sup>Université de Lyon, CNRS-UMR 5276, <sup>2</sup>Université de Strasbourg, CNRS-UMR 7177, <sup>3</sup>TOTAL E&P, <sup>4</sup>Université Paris Diderot, CNRS-UMR 7154

**18:30** Icebreaker Reception



## Oral Presentations | Wednesday 19 September 2018

AMPHITHEATER SEQUOIA	
09:00	Welcome Coffee
09:45	<b>Keynote Lecture - Microbial Reservoir Souring Modelling: Challenges in Getting it Right!</b> - B. Lomans (Shell)
<b>Challenges and Approaches to Production of Conventional and Unconventional Reservoirs with H<sub>2</sub>S</b>	
10:30	<b>We SRM 01 - Downhole Decomposition of Biocide Dazomet and Implications in the Delayed Onset of Hydrogen Sulfide in Hot Shale Gas Production</b> - J.J. Marrugo Hernandez <sup>1*</sup> , R. Prinsloo <sup>1</sup> , R. Marriott <sup>1,2</sup> <sup>1</sup> University Of Calgary, <sup>2</sup> Alberta Sulphur Research
10:55	<b>We SRM 02 - Nitrate Treatment Strategy, Differences of the Reservoir Scale and the Lab Scale</b> - M. Jahanbani Veshareh <sup>1*</sup> , H.M. Nick <sup>1</sup> <sup>1</sup> Technical University of Denmark
11:20	Coffee Break
11:50	<b>We SRM 03 - Simulation Approach for Investigation of H<sub>2</sub>S Generation Mechanisms</b> - D.C. Standnes <sup>1*</sup> , I. Skjevra <sup>1</sup> , A. Kjølhamar <sup>1</sup> , K. Håland <sup>1</sup> , P.K. Munke <sup>1</sup> <sup>1</sup> Equinor ASA
12:15	<b>We SRM 04 - H<sub>2</sub>S in Unconventional Resource Plays: Occurrence, Origin and Mechanisms of Formation</b> - L.T. Bryndzia <sup>1*</sup> , C.I. Macaulay <sup>1</sup> <sup>1</sup> Shell International Exploration & Production Inc.
12:40	<b>We SRM 05 - Experimental Investigation of Hydrogen Sulfide Scavenging Capacities and Mechanisms in Iron-bearing Minerals</b> - A. Graham <sup>1*</sup> , M. Singleton <sup>1</sup> , I.K. Salleh <sup>2</sup> , K. Khairuddin <sup>2</sup> , J. Ibrahim <sup>2</sup> , K. Sorbie <sup>1</sup> <sup>1</sup> Heriot-Watt University, <sup>2</sup> PETRONAS
13:05	Lunch Break
14:35	<b>Keynote Lecture - Advances in Our Understanding of Hydrogen Sulfide Occurrence and Improved Quantitative Prediction</b> - A. Bishop (PEER Institute)
<b>Latest Advances in Modelling and Prediction of H<sub>2</sub>S</b>	
15:20	<b>We SRM 06 - Assessment of H<sub>2</sub>S Generated by TSR Reaction in the Devonian Petroleum System of Alberta (Canada) Using Basin Modeling</b> - I. Kowalewski <sup>1*</sup> , X. Guichet <sup>1</sup> , R. Traby <sup>1</sup> , Y. Hamon <sup>1</sup> , E. Dickens <sup>1</sup> , S. Wolf <sup>1</sup> , T. Euzen <sup>2</sup> , N. Maurand <sup>1</sup> <sup>1</sup> IFP Energies Nouvelles, <sup>2</sup> IFP Technologies (Canada) Inc.
15:45	<b>We SRM 07 - The Barents Sea of the Norwegian Continental Shelf: Drilling through Carbonates if Hydrogen Sulphide is Present: Modelling. Risk Management. Well Planning</b> - M.A. Mosesyan <sup>1*</sup> , H. Alexander <sup>2</sup> , K.M. Edin <sup>2</sup> , L.M. Surguchev <sup>1</sup> , A. Rabey <sup>1</sup> <sup>1</sup> LUKOIL Overseas North Shelf AS, <sup>2</sup> AkerBP
16:10	Coffee Break / Networking Session
17:10	<b>We SRM 08 - How Multiple Sulfur Isotopes (<math>\delta^{33}\text{S}</math>, <math>\delta^{34}\text{S}</math>, <math>\delta^{36}\text{S}</math>) Help Unravel the Context of Thermochemical Sulfate Reaction during Metamorphic Events: Application to Subducted Evaporites from the French Alps</b> - G. Barré <sup>1*</sup> , E. Thomassot <sup>2</sup> , P. Cartigny <sup>3</sup> , R. Michels <sup>1</sup> , L. Truche <sup>4</sup> , P. Strzeczynski <sup>5</sup> , S. Guillot <sup>4</sup> , C. Lorgeoux <sup>1</sup> , N. Assayag <sup>3</sup> <sup>1</sup> Université de Lorraine, CNRS, GeoRessources, UMR 7359, BP 70239, <sup>2</sup> CNRS, CRPG, UMR 7359, <sup>3</sup> Institut de Physique du Globe de Paris (IPGP), <sup>4</sup> Université Grenoble Alpes, CNRS, ISTERRE, UMR 5275, BP 53, <sup>5</sup> Laboratoire de Géologie UFR Sciences et Technique, Université du Mans.
17:35	<b>We SRM 09 - Modelling Approaches to Assess Biogenic Souring During Waterflooding and EOR Operations</b> - H. Alkan <sup>1*</sup> , G. Namazova <sup>1</sup> , S. Hatscher <sup>1</sup> , N. Dopffel <sup>2</sup> <sup>1</sup> Wintershall Holding GmbH, <sup>2</sup> BASF SE
18:00	Conference Dinner

## Oral Presentations | Thursday 20 September 2018

AMPHITHEATER SEQUOIA	
09:00	Welcome Coffee
09:45	<b>Keynote Lecture - The Role of Elemental Sulfur in the Souring of Lean Hydrocarbon Fluids</b> - R. Marriott (University of Calgary)
<b>H<sub>2</sub>S in Heavy Oil and EOR</b>	
10:30	<b>Th SRM 01 - Understanding the Mechanisms of H<sub>2</sub>S Production During SAGD Processes Using Compositional Thermal Reactive Reservoir Simulation</b> - S. Ayache <sup>1</sup> , J. Gasser Dorado <sup>1*</sup> , V. Lamoureux-Var <sup>1</sup> , C. Preux <sup>1</sup> , P. Michel <sup>1</sup> <sup>1</sup> IFP Energies Nouvelles
10:55	<b>Th SRM 02 - Forecasting H<sub>2</sub>S Production Risk in Thermal Projects for EOR</b> - C. Preux <sup>1*</sup> , V. Lamoureux-Var <sup>1</sup> , S.V. Ayache <sup>1</sup> , P. Michel <sup>1</sup> <sup>1</sup> IFP Energies Nouvelles
11:20	<b>Th SRM 03 - Characterizing Sulfur in Foster Creek Bitumen Using Rock-Eval Sulfur, for Assessing H<sub>2</sub>S Production Risk in SAGD Operations</b> - V. Lamoureux-Var <sup>1*</sup> , Z. Ouled Ameur <sup>2,3</sup> , P. Michel <sup>1</sup> , I. Lévêque <sup>1</sup> , A. Ravin <sup>1</sup> , D. Pillot <sup>1</sup> , S. Ayache <sup>1</sup> , C. Preux <sup>1</sup> <sup>1</sup> IFP Energies Nouvelles, <sup>2</sup> Cenovus Energy, <sup>3</sup> Independant consultant
11:45	Coffee Break
<b>Cases from Around the World</b>	
12:15	<b>Th SRM 04 - Unravelling the Processes of the H<sub>2</sub>S Generation in the North-western Pyrenees (France)</b> - G. Barré <sup>1*</sup> , E. Gaucher <sup>2</sup> , G. Hoareau <sup>1</sup> , A. Elias-Bahnan <sup>3</sup> <sup>1</sup> Laboratoire des Fluides Complexes et leurs Réservoirs (LFCR), Université de Pau et des Pays d'Adour (UPPA), <sup>2</sup> TOTAL – CSTJF, <sup>3</sup> Université de Lorraine, CNRS, GeoRessources, UMR 7359, BP 70239
12:40	<b>Th SRM 05 - The Effect of Mixing TSR Fluids on Fluids Quality of The Radhuma and Tayarat Formation Heavy Oil Reservoirs in Burgan Field, South Kuwait</b> - M. Al-Hajeri <sup>1*</sup> <sup>1</sup> Kuwait Oil Company
13:10	Lunch Break
14:40	<b>Th SRM 06 - Fe-S-C Dynamics: Re-examining the Role of Reactive Iron Fractions</b> - M. Mertesdorf <sup>1*</sup> , T. Wagner <sup>1</sup> , C. März <sup>2</sup> <sup>1</sup> Heriot-Watt University, <sup>2</sup> University of Leeds
15:05	<b>Th SRM 07 - Controls on the Magnitude of TSR Derived Hydrogen Sulphide in the Marrat Reservoir, Northern Kuwait</b> - M. Al-Hajeri <sup>1*</sup> , H. Akbar <sup>1</sup> , A. Bishop <sup>2</sup> , L. Gao <sup>2</sup> , Y. Tang <sup>2</sup> <sup>1</sup> Kuwait Oil Company, <sup>2</sup> PEER Institute
15:30	Closing Remarks





## IMPORTANT DATES

Late Registration Deadline	17 September 2018
SRM2018 Conference	18-20 September 2018
Icebreaker Reception	18 September 2018
Conference Dinner	19 September 2018

## REGISTRATION

Registration for this conference is open via the event website. Please find below an overview with all registration fees.

### Registration prices

REGISTERED AND PAID	01/08/2018-14/09/2018	15/09/2018 - ON-SITE
EAGE Member	€ 505	€ 565
Non-member*	€ 605	€ 665
EAGE student member*	€ 235	€ 295
Student non-member*	€ 260	€ 320

<sup>1</sup> The non-member fee includes EAGE membership for 2018.

<sup>2</sup> To qualify for the reduced student registration fee:

- Students must be enrolled in a full time study programme at a recognized university or institute;
- The registration must be accompanied by a copy of a student ID card and/or official proof of enrollment;
- Please note: Student non-members can not be older than 34 years of age (when registering).

<sup>3</sup> All registered family members have access to the social programme, which includes the Icebreaker Reception and the conference dinner

## SOCIAL PROGRAMME

### Icebreaker Reception

**Tuesday 18 September 2018 - 18:30**

An Icebreaker Reception will be organized at the conference venue (IFP Energies nouvelles). This is a great opportunity to network while tasting some finger food and drinks.

### Conference Dinner

**Wednesday 19 September 2018 - 18:00**

The Conference Dinner will be organized at the beautiful Château de Vert-Mont, a castle with a prestigious decor, whose character will leave no one indifferent. Join other participants interested in your area on this special dinner.

### Château de Vert-Mont

3 Avenue Tuck Stell  
92500 Rueil-Malmaison  
France

## SPONSORING

First EAGE/IFPEN Conference on Sulfur Risk Management in E&P offers excellent sponsoring opportunities to create high visibility. For more information about sponsoring, please contact us at [corporaterelations@eage.org](mailto:corporaterelations@eage.org). A "Sponsor's Guide" can also be requested.

## CONTACT

For further up-to-date information, please visit the conference website [events.eage.org](http://events.eage.org) or contact the EAGE Head Office at +31 88 99 55 055

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