Welcome Message

Dear Colleagues,

We are pleased to announce that the second edition of the Asia Pacific Unconventional Resources Technology Conference (Asia Pacific URTeC) will be held virtually from 16-18 November 2021.

A joint effort between the Society of Petroleum Engineers (SPE), the American Association of Petroleum Geologists (AAPG) and the Society of Exploration Geophysicists (SEG), the Asia Pacific URTeC will gather regional and global professionals, regulators and prominent researchers to share their technical know-how and technology advancements. With the theme “Unconventional Resources as a Pathway to a Sustainable Energy Future”, the conference aims to provide us with new perspectives in evaluating and optimising unconventional resources extraction.

The industry has witnessed an increase in activity directed at the shale gas and tight gas resource potential throughout the Asia Pacific region. For example, Australia has large unconventional tight gas and is currently exporting large volumes of coalbed methane as LNG from Queensland and exploring Proterozoic shale resources in the Northern Territory. Both these areas have significant impact for unconventional resources in the Eastern Hemisphere.

Despite the ongoing uncertainty brought on by the pandemic and volatile market outlook, the industry must continue to explore innovative technological solutions and address challenges for unconventional exploration and development to create new prospects for affordable and sustainable supply.

With the support of our industry colleagues, we believe that the conference will be a successful and significant event. We look forward to your participation in a professionally rewarding Asia Pacific URTeC.

Sincerely,

Programme Co-Chairs

Simon John Smith
Chief Petroleum Engineer
Origin Energy
SPE Co-Chair

Thomas Flottman
Principal Geologist and Chief Geoscientist
Origin Energy
AAPG Co-Chair

David J. Campagna
Independent Advisor
SEG Co-Chair

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* This Conference Highlights is updated as at 16 September 2021.
About the Conference

The second edition of the Asia Pacific Unconventional Resources Technology (Asia Pacific URTeC) 2021 will be held virtually from 16-18 November 2021 (UTC+10).

The Asia Pacific URTeC 2021's virtual environment will provide attendees with an engaging experience, including the ability to interact and network with speakers, authors, sponsors and exhibitors and more. The platform is designed for attendees to view each session to gain insights through presentations and discussions by leading industry executives and experts. Sponsors and exhibitors will benefit from the ability to showcase their brand and products to a virtual and global audience.

What to Expect

- **350+** participants from 18+ countries
- Opening and Keynote Address with insights from senior executives and industry leaders
- **6+** hours of senior business and technical leader insights through plenary and panels sessions
- **15+** focused technical sessions
- **3** days of networking opportunities

Why Attend

- **GAIN** crucial insights into current trends through a wide array of comprehensive technical sessions
- **DISCOVER** solutions and emerging trends in the industry
- **CONNECT** with industry experts and peers from across the globe through the virtual environment
- **EXCHANGE** your experience and knowledge with other energy professionals

Registration is now open

Register by 20 August 2021 to take advantage of the Super Early Bird opportunities.

Register for 5 and save up to 15%, Register for 10 and save up to 20%.

Visit go.spe.org/21APURC to register for Asia Pacific URTeC 2021.
Committee

Conference Advisor
Raymond Johnson Jr.
Professor of Well Engineering & Production Technology
School of Chemical Engineering
Energi Simulation Co-Chair, Centre for Natural Gas
The University of Queensland

Technical Programme Co-Chairs
Simon John Smith, SPE
Chief Petroleum Engineer
Origin Energy

Thomas Flottman, AAPG
Principal Geologist and Chief Geoscientist
Origin Energy

David J. Campagna, SEG
Independent Advisor
Independent

SPE Committee Members
George Koperna
Vice President
Advanced Resources International

Martin Rylance
Vice President Engineering
IXL Consulting

Luis Baez
NOV Manager US Shales
Shell

Dan Kuznetsov
Principal Reservoir Engineer
Arrow Energy

Vincent Artus
Reservoir Engineer
KAPPA Engineering

Pankaj Bhavnani
Well Engineer (Drilling & Completion)
Shell

Tom Neville
Principal Consultant
Arrow Energy

Nefeli Moridis
Developer Relationship Manager
NVIDIA

Scott Goligher
Senior Well Engineer
Shell

George Koperna
Vice President
Advanced Resources International

Emily Walker
Graduate Petroleum Engineer
Origin Energy

Susan Howes
Vice President of Engineering
Subsurface Consultants & Associates

Sadegh Asadi
Geomechanics Advisor - Asia Pacific
Bazan Consulting, Inc.

Sameer Ganpule
Fracturing Technical Authority
Origin Energy

Fangui Zeng
Professor
Taiyuan University of Technology

Lucas Bazan
President
Bazan Consulting, Inc.

Vahab Honari
Business Data Analyst
Origin Energy

Christopher Leonardi
Senior Lecturer
The University of Queensland

Gensheng Li
AE Academician/Professor, Vice President of CUPB
China University of Petroleum

Buddy Woodroof
Technical Manager
ProTechnics Division of Core Laboratories

Ruizhi Zhong
Senior Lecturer
The University of Queensland

Jennifer Miskimins
Professor and Department Head of Petroleum Engineering
Colorado School of Mines

Belladonna Maulianda
Specialist II Production Research
PT Pertamina Persero

Zhongwei Chen
Senior Lecturer
The University of Queensland

Elham Samari
General Manager - Technical
Condor Energy Services Ltd.

Saikat Mazumder
Subsurface Manager
GQC (A Shell JV Company)

Heinz-Gerd Holl
Senior Research Officer
The University of Queensland Centre for Natural Gas

Vibhas Jagdish Pandey
Engineering Fellow, Completions
ConocoPhillips

Oliver Gaede
Lecturer
Queensland University of Technology

Alireza Salmachi
Senior Lecturer (Assistant Professor)
University of Adelaide
Committee

SPE Committee Members (Continued)

Simon Chipperfield
Subsurface Advisor
Energy Development Corporation

Andrew White
Onshore Subsurface Manager
Santos

Pham Xuan Anh
Senior Geologist
Weatherford

Usman Ahmed
Independent

Mark Burgoyne
Principal Reservoir Engineer
Santos

Mohammed Omer
Laboratory Engineer, Global R&D
Weatherford

Stephen Kelemen
Independent Industry Professional

Matthew Loth
East Coast and PNG Country Manager
Schlumberger

AAPG Committee Members

Chris Mijnssen
General Manager Bowen and Non-core Tenures
Arrow Energy

Xingjin Wang
Director
Denison GAs

Andrew Garnett
Director, Centre for Coal Seam Gas
The University of Queensland Centre for Natural Gas

Tim A. Moore
Managing Director
Cipher Consulting Pty. Ltd.

Nathan Parker
Carbon Capture and Storage (CCS) Lead
Origin Energy

Ferian Anggara
Associate Professor
Universitas Gajah Mada

SEG Committee Members

Darrell Kramer
Senior Geoscience Advisor
DK GeoScience Services

Marcel Croon
Principal Geophysicist
MPC Kinetic

Rob Ross
Managing Director - South East Asia
Qeye

Julie Shemeta
Owner
MEQ Geo Inc.

Siti Normaizan Hassan
Head, Unconventional Center of Excellence
PETRONAS Canada

Dennis Cooke
Owner
ZDAC Geophysical

go.spe.org/21APURC
Thank You to Our Sponsors

Sponsoring Organisations

- Society of Petroleum Engineers
- AAPG
- SEG

General Sponsor

THE UNIVERSITY OFQUEENSLAND
AUSTRALIA

Sponsored Seminar
# Conference Schedule

<table>
<thead>
<tr>
<th>Time (UTC +10)</th>
<th>Track 1</th>
<th>Track 2</th>
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<tbody>
<tr>
<td><strong>Tuesday, 16 November 2021</strong></td>
<td></td>
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<tr>
<td>0900 - 0930 hours</td>
<td>Opening and Keynote Session</td>
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<tr>
<td>0930 - 1030 hours</td>
<td>Executive Plenary Session: Unconventional Resources as a Pathway to Sustainable Energy Future</td>
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<tr>
<td>1030 - 1100 hours</td>
<td>Sponsored Seminar 1</td>
<td>Technical Session 1 Well Construction</td>
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<tr>
<td>1100 - 1200 hours</td>
<td>Panel Session 1 Valuing Unconventionals, The Good, The Bad and The Ugly</td>
<td>Technical Session 2 Geomechanic: The Intersection of Geoscience and Engineering</td>
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<tr>
<td>1200 - 1300 hours</td>
<td>Break</td>
<td>Technical Session 3 Big Data and Applications of Machine Learning I</td>
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<tr>
<td>1300 - 1400 hours</td>
<td>Technical Session 4 Advances in Hydraulic Fracturing I</td>
<td>Technical Session 5 Petrophysics/Formation Evaluation I</td>
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<tr>
<td>1400 - 1430 hours</td>
<td>Break</td>
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<tr>
<td>1430 - 1530 hours</td>
<td>Technical Session 6 Production Technology</td>
<td>Technical Session 7 Unconventional Reservoir Engineering I</td>
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<td><strong>Wednesday, 17 November 2021</strong></td>
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<tr>
<td>0900 - 1000 hours</td>
<td>Technical Session 8 Case Studies</td>
<td>Technical Session 9 Big Data and Applications of Machine Learning II</td>
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<td>Sponsored Seminar 2</td>
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<td>1030 - 1130 hours</td>
<td>Panel Session 2 The Energy Mix of the Future</td>
<td>Technical Session 10 Geomechanics of the Wellbore: Rock Properties, Near-Field Stresses, and Stability</td>
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<td>Technical Session 11 Unconventional Reservoir Engineering II</td>
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<tr>
<td>1300 - 1400 hours</td>
<td>Technical Session 12 Geophysics</td>
<td>Technical Session 13 Hydraulic Fracturing Diagnostics</td>
</tr>
<tr>
<td>1400 - 1430 hours</td>
<td>Break</td>
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<tr>
<td>1430 - 1530 hours</td>
<td>Panel Session 3 Social License to Operate in a World Dominated by Social Media</td>
<td>Technical Session 14 Advances in Hydraulic Fracturing II</td>
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<td>1530 - 1600 hours</td>
<td>Break</td>
<td>Technical Session 15 Petrophysics/Formation Evaluation II</td>
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<tr>
<td>1500 - 1700 hours</td>
<td>Technical Session 16 CO2, the Environment and Social License to Operate</td>
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<tr>
<td>0900 - 1000 hours</td>
<td>Technical Plenary Session: Unconventional Resources as a Pathway to a Sustainable Energy Future in Asia Pacific</td>
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<tr>
<td>1000 - 1030 hours</td>
<td>Sponsored Seminar 3</td>
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<tr>
<td>1030 - 1130 hours</td>
<td>Panel Session 4 How Good is our Ability in Predicting the Future Production</td>
<td>Technical Session 16 CO2, the Environment and Social License to Operate</td>
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<tr>
<td>1130 - 1230 hours</td>
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<tr>
<td>1230 - 1330 hours</td>
<td>Technical Session 17 Innovative Materials and Emerging Technologies as Applied to Unconventionals</td>
<td>Technical Session 18 Reservoir Engineering for Shales: From Permeability to EOR</td>
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<tr>
<td>1330 - 1430 hours</td>
<td>Closing Session: Chairs and Session Chairs - Virtual Recap</td>
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</table>
Opening and Keynote Session

**Executive Plenary Session:**
Unconventional Resources as a Pathway to a Sustainable Energy Future

**Tuesday, 16 November 2021 | 0900-0930 hours (UTC +10)**

**Tom Blasingame**
Professor, Petroleum Engineering
**Texas A&M University**
2021 SPE President

Tuesday, 16 November 2021 | 0930-1030 hours (UTC +10)

**Session Moderators**

Simon Smith
Chief Petroleum Engineer
**Origin Energy**

David J. Campagna
Independent Advisor
**Independent**

**Speaker**

Mark Fitzgerald
President and Chief Executive Officer
**PETRONAS Canada**
Technical Plenary Session:
Unconventional Resources as a Pathway to a Sustainable Energy Future in Asia Pacific

Thursday, 18 November 2021 | 0900-1000 hours (UTC +10)

Session Moderators

Simon Smith
Chief Petroleum Engineer
Origin Energy

Thomas Flottman
Principal Geologist and Chief Geoscientist
Origin Energy

Speakers

Jennifer Miskimins
Professor and Department Head
Petroleum Engineering
Colorado School of Mines

John G Hattner
Senior Vice President
Netherland, Sewell & Associates, Inc.

David Close
General Manager,
Near Field Exploration,
Onshore Upstream Division
Santos Limited

Joan Esterle
Emeritus Professor,
Earth and Environmental Science
The University of Queensland
Panel Sessions

Panel Session 1: Valuing Unconventionals, The Good, The Bad and The Ugly

Tuesday, 16 November 2021 | 1100-1200 hours (UTC +10)

Session Chairs

Duncan Lockhart
General Manager Exploration
Central Petroleum

Simon Smith
Chief Petroleum Engineer
Origin Energy

Raymond Johnson Jr.,
Professor of Well Engineering & Production Technology,
School of Chemical Engineering,
Energi Simulation Co-Chair, Centre for Natural Gas
The University of Queensland

Speakers

Barbara Pribyl
Independent

John G Hattner
Senior Vice President
Netherland, Sewell &
Associates, Inc.

Martin Wilkes
Managing Director
RISC

Panel Session 2: The Energy Mix of the Future

Wednesday, 17 November 2021 | 1030-1130 hours (UTC +10)

Session Chairs

Jennifer Miskimins
Professor and Department Head
Petroleum Engineering
Colorado School of Mines

Nathan Parker
Carbon Capture and Storage (CCS) Lead
Origin Energy

Heinz-Gerd Holl
Senior Research Officer
The University of Queensland
Centre for Natural Gas

Speakers

Tracey Boyes
General Manager, Future Growth
Origin Energy

Andrew Garnett
Director, UQ Centre for Natural Gas
The University of Queensland
Panel Sessions

Panel Session 3: Social License to Operate in a World Dominated by Social Media

Wednesday, 17 November 2021 | 1430-1530 hours (UTC +10)

Session Chairs

Andrew Garnett
Director, UQ Centre for Natural Gas
The University of Queensland

Siti Normaizan Hassan
Head, Unconventional Center of Excellence
PETRONAS Canada

Speakers

Sarah Browne
Director - Public Affairs
Australian Petroleum Production & Exploration Association

Donald McMillan
Principal Engineer
Oil Gas CBM Services Pty Ltd

Katherine Witt
Senior Research Fellow
The University of Queensland

Panel Session 4: How Good is our Ability in Predicting the Future Production?

Thursday, 18 November 2021 | 1030-1130 hours (UTC +10)

Session Chairs

Dan Kuznetsov
Principal Reservoir Engineer
Arrow Energy

David J. Campagna
Independent Advisor
Independent

Thomas Flottman
Principal Geologist and Chief Geoscientist
Origin Energy

Speakers

Dilhan Ilk
Senior Vice President, North America Division Manager
DeGolyer and MacNaughton

Edith Lagendijk
Director and Principal Consultant
New Energy Consulting

Petrina Weatherstone
Lead Long Term Planning
Origin Energy

Saikat Mazumder
Reservoir Engineering Discipline Lead
QGC
Sponsorship Opportunities

Sponsorship opportunities have been designed to offer maximum exposure and visibility for organisations. For a cost-effective method to strengthen your brand identity and enhance your company’s image at the virtual event, we offer a variety of packages.

We appreciate your generous support and request that you confirm your preferred sponsorship package as soon as possible.

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Principal Sponsor</th>
<th>Gold Sponsor</th>
<th>Silver Sponsor</th>
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<td>✓</td>
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<td>Logo on sponsor acknowledgement presentation slide displayed between technical sessions</td>
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<td>Sponsorship title and logo on the event website, which links to the Sponsor’s company website</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<td>Logo displayed prominently in the main lobby</td>
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<td>✓</td>
<td>✓</td>
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<tr>
<td>Logo visibility in pre and post show promotion</td>
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<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>One (1) digital media (i.e. PDF, JPEG or PNG) inserted in the conference bag for all attendees to view and/or download</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Advertisement in the Conference Highlights</td>
<td></td>
<td>Full Page</td>
<td>Half Page</td>
</tr>
<tr>
<td>Advertisement in the Conference Programme</td>
<td></td>
<td>Full Page</td>
<td>Half Page</td>
</tr>
<tr>
<td>Banner in main lobby linking to Sponsor’s virtual exhibition booth</td>
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<tr>
<td>Corporate video (maximum duration 20 seconds) shown during the countdown to the opening of technical sessions throughout the event</td>
<td>4 x daily</td>
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<tr>
<td><strong>Conference Access</strong></td>
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<tr>
<td>Complimentary Full Access registration *</td>
<td></td>
<td>20</td>
<td>8</td>
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<tr>
<td><strong>Price</strong></td>
<td>USD 14,000</td>
<td>USD 7,000</td>
<td>USD 4,000</td>
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</table>

**Sponsored Seminar**

**USD 5,000**

The sponsor will receive:
- 30-minute session on a topic of sponsor choice.
- Sponsored Seminar information included in official conference programme schedule.
- Speakers to be selected by sponsor.
- Format to be selected from available session format options by sponsor.
- Logo prominently displayed during seminar.
- Logo and sponsorship title at all sponsor recognition signboards across the virtual environment.
- Logo and sponsorship title positioned in the holding slide (“Thank You to Our Sponsors”) between sessions.
- Logo and sponsorship title in Conference Programme.
- Logo and sponsorship title on the event website.
- Four (4) complimentary Full Access registrations.

**Notes:**
* Full Access registration includes access to the Conference (Opening Session, Executive Plenary Sessions, Panel Sessions, Technical Sessions, ePoster Sessions), Sponsored Seminars, Conference Lounge, Networking Lounge, Conference Digital Proceedings and on-demand content.

For further information about sponsorship at Asia Pacific URTeC 2021, contact:

**Nick Chantrell**, Senior Sales Manager - Asia Pacific  
Tel: +603 2182 3145 or email: nchantrell@spe.org

go.spe.org/21APURC
How to Register

Register online at go.spe.org/21APURCR.

Individual Registration

<table>
<thead>
<tr>
<th>Category</th>
<th>Super Early Bird by 20 August</th>
<th>Early Bird by 18 September</th>
<th>Standard Rate after 18 September</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Access: AAPG/SEG/SPE Member</td>
<td>USD 260</td>
<td>USD 280</td>
<td>USD 300</td>
</tr>
<tr>
<td>Full Access: Non-Member</td>
<td>USD 300</td>
<td>USD 320</td>
<td>USD 340</td>
</tr>
<tr>
<td>Full Access: Speaker / Author / Committee / Session Chair</td>
<td>USD 240</td>
<td>USD 260</td>
<td>USD 280</td>
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<tr>
<td>Student</td>
<td>Complimentary (with valid student ID only)</td>
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<td></td>
</tr>
</tbody>
</table>

Group Registration

Register for 5 and save up to 15%, Register for 10 and save up to 20%.

Student Registration

Asia Pacific URTeC 2021 is offering limited complimentary registrations to university students (with valid university ID) to attend the virtual event from 16 – 18 November 2021. Registration for these limited complimentary access will open on 20 September 2021 and be allocated on a first-come-first serve basis. Should you wish to guarantee your attendance at the virtual event, you may consider purchasing a Full Access Registration.

What Do You Get

<table>
<thead>
<tr>
<th>Access Type</th>
<th>Full Access</th>
<th>Student</th>
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</thead>
<tbody>
<tr>
<td>Conference Opening and Keynote Session, Executive Plenary Session, Technical Plenary Session, Panel Sessions, Technical Sessions and Closing Session</td>
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<td>✔</td>
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<tr>
<td>Sponsored Seminars</td>
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<td>✔</td>
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<tr>
<td>Knowledge Sharing ePoster Sessions</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Networking Live 1-1 chat and exchange business card with online attendees</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Digital Briefcase and Business Card Digital resources, information and business cards</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Conference Digital Proceedings</td>
<td>✔</td>
<td>✔</td>
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<tr>
<td>On-Demand Content Conference sessions and presentations up to 1-month after the live event</td>
<td>✔</td>
<td>✔</td>
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</tbody>
</table>
Visit go.spe.org/21APURC for more information about Asia Pacific URTeC 2021