Safeguard Amusement Assets from Costly Corrosion Failures

Help protect amusement park assets and increase visitor safety with the BRAND NEW NACE Controlling Corrosion in the Amusement Park Industry eCourse and the NACE Institute Coatings Foundations for Amusement Parks Micro-Credential.

How will this program help you?
• Understand how coatings protect assets and visitors
• Learn how to protect against corrosion failures
• New corrosion program built exclusively for the industry
• Attain Professional Development Hours (PDH) requirements
• Flexible scheduling so you can attend on your schedule

Learn more about these new, exciting offerings and get started today!

Visit nace.org/amusement
devolution

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Do it all with the fully-encapsulated EVOLUTION® Isolation Gasket, delivering the industry-leading impermeable performance needed to prepare any flange for the increasing risks found in today’s oil and gas industry.

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Forms the Tightest Seal

Stops Galvanic Corrosion
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Fire Safe, API 6FB certified

For more information, visit www.gptindustries.com
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Visit nace.org/amusement
Welcome to the CORROSION 2021 Virtual Conference & Expo
Program Preview

We are pleased to introduce the program preview for the CORROSION 2021 Virtual Conference & Expo, your guide for navigating NACE International’s 75th annual conference. Scheduled for a full two weeks, from April 19 through 30, the conference will offer the broad spectrum of corrosion-related technical, research, educational, public awareness, and networking activities that you and the corrosion industry have come to expect.

With restraints to in-person conferences still in place due to COVID-19, we are dedicated to producing and holding a safe and robust CORROSION 2021, which has been redesigned into a virtual format. This will allow attendees to remain connected to the latest innovations, information, and products advancing our industry today.

To ensure attendees get the most out of conference content, and to allow exhibitors and buyers to easily connect, the CORROSION 2021 Virtual Conference & Expo will utilize Artificial Intelligence (AI) matchmaking tools. The AI feature recommends sessions based on each registrant’s unique profile and program schedule. The digital platform automatically adapts to each user’s time zone, and attendees can plan their schedules around conference offerings such as symposia presentations on the latest corrosion prevention techniques; a forum discussion about best practices for corrosion mitigation; or a committee meeting to hear about current and upcoming industry standards. The full lineup of activities can be found in this program.

Group chats on specific topics will be available, allowing registrants to easily engage with other attendees and peers. Professional development hours can be earned from attending various technical meetings, forums, symposia, and workshops, with content also available in an “on demand” format for six months after the event.

Our Association Award winners will be honored in a virtual ceremony, as well as winners of the 2021 MP Corrosion Innovation of the Year and CoatingsPro Contractor Awards.

We fully expect CORROSION 2021 to exceed the expectations and enrich the careers of participants from all over the world. This program contains complete details on all you will experience and learn. Now that NACE and SSPC—the Society for Protective Coatings have combined into the Association for Materials Protection and Performance (AMPP), the new AMPP boards, committees, and staff look forward to participating with you.

Tim Bieri
Chair, AMPP Board of Directors

Joyce Wright
Chair, AMPP Global Center Board of Directors
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- Several field proven sensors in a single housing for easy installation.
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617-484-9085 info@edi-cp.com

www.edi-cp.com
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Bringing Corrosion Protection Forward.

Engineering, Design & Installation

Pipeline Integrity

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Best-in-class cathodic protection systems.

Corrpro Companies design completion cathodic protection solutions to protect your critical infrastructure. From installation and repair to inspection and monitoring, our engineered solutions enhance the safety and reliability of your products, infrastructure, and the environment.

For more information, visit corrpro.com.

Check out our virtual booth at CORROSION 2021.
General Conference Information

CORROSION 2021

Official Conference Language
The official conference language is English.

Manage Itinerary
Create your personal schedule of events, forums, symposia, and standard committee meetings before you attend conference. Access the CORROSION 2021 virtual schedule on the “Agenda” page at www.nacecorrosion.org.

Professional Development Hours (PDHs)
Earn PDHs in any technical meetings, forums, and symposia you attend. Request your personalized PDH certificates online at www.nace.org/pdh. Certificates are based solely on the information provided to NACE at the time of printing.
This system will be available online for six months after the conclusion of the conference and accessible from your NACE profile.

CORROSION 2021 Conference Papers
The CORROSION 2021 conference proceedings will be available online. Please see below for pricing details:

<table>
<thead>
<tr>
<th>COMPLIMENTARY ONLINE ACCESS</th>
<th>$149 FOR ONLINE ACCESS</th>
</tr>
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<tbody>
<tr>
<td>Virtual Conference Registration</td>
<td>Virtual Exhibit Hall Only Pass</td>
</tr>
<tr>
<td>Student Registrations</td>
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<tr>
<td>Virtual Exhibitor</td>
<td>Full Conference Registration</td>
</tr>
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</table>

Social Media
Keep up with all things CORROSION on social media. Follow AMPP on Twitter, Instagram, Facebook, and LinkedIn to get important updates about the world’s largest corrosion conference.

Remember to use the official conference hashtag #CORROSION2021 to connect with exhibitors, speakers, and attendees before and during the conference!

JOIN TEXAS A&M AND AMPP FOR A WORKSHOP ON

APPEAL Industrial Research in High Performance Polymers

Thursday, May 13, 2021
9 a.m. – 1:40 p.m.
Virtual Meeting (Online via Zoom)

The APPEAL (Application of Performance Polymers in Engineering Applications) Research Consortium is an industry led applied research consortium directed through the Polymer Technology Center at Texas A&M University.
Registration Information

General Registration Information
Registration is available online from January 18, 2021 through October 31, 2021. After April 30, 2021, registrants will have access to view the conference on demand until October 31, 2021.

Student Registration
To learn about the eligibility requirements for becoming a NACE student member, visit www.nace.org/students. Student membership must be active before conference registration can be accepted at the student rate.

Conference Registration Payment and Information
Registration will not be processed without payment. Registration and payment date determine price. Payment must be made in U.S. dollars from a U.S. financial institution.

If you have a disability that may hinder your participation, fax a written description of your needs to +1 281-228-6329 and a NACE staff member will contact you.

Cancellation and Refund Policy
Paid registrations cancelled in writing at least 30 calendar days or more prior to the start of the event will receive a full refund, less a 10% service fee. Paid registrations cancelled in writing 29 to 7 calendar days before the starting date of the event will receive a refund of 50% of the registration fee. No refunds or credit will be issued on cancellation requests received less than 7 calendar days before the event begins. Transfer of registration is permitted one time with an accompanying fee of $100 USD. Transfers may not be made less than 7 calendar days before the event begins. This policy supersedes any previously published policy regarding the cancellation process for NACE conferences.

All requests for transfer or cancellation must be submitted in writing to firstservice@nace.org. No refund will be processed if the registrant is a no show.

IMPORTANT CONTACTS

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<tr>
<th>IMPORTANT CONTACTS</th>
<th>U.S.</th>
<th>INTERNATIONAL</th>
<th>EMAIL</th>
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<tbody>
<tr>
<td>Registration Services and General Questions</td>
<td>1 800-797-6223</td>
<td>+1 281-228-6223</td>
<td><a href="mailto:firstservice@nace.org">firstservice@nace.org</a></td>
</tr>
<tr>
<td>NACE Conferences</td>
<td>+1 281-228-6227</td>
<td>+1 281-228-6227</td>
<td><a href="mailto:lesley.martinez@nace.org">lesley.martinez@nace.org</a></td>
</tr>
<tr>
<td>NACE Exhibits/Sponsorships</td>
<td>+1 281-228-6299</td>
<td>+1 281-228-6299</td>
<td><a href="mailto:sales@nace.org">sales@nace.org</a></td>
</tr>
<tr>
<td>Conference Symposium Papers</td>
<td>+1 281-228-6218</td>
<td>+1 281-228-6218</td>
<td><a href="mailto:papers@nace.org">papers@nace.org</a></td>
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</table>

Virtual Registration
NACE Member: $495 USD
Non-Member: $595 USD

Access to special lectures, forums, corrosive chronicles, symposium presentations, and meetings. Attendees will have an opportunity to participate in interactive chats during the sessions, connect with colleagues in networking lounges, and visit the virtual exhibit hall.

All attendees will have access to a digital copy of the conference proceedings post event.

Student Registration
NACE Member: Free
Non-Member: $100 USD

*Must have an active NACE student membership

To learn about the qualifications for becoming a NACE student member and requirements for student registration, visit www.nace.org/students. Requirements must be fulfilled before conference registration can be accepted.

Virtual Exhibit Hall Pass
NACE Member: Free
Non-Member: Free

By registering for the complimentary/free access to the exhibit hall, you consent to share your information with event organizers and exhibitors/sponsors affiliated with the event. Access is to the virtual exhibit hall ONLY.
Introducing AMPP

NEW Association for Materials Protection and Performance (AMPP)
Represents Corrosion Control and Protective Coatings Industries

To create a unified voice for the corrosion control and protective coatings industries, a new association launched today at a global virtual event. The new organization, the Association for Materials Protection and Performance (AMPP), was formed by a merger between Houston-based NACE International, The Corrosion Society; and Pittsburgh-based SSPC: The Society for Protective Coatings. AMPP’s name, logo, and other brand elements were revealed at the event led by AMPP CEO Bob Chalker and the organization’s executive leadership.

“AMPP brings together the world’s leading corrosion prevention and protective coatings organizations under one umbrella,” says Chalker. “With a vision to create a safer, protected, and sustainable world, the new association will focus on the future of materials protection and performance.”

With more than 40,000 members in 130 countries, AMPP consists of two governance structures—AMPP, a 501(c)(6), and AMPP Global Center, a 501(c)(3). AMPP provides services to members in the areas of certification, accreditation, membership, advocacy, and public affairs, and AMPP Global Center focuses on standards, technical and research activities, conferences, events, education, training, publications, and pre-professional programming.

“No other organization offers the depth and breadth of materials protection and performance information, standards, education, certification, and contractor accreditation programming that AMPP now provides,” says Tim Bieri, chair of the AMPP Board of Directors and vice president for Materials & Corrosion Engineering, BP America, Houston, Texas. “Through AMPP, we will be able to raise the level of excellence of our professional community and have a greater impact on society through our expanded network of members worldwide.”

“I’m looking forward to bringing together the expertise that’s been instrumental in developing standards, training, publications, and other technical resources that support our members and advance our industry,” says Joyce Wright, AMPP Global Center’s chair; and trade manager for Strategy and Innovation, Huntington Ingalls Industries—Newport News Shipbuilding, Hampton, Virginia. “With one voice contractors, owners, craftsmen, manufacturers, corrosion experts, consultants, and industry stakeholders, will do more to protect society across the globe.”

While the AMPP staff has been working together seamlessly since October, some program details such as accreditation and certification continue to evolve. For the near future, NACE and SSPC accreditations and certifications will remain as they are currently.

“For years, AMPP’s new combined membership has been aligned in one very important way, our members are dedicated to protecting infrastructure and assets from corrosion and deterioration. Guided by this common purpose we will be a stronger, more powerful voice for our industry by working together,” says Chalker.

For more information about AMPP, visit www.ampp.org.

About AMPP

The Association for Materials Protection and Performance, AMPP, is the world’s leading organization focused on the protection of assets and performance of materials. AMPP was created when NACE International and SSPC united after more than 145 combined years of corrosion control and protective coatings expertise, and service to members worldwide. Today, AMPP is active in more than 130 countries and has more than 40,000 members. AMPP is headquartered in the U.S. with offices in Houston, Texas and Pittsburgh, Pennsylvania. Additional offices are located in the U.K., China, Malaysia, Brazil, and Saudi Arabia with a training center in Dubai.
Virtual Benefits & Features

EXHIBITORS AND SPONSORS

Benefits

• Showcase your brand’s strength to our highly sought-after audience and build your global network.
• Gather actionable leads and interact with customers 1:1 via chat or through a scheduled booking. Lead generation is offered post-event at no extra cost!
• Measure your ROI with concrete data and analytics and demonstrate your support within the corrosion industry.
• Match and connect. Our matchmaking powered by artificial intelligence (AI) allows you to set up private meetings and unlock meaningful connections, even after the conference ends.

Features

• Exhibitor profile page with group and private chat.
• AI powered matchmaking pairs you with your targeted customer base.
• Opt-in attendee list during and six months after CORROSION ends.
• Exhibitor profile page analytics allows you to evaluate your performance.
• Upload your featured product listings for all to view on your exhibitor profile page.
• Manage and set your meeting schedules with customers with easy-to-use pre-bookings.
• Video banner.

ATTENDEES

Benefits

• Access the latest in corrosion developments and technology directly from industry experts from around the world wherever you are.
• View content on demand for six months after CORROSION ends. Available until October 31, 2021.
• Eliminate travel costs, hotel accommodations, and food expenses so you’re only responsible for the registration fee. Plan your agenda around your work schedule.
• Provides new ways to connect and network with thought leaders and peers via chat rooms and/or video.

Features

• Attendee networking powered by AI: Match and arrange one-on-one meetings with peers using artificial intelligence.
• Video calls and virtual rooms: Participate in one-on-one video calls with peers and exhibitors with the ability to navigate through the platform while remaining connected.
• Programs: Peruse sessions and create your own schedule via an event program that’s always up to date. The AI feature recommends sessions based on your attendee profile and program schedule.
• Group chats: Engage with other attendees and peers by creating group chats on specific topics.
• Exhibitor and sponsor lists: Create and view exhibitors and sponsors in the order you prefer. Create filters to make it easier to find them.
• Time zone: CORROSION 2021’s platform adapts automatically according to your time zone. Never miss a session.
• Push notifications and calendar reminders: Stay Informed with automated reminders that appear on your mobile and/or save sessions to your work calendar.
<table>
<thead>
<tr>
<th>Event</th>
<th>Dates</th>
<th>Location</th>
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<tr>
<td>CORROSION 2021 Conference &amp; Expo</td>
<td>April 19-30, 2021</td>
<td>Virtual</td>
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<tr>
<td>MitigateNOW (webinars)</td>
<td>May/July/September 2021</td>
<td>Virtual</td>
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<tr>
<td>Additive Manufacturing Virtual Seminar (in partnership with ICORR and IOM3)</td>
<td>May 11-12, 2021</td>
<td>Virtual</td>
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<tr>
<td>Bring on the Heat Conference</td>
<td>June 15-16, 2021</td>
<td>Pasadena, TX</td>
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<tr>
<td>NACE Central Area Conference</td>
<td>August 4-6, 2021</td>
<td>Kansas City, MO</td>
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<tr>
<td>MPI Summit</td>
<td>August 18-19, 2021</td>
<td>Washington, DC</td>
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<tr>
<td>AfriCORR 2021 Virtual Conference (in partnership with CorrISA)</td>
<td>September 2021</td>
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<td>Corrosion Technology Week</td>
<td>October 17-22, 2021</td>
<td>Houston, TX</td>
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<tr>
<td>NACE Eastern Area Conference</td>
<td>October 4-6, 2021</td>
<td>Pittsburgh, PA</td>
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<tr>
<td>EAPA 2021 Virtual Conference (in partnership with EAPA and ACA)</td>
<td>October 12-13, 2021</td>
<td>Virtual</td>
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<tr>
<td>PIMS Latin America</td>
<td>November 17-19, 2021</td>
<td>Quito, Ecuador</td>
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<tr>
<td>FireCORR 2021 Virtual Conference (in partnership with PSK)</td>
<td>November 16-17, 2021</td>
<td>Virtual</td>
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<tr>
<td>NACE Western Area Conference</td>
<td>November 30–December 2, 2021</td>
<td>San Francisco, CA</td>
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<tr>
<td>Coatings+ 2021</td>
<td>December 13-16, 2021</td>
<td>Phoenix, AZ</td>
</tr>
<tr>
<td>AMPP 2022 Annual Conference &amp; Expo</td>
<td>March 6-10, 2022</td>
<td>San Antonio, TX</td>
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<tr>
<td>Department of Defense—Allied Nations Technical Corrosion Conference</td>
<td>August 8-11, 2022</td>
<td>Tucson, AZ</td>
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ANTI-HARASSMENT POLICY

CORROSION is committed to providing an environment free of sexual harassment (which includes harassment based on gender, pregnancy, childbirth, or related medical conditions), as well as harassment based on such factors as race, color, religion, national origin, ancestry, age, physical disability, mental disability, medical condition, marital status, sexual orientation, gender identity, gender expression, workers’ compensation leave, veteran status, or any other condition or characteristic protected by law.

A. We expect all participants to abide by this Anti-Harassment Policy during CORROSION 2021 Virtual Conference & Expo.
B. Exercise consideration and respect in your speech and actions.
C. Refrain from demeaning, discriminatory, or harassing behavior and speech.
D. Be mindful of your surroundings and of your fellow participants.
E. Alert NACE staff if you notice harassment.

If you are being harassed, notice that someone else is being harassed, or have any other concerns, please contact Lesley Martinez, Conferences Manager, at lesley.martinez@nace.org.
What's New at CORROSION 2021

FirstService “How To” Mini-Sessions
Have questions about how to log in to your profile, access your grades, renew your certification, schedule your computer-based training exam, or navigate your NACE profile?
Check the online agenda for days and times of available sessions.

Forums

Effect of AC Mitigation on Potential Survey
Presented by Sasan Hosein, Pond & Co.
Cathodic protection (CP) and external coating have been recognized as perhaps the most reliable and cost-effective means of controlling corrosion for pipelines. Each structure or piping system that is provided CP must be tested periodically to determine the effectiveness of the CP system. Pipe-to-soil (P/S) potential measurements are recorded to determine the potential of a pipeline with respect to a reference electrode. Additionally, potential measurements are recorded in corrosion evaluations as a qualitative method to identify corrosion activity.
When properly interpreted and correlated with other measurements, P/S potentials can indicate the severity of both galvanic and electrolytic corrosion cells, as well as the level of CP in accordance with industry standard criteria. There are various challenges associated with pipeline potential readings with alternating current (AC) mitigation collocated with an AC corridor. These challenges require alternative potential evaluation approaches for pipeline integrity evaluation.

Presented by Jessica Torrey, Materials Corrosion Lab, Bureau of Reclamation; Stephanie Prochaska, Bureau of Reclamation; Jim Geibush, Central Arizona Project; Jeff Giddings, HDR, Inc.; and Murray Heywood, Sherwin Williams Protective & Marine Coatings
The forum will consist of two primary topics. Industry experts will share best practices and lessons learned from their work with owners and operators in the water and wastewater industries. The presenters will also compare new and old technologies, as well as discuss new and emerging trends.

New Symposia

Corrosion in Sweet and Slightly Sour Production Conditions
This symposium features technical papers on laboratory and field experience of CO₂/H₂S corrosion and mitigation in a hydrocarbon-containing environment.
Sponsoring Committee: TEG 059X
Chair: Ziru Zhang  Vice Chair: Sudhakar Mahajanam

Innovations in Chemical and Mechanical Cleaning and Fouling/Corrosion Mitigation
This symposium features technical papers that provide fundamental insight into new and upcoming innovations in the field of chemical and mechanical cleaning. Innovations in this field include new chemistries, methods, applications, or techniques, emerging equipment, and innovative partnerships. Case studies involving the use of the innovative technologies or chemistries at the field level, as well as laboratory scale initial testing methods, may be included. It will also feature new ideas that have yet to emerge on the scene.
Sponsoring Committee: TEG 188X
Chair: Roxanne Shank  Vice Chair: Christopher Wiggins

In partnership with ASM International the following courses will be offered during the virtual event.

Introduction to Metallurgical Lab Practices (Short Course)
Corrosion and surface oxidation examples will be utilized to illustrate relevant metallographic preparation techniques, microscopic examination, and mechanical testing procedures. These are typical capabilities of metallurgical testing laboratories.

Microstructure of Ferrous Alloys (Short Course)
This corrosion focused short course will explore the effect of sensitization temperature on the microstructure of austenitic stainless steel and elevated temperature oxidation of carbon steel through heat treat experiments, metallographic preparation, and microscopy.

Design for Additive Manufacturing (Short Course)
This course introduces attendees to the full range of additive manufacturing (AM) processes, the materials used in those processes, geometric flexibility and limitations, and typical applications. The topics are covered in the context of design for additive manufacturing, the specification of material characteristics, process parameters, and geometric attributes to meet application objectives, one of which is corrosion mitigation.

Principles of Failure Analysis (Focus on Corrosion Failures) (Short Course)
This course will present the definition of corrosion, the basics of electrochemistry, the many types or mechanisms of corrosion and the factors affecting them, corrosion control and prevention, and the analysis of corrosion failures.
**Symposia**

Please note that the dates given for these symposia are tentative; if papers are retracted, the lengths of some symposia may be shortened. Research in Progress Symposia are only available April 19-30, 2021. For the most up-to-date listing, visit [www.nacecorrosion.org](http://www.nacecorrosion.org).

**AC Interference, AC Induced Corrosion, AC Risk Assessment, Monitoring and Mitigation Details**
This symposium will include papers on alternating current (AC) interference on buried pipelines. Specific topics may include analysis of AC interference, AC corrosion excavations and failure analysis, AC risk assessment, monitoring, and mitigation.

*Sponsoring Committee: STG 05*
Chair: Shane Finneran  
Vice Chair: Kyle Platt

**Advanced Electrochemical Methods—Research in Progress**
This research in progress (RIP) symposium will cover recent advances made in understanding corrosion using state-of-the-art electroanalytical techniques and also other “real time” or in-situ characterization techniques. The topics of interest include corrosion studies using electroanalytical methods such as scanning electrochemical microscopy (SECM), scanning vibrating electrode technique (SVET), scanning kelvin probe force microscopy (SKPFM), scanning droplet cell microscopy (SDCM), and local electrochemical impedance spectroscopy (LEIS). This session will also cover “real time” spectroscopic methods used in corrosion monitoring such as online inductively coupled plasma-atomic emission spectroscopy (ICP-OES) and in-situ corrosion investigations using either optical, x-ray, or electron-based methods.

*Sponsoring Committee: Research*
Chair: Sebastian Thomas  
Vice Chair: Rebecca Schaller

**Advances in Materials for Oil and Gas Production**
This symposium will present advances in materials technology and research for oil and gas. The focus is on new and improved metallic materials and applications. This includes consideration and evaluation of the material’s performance in its envisaged exposure environment. Field experiences, failure analysis, and mitigation through metallurgical innovative solutions may also be included.

*Sponsoring Committee: STG 32*
Chair: Hernan Rincon  
Vice Chair: Filippo Cappuccini

**Advances in Water-Formed Mineral Scales and Deposits Control**
The symposium will have original and review papers dealing with water-formed mineral scales and deposits formation and inhibition in industrial water systems. Papers will address inhibition of different scales with new additives in various industrial systems including boiler, cooling, geothermal, desalination, sugar processing, oil and gas production, etc.

*Sponsoring Committee: STG 11*
Chair: Zahid Amjad  
Vice Chair: Tao Chen

**Anodic & Cathodic Protection**
This symposium focuses on anodic and cathodic protection on ferrous materials in pipeline, oil, and gas systems.

*Sponsoring Committee: STG 05*
Chair: Dan Wagner  
Vice Chair: Stephen Ball

**Atmospheric Corrosion of Structural Materials**
This symposium covers engineering materials designed to resist degradation from multiple stressors (e.g., corrosion, high-temperature, fatigue, etc.). The types and severities of stressors depend on the intended application and service life. For this reason, screening, qualification, and implementation of new materials can be a lengthy process. Despite exhaustive laboratory testing, some materials experience unexpected failures in service due to a combination of deleterious effects that were either not anticipated or not captured in initial material evaluations. Recently, many industries have begun developing combined-effects test protocols that better replicate and accelerate the service conditions engineering components experience. Some of these methods also include the combined effect of environment and stress, stress corrosion cracking, or fatigue. To document and share recent efforts in this area, this symposium will focus on technical approaches for evaluating laboratory methods for simulating atmospheric corrosion, including but not limited to acceleration, reproducibility, and including applied stress. Papers that address combined exposure parameters, thermal, UV, chemical, mechanical stressors, are also included. Topics of interest include but are not limited to laboratory testing, outdoor exposures, in-service evaluations, case studies, and modeling and simulation. In particular, papers that address new combined-effects mechanisms and ways to reproduce those in a laboratory setting may be included.

*Sponsoring Committee: TEG 189X*
Chair: Sarah Galyon Dorman  
Vice Chair: Sean Fowler

**Biomedical Materials—Research in Progress**
This RIP symposium covers advancements in the biomedical field with respect to corrosion, degradation, and biocompatibility. Topics of interest include, but are not limited to: emerging materials (e.g., biodegradable alloys), fretting corrosion (e.g., orthopedic joints), device interaction with the biological environment, implant retrieval analysis, novel corrosion evaluation methods, electrochemical techniques in biosensors and active implants, and surface treatments to inhibit infection and modulate degradation. Presentations will focus on recent advances in corrosion of implants and will span a wide range of product application areas such as cardiovascular, orthopedic, neurological, and dental devices.

*Sponsoring Committee: Research*
Chair: Srinidhi Nagaraja  
Vice Chair: Shiril Sivan
Symposia

Coatings, Composites, and Elastomers Used in Oil and Gas Piping Systems
This symposium presents coatings used in corrosion protection and deposit mitigation on steel pipe, composites used with the steel pipe, in place of the steel pipe, and elastomers used in the piping system. The functionality of these systems are for things like corrosion protection, weight savings, chemical resistance, deposit mitigation, and flow enhancement for the oil and gas industry.
Sponsoring Committee: STG 33
Chair: Robert Lauer    Vice Chair: Jeffrey Hamilton

Corrosion Evaluation and Mitigation in Reinforced Concrete Structures
This symposium discusses the evaluation of reinforced concrete (RC) structures and the design and implementation of corrosion mitigation systems for RC structures. Topics include corrosion evaluation methods, alternative design criteria, service life prediction, use of alternative materials (reinforcing steel, concrete mixes, admixed inhibitors), and electrochemical methods for corrosion mitigation.
Sponsoring Committee: TEG 053X
Chair: Javier Balma    Vice Chair: Christopher Alexander

Concrete & Architecture—Research in Progress
This RIP symposium covers the overall aspects of corrosion of steel in concrete for building, construction, architecture, and infrastructure including reinforced concrete structures, offshore and onshore infrastructure, bridges, and concrete pipelines. Different aspects of corrosion of steel in concrete will be covered including pitting corrosion, uniform corrosion, chloride corrosion threshold, carbonation influenced corrosion, new cementitious materials, new geopolymer concrete, fly ash concrete corrosion, stress corrosion cracking, fatigue corrosion, weld joints corrosion, corrosion inhibitors, electrochemical chloride removal, electrochemical realkalinization, new corrosion monitoring techniques, modeling, and simulation.
Sponsoring Committee: Research
Chair: David Bastidas    Vice Chair: Christopher Alexander

Corrosion in Nuclear Systems
This symposium covers materials-related issues encountered in the generation of nuclear power energy in light, heavy, and advanced nuclear power reactors and plants. This can include degradation mechanisms of structural materials and materials reliability issues encountered in nuclear power applications, including degradation management. Paper also cover advanced manufacturing methods being developed for nuclear plant component manufacture and deployment.
Sponsoring Committee: TEG 224X
Chair: Vineeth Kumar Gattu    Vice Chair: Sheewa X. Feng

Control of Corrosion in Oil and Gas with Inhibitors
This symposium focuses on the study of the application of corrosion inhibitors and/or scale/deposit inhibitors and their mechanisms of inhibition.
Sponsoring Committee: TEG 184X
Chair: Jeremy Moloney    Vice Chair: Zineb Belarbi

Corrosion in Supercritical Systems
This symposium focuses on the measurement or assessment of degradation in any supercritical system, including especially supercritical water and supercritical carbon dioxide. Papers can be of a research or industrial nature.
Sponsoring Committee: TEG 121X
Chair: Shiladitya Paul    Vice Chair: Xi Wang

Control of Problematic Microorganisms in Oil and Gas Field Operations
This symposium discusses treatments and monitoring techniques pertaining to the control of microbiological problems and biogenic H₂S in oil, water, and gas systems for upstream and downstream operations. Papers may include laboratory and/or field results.
Sponsoring Committee: TEG 286X
Chair: Torben Lund Skovhus    Vice Chair: Jason Lee

Corrosion Issues in Military Equipment and Facilities
This symposium features research on identification, causes, and control of corrosion and materials degradation for military air, ground, and ship systems, as well as electronic systems, support equipment, and infrastructure.
Sponsoring Committee: STG 40
Chair: Wes Barfield    Vice Chair: Robert Mason

Corrosion in Sweet and Slightly Sour Production
This symposium covers corrosion caused by acid gasses, organic acids, oxygen ingress, and spent acids in upstream production systems. Papers may be related to prediction of corrosion, detection and mitigation of corrosion issues, and/or failure analysis.
Sponsoring Committee: TEG 059X
Chair: Sudhakar Mahajanam    Vice Chair: Haitao Fang

Control of Problematic Microorganisms in Oil and Gas Field Operations
This symposium discusses treatments and monitoring techniques pertaining to the control of microbiological problems and biogenic H₂S in oil, water, and gas systems for upstream and downstream operations. Papers may include laboratory and/or field results.
Sponsoring Committee: TEG 286X
Chair: Torben Lund Skovhus    Vice Chair: Jason Lee

Corrosion and Logistic Challenges Associated with Hydrotesting and Mothballing
This symposium covers corrosion and logistics issues associated with hydrotesting equipment, on and offshore, in the shop and in the field. Water sources may vary from potable to seawater. Specific practices to minimize corrosion, or real-world examples of corrosion problems caused by poor water quality are included.
Sponsoring Committee: TEG 397X
Chair: Krista Heidersbach    Vice Chair: Jodi Wrangham

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Symposia

Corrosion Issues in the Pulp, Paper, and Biomass Industries
This symposium features technical papers related to the pulp, papermaking, and biomass conversion processes. These may include case studies, research into new materials or methods, industry corrosion problems and their solutions, new materials, or other topics related to pulp and paper.
Sponsoring Committee: STG 38
Chair: Matthew Tunnicliffe      Vice Chair: Catherine Noble

Corrosion Management
This symposium details novel approaches to corrosion management and the application of different corrosion management philosophies.
Sponsoring Committee: STG 08
Chair: Robin D. Tems      Vice Chair: Brian Burgess

Corrosion of Additively Manufactured Materials
This symposium addresses the corrosion-related issues of additively manufactured (AM) materials, mainly metals. In contrast to conventional processes, AM processes and post-processing treatments result in unique microstructures and material surfaces that alter the corrosion performance. Subjects include but are not limited to: process-structure-performance relationships, post-processing treatments and surface finish, corrosion mechanism of AM materials, AM material degradation in corrosive environments, AM materials selection and applications, AM qualification and certification, integrity or risk analysis and assessment, etc.
Sponsoring Committee: TEG 569X
Chair: Liu Cao      Vice Chair: Emerson Nunez-Moran

Direct Assessment
This symposium covers new technologies and methods, as well as case studies and histories in the area of external corrosion, internal corrosion, and stress corrosion cracking by way of direct assessments.
Sponsoring Committee: STG 35
Chair: Jorge Vasquez      Vice Chair: Carlos Melo Gonzalez

Emergent Materials—Research Topical Symposium
The Research Topical Symposium will provide fundamental insight into the processing-structure-corrosion performance relationships of emergent alloys and materials fabricated by advanced manufacturing. Topics of interest include but are not limited to nanocrystalline, amorphous and compositionally complex alloys along with additively manufactured metals and composites. Contributions highlighting materials-by-design concepts and approaches for corrosion resistance may be included.
Sponsoring Committee: Research
Chair: Eric Schindelholz      Vice Chair: Rajeev Gupta

Environmental Assisted Cracking
This symposium provides understanding of all kinds of environmental assisted cracking (EAC) mechanisms including but not limited to hydrogen embrittlement, stress corrosion cracking, corrosion fatigue, and so on. The papers can cover all sorts of materials (metals and composites), effects of materials processing methods and environmental parameters, root cause failure analysis in service, lab testing methods, materials modeling, industry standards development, state of art EAC research reviews, and so on.
Sponsoring Committee: TEG 186X
Chair: Fei Tang      Vice Chair: Arshad Bajvani

Flow Assurance in Oil and Gas from Inland to Subsea
This symposium features technical papers on maintenance of flow assurance in deep water and inland oil and gas systems by controlling corrosion, scale, and related mechanisms.
Sponsoring Committee: TEG 202X
Chair: Qiwei Wang      Vice Chair: Zhengwei Liu

Geothermal Corrosion and Scaling
This symposium will promote discussion on corrosion and scaling in geothermal energy systems impact of production, process and reinjection conditions on materials and process efficiency. Materials and scaling specialists and operators and service providers will share their recent work activities.
Sponsoring Committee: TEG 182X
Chair: William MacDonald      Vice Chair: Sigrun Karlsdottir

High Temperature Issues and Materials for the Process Industry
This symposium discusses the performance of high-temperature materials and equipment in chemical, refinery, and petrochemical processes, and high-temperature corrosion and damage mechanisms of materials and equipment in chemical, refinery, and petrochemical processes.
Sponsoring Committees: TEG 123X, 126X, 128X, 270X, STG 37
Chair: Vinay Deodeshmukh      Vice Chair: Bill Valerioti

Hydrogen Embrittlement and Stress Corrosion Cracking in Subsea Materials
This symposium features research, development, and novel oil and gas or subsea applications involving evaluation of materials for susceptibility to hydrogen embrittlement by cathodic protection, galvanic interactions, or from other contributory sources of hydrogen where H2S is not believed to be the primary contributor to the damage mechanism and cracking.
Sponsoring Committee: STG 32
Chair: Russell Kane      Vice Chair: Sai Prasanth Venkateswaran
Symposia

Inhibitors—Vapor Transported (VCI) and Surface Coated Rust Preventive (RP)
This symposium features research, case studies, and state-of-the-art use and application of vapor corrosion inhibitors (VCIs) and related rust preventative (RP) coatings.
Sponsoring Committee: TEG 093X
Chair: Charles Phillips  Vice Chair: Sujay Math

Innovations in Chemical and Mechanical Cleaning and Fouling/Corrosion Mitigation
This symposium will provide fundamental insight into new and upcoming innovations in the field of chemical and mechanical cleaning. Innovations in this field include new chemistries, methods, applications or techniques, emerging equipment, and innovative partnerships. Case studies involving the use of the innovative technologies or chemistries at the field level, or laboratory scale initial testing methods may be included.
Sponsoring Committee: TEG 188X
Chair: Roxanne Shank  Vice Chair: Chris Wiggins

Localized Corrosion—Mechanisms, Research Methods, Modeling, and Control
This symposium features technical papers in the area of localized corrosion that discuss mechanisms, traditional and novel research methodologies, modeling and monitoring approaches, real cases and failure analysis, as well as strategies to control it.
Sponsoring Committees: TEG 407X, STG 60
Chair: Helmuth Sarmiento Klapper  Vice Chair: Mariano Kappes

Marine Corrosion—Research in Progress
This RIP symposium will cover all aspects of corrosion occurring in the marine environment. Fundamental aspects of material performance and degradation in contact with seawater or seawater aerosols are of interest. These topics can include but are not limited to corrosion mechanisms prevalent in seawater such as localized corrosion or galvanic interactions, mechanical degradation, and mitigation strategies such as coatings or surface treatments. Contributions may include experimental and modeling studies and focus on recent results or research currently in progress.
Sponsoring Committee: Research
Chair: Derek Horton  Vice Chair: Saba Navabzadeh Esmaeely

Marine Corrosion—Innovative Approaches for Maintaining the Functionality and Integrity of Marine Structures
This symposium deals with innovative approaches for maintaining and ensuring the functionality and integrity of structures exposed to seawater and marine atmospheric conditions. Papers based on laboratory research, field applications as well as case studies may be included.
Sponsoring Committee: STG 44
Chair: Moavin Islam  Vice Chair: Abdul Hameed Al-Hashem

Materials and Integrity in Oil Sands
This symposium features technical papers on oil sands from owner-operators, vendors, consultants, and researchers. Areas of interest include (but are not limited to) corrosion, failures, wear, process, material selection, asset integrity, and can be related to steam-assisted gravity drainage, downhole, or surface equipment/facilities.
Sponsoring Committee: TEG 341X
Chair: Duane Serate  Vice Chair: Matthew Krantz

Microbiologically Influenced Corrosion
This symposium has technical papers concerning the impact of microbiological processes on the performance of metallic and nonmetallic materials. Contributions will explore the mechanisms and modeling of microbiologically influenced corrosion (MIC) and assess the influence of physicochemical and microbiological factors on biodeterioration processes and materials performance. Papers will describe recent advancements in monitoring and understanding the microbial ecology, as well as present new techniques for online monitoring of MIC and environmentally friendly control methods.
Sponsoring Committee: TEG 187X
Chair: Nora Eigbergen  Vice Chair: Tony Poulassichidis

Nanotechnology in Coatings
This symposium features technical papers on nanomaterials and other concepts taking advantage of the nanoscale to both enhance and understand the performance of coatings. A number of speakers will participate in a one-day session to lead the community in looking at various formulated technologies applicable for corrosion mitigation, stimuli responsive materials, and other performance parameters.
Sponsoring Committee: TEG 474X
Chair: Igor Kosacki  Vice Chair: Joao Tedim

Oil & Gas Coating Technology
This symposium covers the following themes: (1) underfilm corrosion mechanism for organic coatings, (2) cathodic disbondment mechanism for organic coatings, (3) coating blister mechanism, (4) impact of soluble salts on coating performance, (5) high temperature (>150 °C) coatings for CUI application, (6) cathodic shielding for pipeline coatings, and (7) innovation coating technology.
Sponsoring Committees: STG 02 & 03
Chair: Benjamin T. A. Chang  Vice Chair: Andy Bodington

Pipeline Integrity
This symposium covers on all aspects of pipeline integrity that can include pipeline integrity management, inspection, assessment, mitigation, rehabilitation, operational aspects, regulatory issues, present and upcoming technologies, methods, experiences, and case studies, and it new technologies, new inspection methodologies, new analyses, etc.
Sponsoring Committee: TEG 267X
Chair: Andrew Lutz  Vice Chair: Tod Barker
Symposia

Pits, Cracks, and Crevices—Research in Progress
This symposium covers fundamental studies of localized corrosion and cracking regardless of environment or material type. Topical phenomena of interest include, but are not limited to: pitting, stress corrosion cracking, corrosion fatigue, intergranular attack, and crevice corrosion. Fundamental aspects of the ongoing research including occluded chemistries, electrochemical techniques, metallurgical influences, and mechanistic initiation/propagation studies may be included. Laboratory experimentation, computational modeling, and environment-specific case studies may be featured.

Sponsoring Committee: Research
Chair: Jason Lee  Vice Chair: Jenifer Locke

Power Industry Corrosion
This symposium has technical papers related to corrosion management/mitigation in electric power generation, transmission, and distribution. Papers will include research in new technologies and/or practices, experiences in implementation of new technologies and/or practices, and experiences in repairs, renovations, recovery, and updates/grades pertinent to the electric power generation, transmission, and distribution industries.

Sponsoring Committee: STG 41
Chair: Jon Brasher  Vice Chair: Graig Cilluffo

Progress in Laboratory Testing of Corrosion Inhibitors for Oil Field Applications
This symposium features novel techniques and methodologies for evaluation of corrosion inhibitors in the lab, advances in quantitative evaluation of pitting corrosion, factors affecting quality of laboratory data, and gaps and challenges in lab-field transference.

Sponsoring Committee: TEG 253X
Chair: Alla Crabtree  Vice Chair: Bruce Brown

Real Time Corrosion Monitoring for Process Applications: Technology, Experiences, Case Studies
This symposium covers real time corrosion monitoring with an emphasis on advances in technology, user experience, or case studies.

Sponsoring Committee: TEG 100X
Chair: Hui Li  Vice Chair: Xiaoji Li

Recent Experiences with Austenitic and Duplex Stainless Steels
This symposium will have technical papers on recent experiences with stainless steels. The focus is on end user experiences from the process industries such as chemical processing, pulp and paper, oil and gas, desalination, pharmaceutical, and power generation. Topics include successes, failures, material selection, fabrication, and new developments.

Sponsoring Committees: TEG 114X, 116X
Chair: Nicole Kinsman  Vice Chair: Lena Wegrelius

Recent Experiences with Nickel, Titanium, Zirconium, and Other Corrosion-Resistant Alloys
This symposium has technical papers related to the practical use and experience with corrosion-resistant alloys including nickel base, titanium, zirconium, and other corrosion-resistant alloys.

Sponsoring Committee: STG 39
Chair: Ralph Baessler  Vice Chair: Ajit Mishra

Refining Industry Corrosion
This symposium features papers on corrosion and material issues within the refining industry. Topics will explore case histories, materials performance, corrosion mechanisms, and failure analysis.

Sponsoring Committee: STG 34
Chair: Huang Lin  Vice Chair: Abbey Wing

Solid Particle Erosion and Erosion-Corrosion
This symposium will cover such subjects as experimental erosion/abrasion wear studies, advanced computational fluid dynamics erosion and erosion-corrosion modeling, mechanistic/empirical model development, technologies for erosion measurements/monitoring, erosion mitigation/management techniques, sand management, etc.

Sponsoring Committee: TEG 077X
Chair: Mazdak Parsi  Vice Chair: Hadi Arabnejad Khanouki

Sour Corrosion
This symposium features technical papers on advances in sour corrosion in oil and gas production. The focus is on sour corrosion mechanisms, mitigation strategies, case histories, and best practices in corrosion management.

Sponsoring Committee: TEG 282X
Chair: Frederick Pessu  Vice Chair: Jing Ning

Sustainable Corrosion Control—Research in Progress
This RPI symposium will cover long-term projections (20+ years) of climate change, biodiversity loss, environmental degradation, and resource depletions that are triggering shifts across the energy, manufacturing, and agricultural industries. Whereas corrosion management can seem disconnected from sustainability initiatives, in fact, effective materials management is a critical method for reducing waste, preventing damage, and decreasing the cost of operations. Research that provides quantitative analysis of sustainability-related metrics for materials management activities related to corrosion, innovative new methods for corrosion mitigation such as green inhibitors and coatings, or investigates corrosion related issues that may arise in the low carbon energy future (renewable and/or nuclear industries) may be covered.

Sponsoring Committee: Research
Chair: Christopher Taylor  Vice Chair: Alp Manavbasi
Symposia

The Digital Asset Transformation—Driving Value for Corrosion & Asset Integrity Management
This symposium features technical papers on the benefits of recent developments and industry trends in digital technologies for corrosion and integrity management. Many industry sectors are seeking to increase efficiency and reduced costs through the application of digitalization and technologies such as 3D visualization and the Internet of Things (IoT). The transforming potential in data capture, information management and analytics, and the possibilities for implementing AI (artificial intelligence), all of which can reduce risk and facilitate better decision making, are fully applicable to the management of corrosion and asset integrity regardless of industry type. The symposium will endeavor to obtain papers from different industries covering a broad range of topics on these new developments from both technology providers and end users/asset operators.

Sponsoring Committee: STG 08
Chair: Cecilie Haarseth
Vice Chair: Robin D. Tems

Systems for Mitigation of Corrosion Under Insulation
Sponsored By Owens Corning
The presence of moisture is necessary for corrosion under insulation (CUI) to occur. When designing process facilities, the selection of the insulation system is an important factor. Improper choices can not only lead to underperforming insulation systems, but also contribute to issues associated with CUI.

Tools and Techniques for Managing Corrosion at Water and Wastewater Utilities
Sponsored By NACE Water/Wastewater Council
This two-part webcast series explores the tools and techniques for managing corrosion at water and wastewater utilities. The first part, available on demand, covers chemical, biological, and galvanic sources of corrosion. The second part will air on February 18, 2021, with registration information coming soon.

Drones and the Future of Corrosion Inspections
Presented By Jack Tinnea
This webcast will address how drone inspection differs between bridges, historic buildings, powerlines, and ship ballast tanks and will get you started in the proper direction to employing a contracted or in-house drone inspection program.

WATCH ON DEMAND NOW:
www.materialsperformance.com/webinars

Thermal and Cold Spray Coatings
This symposium will cover all aspects of thermal and cold spray coatings for mitigation of corrosion and wear with a specific focus on (but not limited to) surface preparation, coating consumable selection, spray method selection, spray parameter development, in-line quality and inspection, testing and qualification, operational experience, cost reduction, maintenance, and repair. The subjects to be covered include results of basic and applied research on thermal spray processes and coating materials, including field experience on thermal spray coatings, materials, processes and strategies for corrosion control, etc. Contributions on conventional and novel thermal and cold spray coating systems used to prevent corrosion and wear in offshore, onshore, oil and gas, subsea, marine, construction, chemical industry, refinery, construction, automotive, power, aerospace, etc. may also be included.

Sponsoring Committee: TEG 255X
Chair: James Weber
Vice Chair: Garima Mittal

Top of Line Corrosion
This symposium will have technical papers related to mitigation of the top of line corrosion (TLC), simulation and prediction of the top of the line corrosion, and study the effect of the key parameters of TLC.

Sponsoring Committee: TEG 515X
Chair: Zineb Belarbi
Vice Chair: Ezechukwu Anyanwu
Forums
For the most up-to-date listing, visit www.nacecorrosion.org.

A Tour to West Asia and Africa: Corrosion Management Challenges and Opportunities in the Most Fascinating Area in the World
Presented by Gasem Fallatah, AMPP

The West Asia and Africa (WA&A) Area 2021 forum will focus on the impact and effect of COVID-19 on the WA&A Area corrosion industry and how the area professionals have handled the situation including some entrepreneurial ways around dealing with the crisis.

Lectures topics include:
- How did COVID-19 impact the corrosion industry?
- Ways and means that industry adapted to mitigate the COVID-19 effect
- Entrepreneurship in handling the COVID-19 situation

Battle Against Corrosion in Latin America
Presented by Oladis de Rincon, CEC, Universidad del Zulia, Venezuela; Leonardo Uller, AMPP director; Gustavo Romero, PENSPE, Mexico; and Marianella Ojeda, Promigas, Colombia

The study of corrosion and its prevention in Latin America had its initial epicenter at universities and research institutes. In countries such as in Argentina, Brazil, Mexico, and Venezuela, important developments were fostered in these institutions that became the seeding grounds for both new technical development and for new career opportunities. The work was always done in collaboration with international partners and with the influence of NACE through various means.

Local NACE sections also emerged around those efforts, which have allowed the work to spread within countries and across borders to other neighboring countries. From the overall effort, the results have been a new generation of local leaders in the field, graduate and post graduate studies, abundant research, development of the corrosion industry and continuous support toward battling corrosion, and protecting society from the adverse impact of corrosion.

This forum will highlight the influence of research institutes and universities on the battle against corrosion in Latin America, the significant technical progress that has been made, and the new upcoming leaders who are influencing the current dynamic in this battle.

The forum will be run in English with access to the presentations recorded in Spanish.

East Asia & Pacific Area Forum—Intelligent Corrosion Control

This half-day event focuses on the topics including smart materials and technology for corrosion protection, sensors and devices for corrosion monitoring, and corrosion big data evaluation and prediction.

Effect of AC Mitigation on Potential Survey
Presented by Sasan Hosein, Pond & Co.

Cathodic protection (CP) and external coating have been recognized as perhaps the most reliable and cost-effective means of controlling corrosion for pipelines. Each structure or piping system that is provided CP must be tested periodically to determine the effectiveness of the CP system. Pipe-to-soil (P/S) potential measurements are recorded to determine the potential of a pipeline with respect to a reference electrode. Additionally, potential measurements are recorded in corrosion evaluations as a qualitative method to identify corrosion activity.

When properly interpreted and correlated with other measurements, P/S potentials can indicate the severity of both galvanic and electrolytic corrosion cells, as well as the level of CP in accordance with industry standard criteria. There are various challenges associated with pipeline potential readings with alternating current (AC) mitigation collocated with an AC corridor. These challenges require alternative potential evaluation approaches for pipeline integrity evaluation.

IMPACT PLUS: A Blueprint for Improved Corrosion Management Practices and Sustainability
Presented by Elaine Bowman, AMPP

Companies are finding IMPACT PLUS to be an effective method for improving corrosion management practices and sustainability within their organizations. Those using IMPACT PLUS have seen that this one-of-a-kind corrosion management tool provides a simple way for their organizations to identify gaps in their corrosion management and sustainability practices while delivering a method for road-map creation leading to higher performance. Attendees will learn how many have utilized IMPACT PLUS to create a framework and communications that support asset longevity and corrosion management targets at all levels of their organizations.

Leadership: Activate the Leader Within
Presented by John Todd, KTA-Tator, Inc., and Stephanie Biagiotti, Xcel Energy, Inc.

What will it take for you to become the leader you want to be? Training is often a one-time academic event that teaches ideas, approaches, and tools. Leadership, however, is a complex skill that is developed over time and should be approached like building a habit; a few training sessions will not lead to lasting results. Leaders must commit to ongoing efforts for development of their leadership skills and abilities. Companies are increasingly relying on multidisciplinary teams and studies show improved performance of teams that rely on the collective capabilities of men and women with a diverse mix of ages and cultures. But a mix of diverse people does not guarantee high performance. Inclusive leadership is needed to bring everyone together and effectively implement the strategy.

This forum will provide guidance from diverse leaders to help you activate the inclusive leader already within you by giving you the confidence to lead and influence diverse, high-performing teams.

Seven Enduring Truths of Knowledge Management Workshop
Presented by Cindy Hubert, Executive Director Client Solutions, APQC

As digital transformation sweeps organizations and the pace of change accelerates, knowledge management (KM) programs are embracing the disruptions while keeping their eye on fundamentals like honing their strategies, identifying critical knowledge, and engaging end users in knowledge sharing and reuse. APQC has been at the forefront of learning from organizations across the globe on what works and what doesn’t in KM. Using best practices and learnings from the past 25 years, Cindy Hubert will share
seven enduring truths for KM. Participants will walk away from this interactive session with tips and techniques that help them navigate the waters of change and uncertainty.

Topics to be discussed include:

• Common definition for KM
• Why organizations pursue KM
• How to identify KM approaches that improve and enable knowledge flow across the organization
• Recognize the key roles and responsibilities associated with managing knowledge

The goal of the workshop is to provide participants what they need to accelerate their planning and implementation of KM.

NACE International Water Forum
Presented by Jessica Torrey, Bureau of Reclamation; Stephanie Prochaska, Bureau of Reclamation; Jim Geisbush, Central Arizona Project; Jeff Giddings, HDR, Inc.; and Murray Heywood, Sherwin Williams Protective & Marine Coatings

The Water Forum is an annual opportunity for professionals in the water and wastewater industries to discuss corrosion issues and challenges facing the industry. Invited owners, operators, and industry experts will share best practices and lessons learned from their work, highlighting case studies ranging from protective coatings and cathodic protection implementation to asset management. The presenters will also compare new and emerging trends and technologies with traditional corrosion control techniques and discuss how these can be effectively implemented in the water and wastewater industries. The Water Forum is designed to be participative, and all conference attendees interested in this field are encouraged to attend.

PHMSA Pipeline Safety Forum
Presented by Kevin Garrity, Mears, Executive VP; Alan Mayberry, PHMSA, Associate Administrator; Vince Murchison, Murchison Law Firm, PLLC; and Carl Weimer, Pipeline Safety Trust

PHMSA (Pipeline and Hazardous Materials Safety Administration) and NACE members play a critical role in protecting the public from potential catastrophic failures of liquid/gas pipelines. Join policymakers, regulators, and industry experts for a discussion on how PHMSA and other agencies address corrosion in pipeline safety. The forum will provide both regulator and industry perspective on best pipeline safety practices and the latest developments.

The PHMSA Forum is your chance to hear an annual update from key PHMSA officials and discuss proposed rules that may be considered in 2021. Additionally, you’ll have the opportunity to hear from fellow members and stakeholders on the latest trends in pipeline safety.

Premature Coating Failures—Common and Uncommon Causes & How to Investigate Coating Failures When They Occur
Presented by Mike O’Brien, Mark 10 Resource Group, Inc.

Premature coating failures continue to cost asset owners, paint manufacturers, fabricators, contractors, shipbuilders, and others substantial amounts of unbudgeted money every year. Most of these failures are preventable if the proper principles are employed for selecting, applying, and inspecting the coatings. This tutorial is based on hundreds of real-life coating failures investigated by the presenter during his 41 years in the coating industry. This practical, informative tutorial is presented using many real-life case histories. It addresses coating failures that occur on steel, concrete, hot-dip galvanizing, and ductile iron substrates, as well as explains the important properties for each of these substrates that users should consider when selecting and applying coatings to them. Failures involving most of the commonly applied coatings, a list that includes, but is not limited to, inorganic zinc, organic zinc, epoxy, polysiloxane, polyurethane, waterbased acrylic, and polyureas, will be covered. Each of these coatings is discussed and pictures of the actual failures with these coating types are shown.

NEW—When a premature coating failure occurs, it is important to investigate it using proper principles, techniques, and procedures. This year’s presentation will include a new section on some basic principles to employ when investigating premature coating failures, including how to prepare for a coating failure investigation, conduct the on-site investigation, and determine the laboratory testing to perform, analyze the results, and write the report.

Thermal and Cold Spray Coatings—Processes, Applications, and Challenges
Presented by Shiladitya Paul, TWI; James Weber, James K. Weber Consulting, LLC; Frank Prenger, Grillo-Werke Aktiengesellschaft; and Dave Harvey, TWI

This session will cover discussions on thermal and cold spray coatings for mitigation of corrosion and wear with a specific focus on (but not limited to) surface preparation, coating consumable selection, spray method selection, spray parameter development, in-line quality inspection, and qualification, operational experience, cost reduction, maintenance, and repair. The subjects to be covered include the latest research and field experience on thermal spray.

WCO Forum—Corrosion in Low-Carbon Energies (Renewables, Nuclear, and Carbon Capture)
Presented by Damien Feron, World Corrosion Organisation; Günter Schmitt, Germany; Raul B Rebak, USA; Ralph Bäßler, Germany; Polina Volovitch, France; and Digby MacDonald, USA

Over the past decades, low-carbon energies have emerged as a strategic priority to decrease carbon dioxide (CO2) releases in the atmosphere to limit global warming. The Intergovernmental Panel on Climate Change (IPCC), a United Nations body for assessing the science related to climate change, includes the following as low-carbon energies: renewable energies, nuclear energy, and carbon capture and storage. The development of these forms of energy raises corrosion issues that the WCO, a non-governmental organization recognized by the United Nations, is addressing.

The debates will be facilitated by international points of view given by well-known international experts in the corrosion fields of nuclear energy, carbon capture and storage, wind and seawater turbines, and geothermal and solar energies.

The forum will provide the opportunity to learn and exchange information on corrosion issues and remedies in the new and developing fields of low-carbon energies.
Corrosive Chronicles and “Legacy” MP Innovation Sessions

These sessions will feature experienced corrosion professionals and AMPP staff who will present interactive forums on a variety of corrosion-related topics. Conference attendees will learn unique lessons and devise solutions to corrosion issues that are relatable to their fields of expertise. Topics of discussion include the following:

Adjustable Atmospheric Corrosion Test Rack
Presented by Raghu Srinivasan, University of Alaska Anchorage

Modular and adjustable atmospheric corrosion tests were designed and installed on the roof of the University of Alaska’s Engineering Parking Garage. Racks were 46 by 46 in (1,168.4 by 1,168.4 mm) and can be adjusted to three different angles (0, 30, and 45 degrees to the horizontal) similar to a car hood. The angle of exposure affects the snow/ice retention, and this leads to the formation of varying thicknesses of moisture on a metal surface. The angle of exposure also affects the wash off from rain, which can change the atmospheric corrosion mechanisms. This rack helps in identifying the weather parameters by isolating the corrosion-inducing variables and their primary effect on corrosion in extreme cold climates.

Advancing Cathodic Protection Testing Through Integration & Automation
Presented by Bill Mott and Charlie Petrie, Taku Engineering

Our product development team has utilized state-of-the-art technology to develop a GPS synchronized cathodic protection (CP) current interrupter that fits in your pocket. The Pocket Interrupter One (Pi-1) is designed to be intuitive and simple to use while providing advanced capabilities.

We have also developed an algorithm that can automatically pick the On, Instant Off, and most depolarized potential from a CP waveform. We are now integrating a high sample rate waveform logger and automated waveform analysis into a handheld device, and eventually we will integrate it into the Pi-1.

Contractor Awards Program
This session will take place under the Awards tab in the platform. CoatingsPro Magazine will again recognize industry excellence in the application of commercial and industrial high-performance coatings with the fourth annual Contractor Awards Program.

Join us as we announce the accomplishments of the 2021 winners in these six categories: Commercial Concrete, Commercial Roof, Industrial Concrete, Industrial Steel, Specialty Project, and Contractor/Crew MVP. Recipients of the NACE International Institute Contractor Accreditation Program (NIICAP) 5 Star Awards will also be recognized. For more information, visit www.coatingspromag.com/contractor-awards.

Corrosion Control and Ecosystems Enhancement for Offshore Monopiles
Presented by Monica M. Maher and Geoff Swain, Center for Corrosion and Biofouling Control, Florida Institute of Technology

Corrosion has been reported inside hollow steel monopile foundations used to support offshore wind-powered turbines. This research investigated incorporating perforations in the monopile walls that allow the free flow of ambient seawater into the interior and the installation of cathodic protection, as well as enable the interior structure to provide a habitat for marine life. Partially submerged steel pipes with different treatments were deployed. The results demonstrated that a cathodically protected perforated monopile structure creates an environment with more favorable conditions for corrosion mitigation and water chemistry as compared to a sealed structure. Furthermore, the perforated cathodically protected pipe recruited a diverse population of settled and mobile organisms.

Does Your Daily Inspection Report Tell the Story?
Presented by Sean Browning, Pond & Co.

Writing a good coatings inspection report is critical. There are different reporting formats. Most of them are acceptable, but the content of the report is what’s important and critical. The reporting format sometimes will depend on if you are involved in QC or QA. All sections of the coatings inspection report will be discussed, including project information, equipment, materials, containment, surface, application, inspections, corrective actions, non-conformances, and sign-offs.

Hexcorder Pro Digital Combined CIPS/DCVG Pipeline Integrity Surveys
Presented by Pat Yaremko, Cathodic Technology, Ltd.

The presentation will review the features and benefits of performing pipeline integrity surveys using the Cath-Tech Hexcorder Pro survey system. Topics will include a walkthrough of the Android app with its various features and benefits highlighted.

The Cath-Tech Hexcorder Pro is designed to provide state-of-the-art pipe coating condition data (DCVG) and/or pipeline cathodic protection data (CIPS) with rich, real-time graphics in the field. The Hexcorder may be operated in numerous modes, including DCVG only, CIPS only, combined DCVG and CIPS, or multi-person DCVG mode, among others.

The session will cover the key benefits of the Hexcorder Pro, including:

1. Perform DCVG and CIPS simultaneously with all data gathered at the exact same geographic locations, at the exact same moment in time, and under the exact same field conditions. Performing two separate conventional surveys is no longer necessary!
2. All equipment is fully GPS equipped, enabled, and data integrated.
3. No special software required—you already own all the software you’ll need!
4. The Hexcorder Pro is built by corrosion engineers for corrosion engineers, thus making it specifically designed to do nothing but pipeline integrity surveys.
Leveraging Water Repellency Technology to Mitigate Corrosion Under Insulation Challenges
Presented by Ricky Seto, ROCKWOOL Technical Insulation

The task of mitigating corrosion under insulation (CUI) is an industry challenge. It is important to choose an insulation material with key characteristics that help prevent water from taking hold of the system. Wet insulation offers reduced performance and water trapped under or in the insulation material may cause corrosion of unprotected metal. While stone (mineral) wool insulation is frequently used, the significant variations of water repellency properties within the product family are not well understood, since stone wool is treated with different types of additives to achieve water repellency.

As a distinguished recipient of the MP 2019 Corrosion Innovation of the Year Award, ROCKWOOL Technical Insulation’s ProRox with WR-Tech (Water Repellency Technology) puts our stone wool insulation truly in a “class of its own.” WR-Tech incorporates a revolutionary, coating friendly and water-repellent binder technology (an inorganic resin additive) that coats each individual fiber of our stone wool pipe insulation during the production process in order to help reduce and mitigate the harmful effects of CUI.

As the world’s largest manufacturer of stone wool insulation, it is our desire to educate the industry about the water repellency of insulation, as well as innovate and continuously improve the performance of insulation materials. This presentation is intended to inform the audience about the water repellency properties of mineral wool products with different types of hydrophobic treatment, as well as the effects on corrosion. It will specifically highlight our innovative WR-Tech material, which offers superior water repellency and moisture dissipation performance.

Shifting the Paradigm of Protective Materials Design Via Self-Healing Functionality
Presented by Dr. Gerald O. Wilson, Autonomic Materials, Inc.

In a 2016 report by NACE International, the global cost of corrosion was estimated to be about US$2.5 trillion, which amounts to about 3.4% of the global gross domestic product (GDP). Industries that maintain a disproportionate amount of their assets in extremely corrosive environments, such as oil and gas, infrastructure protection, and marine, bear a disproportionate amount of these costs. Add to these costs the environmental and individual safety consequences of material failure due to corrosion, and the case for investing in new technologies geared toward improving corrosion protection can hardly be overstated.

In this talk, I will report on novel additives that leverage the incorporation of microencapsulated healing agents into coating systems with a view toward lengthening their service lives and that of their underlying substrates, while minimizing the opportunity cost of downtime associated with maintenance. These self-healing additives have been evaluated in a broad range of coating systems selected to provide the asset owner/operator with a range of smarter coating solutions aimed at delivering improved readiness and cost savings across the value chains of the industries highlighted above.

Certification: The Why and How
Presented by Kari Hodge, Ph.D., NACE International Institute

Join the certification team in the open forum to discuss the innovative and exciting credentials coming your way. This is an opportunity to hear about new credentials and tools available to help you advance your career, provide feedback, and ask questions. Learn how you can get involved in the development of the next generation of credentials. Kari Hodge, Ph.D., Sr. Manager of Credential Development and Psychometrics, will host this event. Kari brings 15 years of certification industry experience to AMPP and is looking forward to hearing from you in the interactive and information session about the future of certification.
Protective Coatings Workshop

Want to stay current on the latest coatings developments and technologies available?

CORROSION is excited to announce the return of the Protective Coatings Workshop. This workshop, designed for coatings applicators, inspectors, and contractors of all experience levels, will feature engaging discussion and presentations from coatings industry leaders, an introduction to new emerging technologies and techniques, and highlight best practices from experts. In addition, you will get the opportunity to network with fellow contractors, inspectors, and suppliers.

Presentations this year include:

**Surface Preparation**  
*Presented by Joe Walker, Elcometer, and Johnny Eliasson, Chevron Shipping*

**Using Dry Film Thickness Measurement Equipment Effectively**  
*Presented by Mike Beamish, Defelsko*

**Robotics in Coatings Inspection**  
*Presented by Norman Spence, Spence Consulting*

**Passive Fire Protection**  
*Presented by Russell Norris, Sherwin Williams*

**Shop and Field Applications for Metallic Zinc Coatings**  
*Presented by Bernardo Duran, International Zinc Association*

**The Misconceptions of Chemically Grouping Coatings**  
*Presented by Paul Vinik, Greenman-Pedersen, Inc.*

**Architectural and Industrial Maintenance (AIM) VOC Regulations and PCBTF (Oxsol 100) VOC Exemption Update**  
*Presented by David Darling, American Coating Association*

**Augmented Reality in Coatings Inspection**  
*Presented by Lake Barrett, KTA*

**From the Sublime to the Ridiculous: Life in the Fast Coatings Lane**  
*Presented by Vijay Datta and Mike O’Donoghue, International Paint*

**Protective Coatings in Infrastructure: Attributes, Structure Requirements and Case Studies**  
*Presented by Steven Reinstadler, Covestro, LLC*

Please note schedule and presentations are subject to change.

The Protective Coatings Workshop is supported by:
Standards Committees Information

The Association for Materials Protection and Performance (AMPP) invites you to participate in the CORROSION 2021 Standards Committee (SC) meetings. Our committees are a collaboration of top subject matter experts and business professionals, which encourages discussions of the latest technological advances and industry best practices. This permits members greater access to changes taking place within specific industries and offers the opportunity to identify industry needs for standards.

You can self-join our SCs from our web site: https://my.nace.org/technical/committeeregistration/SCregistration.aspx. As a member of an SC, whether you are developing consensus standards documents, responding to approval ballots within the SCs, serving as a document project manager (DPM), or serving as an SC officer, your participation is a valuable part of the development of international industry standards. Join us to find out what international standards projects each SC is working on and propose new projects that will meet future industry needs.

Standards Committees scheduled to meet during CORROSION 2021 are listed on the following pages. For the most up-to-date SC meeting listings, with the exact meeting time, visit the CORROSION 2021 conference web site at www.nacecorrosion.org.

For more information, contact Standards@nace.org.
### Technical Committee Meetings

For the latest schedule, visit [www.nacecorrosion.org](http://www.nacecorrosion.org).

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<th>Meeting</th>
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<td>SC 22</td>
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### Other Meetings

For the latest schedule, visit [www.nacecorrosion.org](http://www.nacecorrosion.org).

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<tr>
<td>Speller Lecture</td>
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Fueling Your Relationship with the Navy

The new MPI 500 series standards specify coatings approved for Navy fuel-related and waterfront assets.

What are the new 500 series standards?
The MPI 500 series is a set of coatings systems with standards for protecting waterfront steel structures and those related to fuel handling and storage and includes:

- Interior carbon-steel fuel tanks
- Auxiliary handling equipment
- Welded fuel tank interior structures
- Steel sheet piling and other steel waterfront structures

How do I get my coating system approved for use?
To get started or for questions visit naceinstitute.org/mpi500

NACE International, The Corrosion Society and SSPC: The Society for Protective Coatings, are now AMPP.
Corrosion, Fracture, and Failure Issues for Post-Tensioned Concrete Bridge Structures

The inception of post-tensioned (PT) concrete dates to less than one century ago, and the technology has subsequently evolved in response to integrity issues as these have been identified. While individual high-strength steel wires or threaded bars are sometimes employed, spiral wound seven wire strand conforming to ASTM A416 in plastic duct is more common. The focus here is upon PT in concrete bridge structures where there is an array of ducts within concrete segments, each with multiple strands that, subsequent to stressing, are grouted. This results in compressive stresses in the concrete at locations that otherwise would be in tension and subject to cracking. Particular attention is given to causes and occurrences of wire and strand corrosion and resultant tendon failure. Such corrosion most commonly occurs from bleed water, water entry through grouting ports or deck drains, or the presence of what has been termed “soft grout;” that is, grout that is segregated and moist with the presence of free water and relatively high sulfate concentrations. Tendon failures in the latter case have been reported as soon as two years post-construction. In response to this, a modeling approach that projects the onset and subsequent rate of wire and strand fractures and tendon failures, given statistics for individual wire/strand corrosion rate, is described along with the role of influential factors. A foremost challenge moving forward is the development of technologies for, first, identifying and quantifying corrosion damage and, second, controlling any ongoing corrosion. Approaches for accomplishing this are described.
2021 Association Awards

R.A. BRANNON AWARD
The R.A. Brannon Award is the signature award of the association. It recognizes a current member of NACE International whose outstanding service has contributed to the development and improvement of the association that resulted in promotion of the objectives of NACE.

The 2021 R.A. Brannon Award recipient is David Schramm.

For over 40 years, David Schramm has contributed to NACE International as a member, technical contributor, leader, and advocate. His volunteer leadership has provided significant support to the association’s professional development, public policy, and outreach activities. Schramm has served the association through various technical and administrative committees, through the sustained and focused advancement of the association’s education, training, and certification programs, and has served on the NACE International Board and the Inauguration Board of the NACE International Institute. Schramm provided leadership, support, and guidance to the initial development of the association’s education and certification programs related to cathodic protection and interference.

CORROSION BEST PAPER AWARD
The CORROSION Best Paper Award is given in recognition of the most outstanding manuscript published in CORROSION for the preceding calendar year.


Persaud is with Queen’s University, Ontario, Canada. Smith is with Canadian Nuclear Laboratories, Canada. Newman is with University of Toronto, Canada.

T.J. HULL AWARD
The T.J. Hull Award is given in recognition of the outstanding contribution to NACE in the field of publications.

The 2021 T.J. Hull award recipient is Wayne W. Frenier, FNACE.

Frenier received a M.S. degree in organic chemistry from the University of Chicago and then entered the U.S. Air Force, serving in Vietnam. He joined NACE in 1974 and is a Life Member as well as a Fellow. Since 1970, he has worked in the energy industry as a research and development chemist. Frenier has written eight books that were published by SPE and NACE International and has worked as a technical editor. To date he has edited and rated over 150 manuscripts submitted for SPE and Materials Performance. He has been an associate editor for two SPE journals.

F.N. SPELLER AWARD
The F.N. Speller Award is given in recognition of significant contributions in the field of corrosion engineering.

The 2021 F.N. Speller Award recipient is Jose Maria Bastidas.

For over four decades, Professor Jose-Maria Bastidas has contributed in many aspects of corrosion, electrochemical methods applied to corrosion assessment, and materials characterization. He has devoted his career to elucidate the mechanisms of electrochemical corrosion by studying several technological applications in energy generation, transport systems, aerospace, automotive, and food industries. Bastidas has championed over 60 research projects in corrosion, produced over 450 original articles, and supervised over 30 Ph.D. theses at different universities of Spain, Colombia, Mexico, and Venezuela.
2021 Association Awards

H.H. UHLIG AWARD
The H.H. Uhlig Award is given in recognition of outstanding effectiveness in post-secondary corrosion education as exhibited by an educator who excites their students through outstanding and innovative teaching in corrosion.

The 2021 H.H. Uhlig Award recipient is James T. Burns.

Burns received a B.S degree from the United States Air Force Academy in engineering mechanics with a mathematics minor in 2002 and completed his M.S. and Ph.D. in material science and engineering at the University of Virginia. He also has served as an Aircraft Battle Damage engineer and Assistant Aircraft Structural Integrity Program (ASIP) manager for the C-130 and as a research engineer at the Air Force Research Laboratory. His research focuses on the intersection of metallurgy, solid mechanics, and electrochemistry. Since 2011, he has worked as an associate professor in the Center for Electrochemical Science and Engineering at the University of Virginia.

W.R. WHITNEY AWARD
The W.R. Whitney Award is given in recognition of significant contributions to corrosion science.

The 2021 W.R. Whitney Award recipient is Robert G. Kelly, FNACE.

Kelly has been conducting research on the corrosion of metals for the past 35 years. He holds a Ph.D. from Johns Hopkins University and spent two years at the Corrosion and Protection Centre at the University of Manchester as a Fulbright Scholar and as an NSF/NATO Post-doctoral Fellow. His experience includes work on the corrosion of metals and alloys, nonaqueous and mixed solvents, as well as studies of the electrochemical and chemical conditions in localized corrosion sites in various alloy systems. He has graduated over 25 Ph.D. students and co-authored over 120 papers. Kelly is also a Fellow of NACE International and has won several teaching awards during his career. He is currently a professor with the University of Virginia.

JOHN H. FITZGERALD, III, AWARD
The John H. Fitzgerald, III, Materials Performance Best Technical Article Award is given in recognition of the best technical article published in Materials Performance each year.


Monica Maher is with the U.S. Department of Energy. Geoffrey Swain is with the Florida Institute of Technology.

DISTINGUISHED SERVICE AWARD
The Distinguished Service Award is given in recognition of distinguished service to NACE by an elected or appointed member, or by a group.

The 2021 Distinguished Service Award recipients are Kalliopi K. Aligizaki, Mohsen Achour, Zahid Amjad, Stephen F. Biagiotti, Jr., Phil Dent, Ameeq Farooq, Raul B. Rebak, Joseph Saxton, Manish Kumar Sogani, and Ardjan Kopliku.

TECHNICAL ACHIEVEMENT AWARD
The Technical Achievement Award is given in recognition of technical achievement in corrosion engineering that had significant impact on the practice of corrosion control, or on the enhancement of the profession of corrosion engineering. Recognized achievements can be in the areas of research, engineering, or education.

The 2021 Technical Achievement Award recipients are Brian Dale Chambers, Y. Frank Cheng, Khlefa Esaklul, Mohammad Sadegh Parvizi, Yousef Khuraibut, and Qiwei Wang.
2021 Association Awards

DISTINGUISHED ORGANIZATION AWARD
The Distinguished Organization Award is given in recognition of outstanding contributions by an organization to the field of corrosion science or engineering.

The 2021 Distinguished Organization Award recipients are Nanto Cleantech, Inc.; Microbial Analysis; and the Institute for Corrosion and Multiphase Technology (ICMT), Ohio University.

Nanto Cleantech, Inc.—Nanto Cleantech is a U.S.-based Industrial Intellectual Property and Technology Company with affiliates in Europe and Israel. The core business is to design, develop, and supply advanced materials, additives and multifunctional coatings, based on proprietary patented nanotechnology (WO/2010/064274) and IP products formulated to improve properties such as anticorrosion, barrier effect with unique modified technologies, and smart materials like nanoclay, nantoNite, and nantoClay solutions.

Microbial Analysis—With 20 years of experience in diagnosing MIC and souring with DNA-based technologies, Microbial Analysis’ work consists of unravelling complex microbiological puzzles solving by making the microbial world visible and understandable for the customers.

ICMT, Ohio University—The ICMT’s mission is to advance scientific knowledge in corrosion in multiphase flow systems, through conducting cutting-edge research and educating highly competent students who will disseminate this knowledge throughout the corrosion community and contribute to solving industry challenges.

NACE FELLOW HONOR
The honor of NACE Fellow is given in recognition of distinguished contributions in the fields of corrosion and its prevention. It was also established to develop a broadly based forum for technical and professional leaders to serve as advisors to the association.


OLIVER MOGHISSI AWARD
The Oliver Moghissi Award recognizes an individual who has demonstrated exemplary support of the corrosion control community through work that bridges the gap between corrosion maintenance/operations activities and the use of business-oriented corrosion management systems in industry. Oliver Moghissi served as president of NACE from 2011-2012 and was the ultimate driver of discussing corrosion control planning as a strategic business advantage.

The 2021 Oliver Moghissi Award recipient is Gerhardus (Gerry) Koch, Ph.D., FNACE.

Koch is the owner and principal consultant of Corrosion Management Consultants, LLC with over 35 years of engineering and consultancy experience in structural integrity and corrosion of structures, buildings and facilities. He holds an M.S. in aeronautical engineering from Delft University in the Netherlands, and a Ph.D. in metallurgical engineering from the University of Illinois in Urbana-Champaign.

Koch led a team of experts to assess the impact of corrosion on the U.S. economy, mandated by the U.S. Congress in the Transportation Equity Act of the 21st Century (TEA-21) (1999-2001). In 2015, NACE International initiated a study (NACE-IMPACT) led by Koch to provide an estimate of the global cost of corrosion and to address structural integrity and corrosion in terms of business management. Its results formed the basis for the development of a Corrosion Management tool, IMPACT PLUS, to conduct corrosion management as part of an organization’s management system.

Koch was awarded the 2007 NACE International Presidential Achievement Award and received the NACE Fellow Honor in 2012. He has been a NACE IMPACT PLUS Navigator since 2018.

NACE FOUNDATION FOUNDERS AWARD
The Founders Award recognizes exceptional contributions and meritorious work by an individual on behalf of the NACE Foundation. To be meritorious, the work chosen must significantly influence the education of students and educators in corrosion science and engineering.

The 2021 Founders Award recipients are Jeff Didas and Slyvia Hall. (Hall passed away in 2021.)

About the recipients: For more information on the 2021 awards winners, please visit the Awards section at www.nace.org/awards.
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*As of February 5, 2021

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Join us at the **CORROSION 2021 Virtual Conference & Expo** to celebrate

**Wednesday, April 28, 2021**
**1 to 1:30 p.m. CST**

Save the date

From AMPP, publisher of leading magazines for the corrosion & protective coatings industries.
JOIN US FOR OUR FINAL YEAR!
When | December 13–16, 2021
Where | Phoenix Convention Center, Phoenix, AZ

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