

Welcome to ICorr Aberdeen Branch 2026 Corrosion Awareness Day

Kindly Hosted By Lloyd's Register

Corrosion Engineering In The Energy Sector

28th August 2026

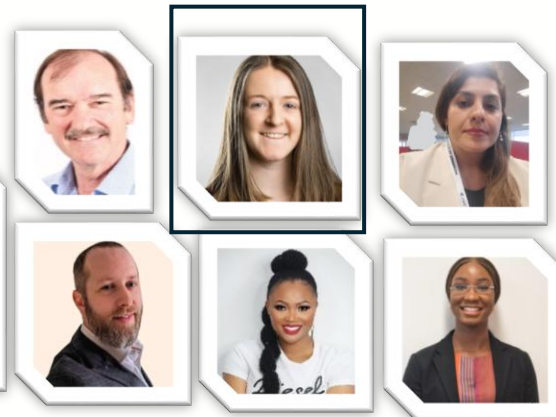


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2025-2026 Aberdeen Branch Committee



Branch Position	Committee member	Branch Position	Committee member
Chair	Stephanie Okoye	Website Officer	Dr. Yunnan Gao [National President] 24-26
Vice Chair	Vacancy (Priority to Fill)	ETGB Representative and University Liaison	Dr. Steve Paterson
External Secretary	Vacancy (Priority to Fill)	Trustees Observer and CMJ Liaison	Stephen Tate [National Past President] 22-24
Internal Secretary and YICorr Liaison (Oct. 26)	Dr. Priscilla Ogunlode	Observer	Dr. Bryn Roberts [Past Financial Officer]
Financial Officer	Johhny Morton	Observer	Adesiji Anjorin [Past Chair]
Sponsorship Officer	Vacancy (Priority to Fill)	Observer	Dr. Olubayo latinwo
Event Co-Ordinator and CPD Officer	Fatemeh Faraji	Committee Member	Lauren Sayer



CAD Event Programme – 28th August 2026

Arrival and Attendee Registration - 8.15 to 8.45			
1	Welcome, Introduction (ICorr Event Objectives, Safety Moment and Key Sponsor)	Stephanie Okoye - Event Chair Dr Rob Howard - Lloyd's Register	8.45 to 9.00
2	The Institute of Corrosion Role in Corrosion Management	Dr Yunnan Gao - ICorr President	9.00 to 9.15
3	Principles of Corrosion	Dr Priscilla Ogunlode - ICorr	9.15 to 9.45
4	Global Cost of Corrosion	Stephen Tate – ICorr Immediate Past President	9.45 to 10.15
5	Corrosion Engineers in Action: From Design to Operations and Turnarounds	Pavin Pavithran - Lloyd's Register	10.15 to 10.45
Networking Break - 10.45 to 11.00			
6	Materials Selection for Upstream Oil and Gas	Dr Rob Howard - Lloyd's Register	11.00 to 11.30
7	Continuous Area Monitoring for Localized Erosion and Corrosion in Upstream Oil and Gas: A New Approach Using Dense Array EMAT Technology	Lirije Kadriu - Emerson	11.30 to 12.00
8	Corrosion Management Considerations for Assets Approaching CoP and Decommissioning	Dr Eugene Ogosi - Apache	12.00 to 12.30
Networking Lunch - 12.30 to 13.30			
9	Overview of LR Compliance Services & Case Studies	Fiona Clark & Colin McKenzie Lloyd's Register	13.30 to 14.00
10	Overview of LR Advisory Services	Luke Munro - Lloyd's Register	14.00 to 14.30
11	Offshore Wind – A Quick Overview of Fixed and Floating Offshore Wind – Engineering and Industry Developments	Neil Morgan - Lloyd's Register	14.30 to 15.00
12	Corrosion Awareness Quiz	Stephanie Okoye - Event Chair	15.00 to 15.30
13	Closing Remarks, Issue of Certificates of Appreciation to Speakers	Dr Yunnan Gao - ICorr President	15.30 to 16.00



Speaker Biography and Presentation Synopsis



The Institute of Corrosion Role in Corrosion Management

Dr Yunnan Gao is the current President of the Institute of Corrosion (ICorr) in the UK. He previously served as Vice President from November 2022 to November 2024 and has been an active member of the ICorr Aberdeen Branch Committee for over 12 years. During this time, he held the position of Chair twice, playing a key role in strengthening and expanding the branch.

Dr Gao earned his BEng in Materials and Metallurgy from Northeastern University, China. In 2003, he moved to the UK and obtained MSc and PhD degrees in materials and corrosion at Loughborough University. Since March 2008, he has gained over 18 years of professional working experience in the energy sector, both in the UK and internationally. He has worked for several leading energy and technical service companies, including Atkins, BP, DNV GL, Lloyd's Register, Repsol Sinopec, Saipem, and Stork, with a focus on asset integrity and corrosion management. Currently, Dr Gao is based in Sunbury, UK, working as a corrosion specialist for BP.

Throughout his career, Dr Gao has developed deep theoretical and practical expertise in materials engineering, corrosion control, and asset integrity management- particularly in corrosion mechanisms, monitoring, inspection technologies, and their industrial applications. He has led and delivered numerous major projects across the full lifecycle of oil and gas production facilities, from concept design to operations. His work includes the production of thousands of technical reports, many of which are high-level publications, and he has presented extensively at international conferences and symposia.

Dr Gao is a UK Chartered Engineer (CEng), Chartered Scientist (CSci), Fellow of the Institute of Corrosion (FICorr), Fellow of the Institute of Materials, Minerals and Mining (FIMMM), and an AMPP Certified Corrosion Specialist.



Dr. Yunnan Gao - ICorr

Presentation Overview

- Introduction to the Institute of Corrosion (ICorr), its mission, activities, and role in supporting the corrosion profession
- Opportunities and benefits available through ICorr membership
- Career development, continuing professional development (CPD), and pathways to professional registration
- ICorr's engagement with international corrosion organisations and global activities

Principles of Corrosion

Dr Priscilla Ogunlode is a Corrosion Engineer with Vysus Group specialising in corrosion assessment, asset integrity, risk-based inspection and corrosion management for oil and gas and energy transition assets. She holds a PhD in Chemical Engineering from Robert Gordon University, where her research included hydrogen infrastructure and pipeline repurposing. She also holds an MSc in Oil and Gas Engineering, is API 571 certified and has consultancy experience supporting major operators through corrosion assessments, integrity evaluations and technical reporting. Priscilla is passionate about corrosion awareness, knowledge sharing and supporting the development of future corrosion professionals.



Dr. Priscilla Ogunlode
- Vysus

Presentation Synopsis

The presentation introduces the fundamental principles of corrosion and explains why corrosion remains one of the primary threats to the safety, reliability and longevity of industrial assets. Beginning with the fundamentals of electrochemistry, the session explains anodic and cathodic reactions, thermodynamic driving forces and the kinetic factors that influence corrosion rates, including temperature, oxygen, pH, chlorides, flow and microbiological activity. Practical examples are used throughout to relate theory to real engineering applications.

The presentation then reviews the most common corrosion mechanisms encountered within the oil and gas industry, including CO₂ corrosion, H₂S corrosion, pitting, galvanic corrosion, microbiologically influenced corrosion (MIC), corrosion under insulation (CUI), sulphide stress cracking and hydrogen-related damage. It also explores the emerging corrosion challenges associated with hydrogen, carbon capture and storage (CCS), offshore wind and geothermal energy, highlighting the importance of understanding degradation mechanisms as industry transitions towards lower-carbon technologies.

The final section focuses on corrosion prevention and management through appropriate materials selection, process and environmental control, coatings, cathodic protection, chemical treatment and active corrosion management systems. The presentation reinforces that inspection alone cannot prevent corrosion and demonstrates how effective integrity management relies on understanding corrosion mechanisms, implementing proactive mitigation strategies and maintaining corrosion awareness throughout an asset's lifecycle.

Designed for Corrosion Awareness Day, this presentation provides engineers, technicians, inspectors, graduates and non-specialists with a practical introduction to corrosion science and its application to maintaining safe, reliable and sustainable industrial assets.



Global Cost of Corrosion

Stephen Tate, MBA, PG Dip Eng, is the Immediate Past President of the Institute of Corrosion (ICorr) and a highly experienced corrosion professional with an extensive career spanning the global energy industry.

He is a long-standing member of the ICorr Aberdeen Branch Committee for over 15 years, Stephen has made significant contributions to the profession through a range of leadership roles. He served as Chair of the ICorr Aberdeen Branch during the 2016/17 and 2019/20 sessions, National Vice President from 2020 to 2022, and National President from 2022 to 2024. In addition, he was Co-Chair of the SPE Corrosion Conference in 2021.

Stephen has worked with a wide range of major operators, including Amoco, BP, British Gas, ConocoPhillips, Fairfield Energy, INOC, QGPC, Qatar Gas, SNAM, Shell, Talisman Energy, and TotalEnergies. Throughout his career, he has delivered corrosion engineering expertise primarily through Aberdeen Corrosion Engineers Ltd (ACEL), CAN, and Oceaneering.



Stephen Tate - ICorr

Presentation Synopsis

This presentation aims to raise awareness of the significant economic burden that corrosion places on society, as well as the environmental, operational, and safety risks associated with corrosion-related failures. It will also highlight the vital role of corrosion professionals in safeguarding critical infrastructure and discuss the importance of developing the next generation of corrosion engineers and specialists.

Drawing on a series of case studies, the presentation will examine notable corrosion incidents from across the UK, including several examples from North East Scotland. These real-world examples will demonstrate the consequences of inadequate corrosion management and the lessons learned from both failures and successes in industry.

In addition, the presentation will provide an overview of the most widely used corrosion mitigation and prevention strategies. This will include a discussion of protective coatings, cathodic protection systems, and other practical approaches used to maintain asset integrity, improve reliability, and extend the service life of structures and equipment across a range of industries.

The presentation is intended to provide attendees with a greater appreciation of the scale of the corrosion challenge, the value of effective corrosion management, and the critical contribution made by corrosion professionals in protecting people, assets, and the environment.



Corrosion engineers in Action: From Design to operations and Turnaround

Pavin Pavithran is currently working as a Corrosion Specialist at Lloyd's Register, where he works with a multidisciplinary team supporting LR energy projects. In this role, he provides technical assurance related to corrosion, coatings, fitness-for-purpose, in-line inspection, cathodic protection, and material selection studies.

He has worked across the full project lifecycle, including FEED, detailed engineering, operations support, shutdowns, and asset integrity management, corrosion and metallurgical testing, and failure investigations.

He holds a Master's degree in Materials Research from Queen Mary University of London and an MBA in Project Management. He is a Chartered Engineer and a Fellow of the Institute of Corrosion and holds certifications including AMPP Corrosion Specialist, Protective Coating Specialist, API 571, and API 580.



Pavin Pavithran - LR

Presentation Synopsis

This presentation provides an overview of the role of corrosion engineers across different stages of the energy industry lifecycle, highlighting their contributions in areas such as design, project execution, testing, operations, and turnarounds.

The session is based on the speaker's industry experience and aims to give early-career corrosion engineers a clear understanding of the variety of roles they may encounter throughout their careers. It outlines the types of work involved and the corrosion engineering skillsets developed at each stage, demonstrating how the discipline supports asset integrity, reliability, and safe operations.

As part of Corrosion Awareness Day, this talk is intended to help young engineers understand the different career pathways available within corrosion engineering, identify areas of interest, and explore opportunities within the field. The session will conclude with a Q&A discussion.



Material Selection for Upstream Oil and Gas

Rob Howard graduated from the University of Cape Town in Materials Science and Engineering in 1995. Following graduation, he worked as research associate in the coating laboratory of the Corrosion and Protection Centre, University of Manchester.

Since joining Lloyd's Register in 1998, he has worked in corrosion and integrity management (1998 to 2007) and design appraisal and technical support within metallic materials and welding engineering (2008 to present).

He has been Materials Team Leader in the Offshore Technical Support Office since 2014. He is a Chartered Engineer and a Professional Member of the Institute of Materials, Minerals and Mining.



Dr. Rob Howard - LR

Presentation Synopsis

Upstream oil and gas production and utility systems are fabricated in a range of different materials, including carbon and alloy steels, stainless steels, nickel alloys and copper alloys.

The correct selections must be made in the design phase based on cost, availability, corrosion resistance and mechanical properties. This presentation provides an understanding of the selection process, common corrosion types, typical material selections and the commonly-used codes and standards.

The presentation is based on experience of design appraisal for new projects, offshore operations and failure investigations. It will benefit early career corrosion and integrity engineers and others who want an introduction to the range of metals and alloys that are used in upstream oil and gas facilities.



Continuous Area Monitoring for Localized Erosion and Corrosion in Upstream Oil and Gas: A New Approach Using Dense Array EMAT Technology

Lirije Lilly Kadriu is Senior Manager, Global Product Management at Emerson, leading strategy and portfolio development for corrosion and erosion monitoring solutions.

Based in the UK, she works closely with customers, industry experts, and global engineering teams to advance technologies that help asset owners improve integrity management, reduce risk, and optimise operational performance.

Her experience spans product management, market strategy, and the application of monitoring technologies across the energy and process industries.



**Lirije Lilly Kadriu -
Emerson**

Presentation Synopsis

Localized erosion and corrosion remain among the most difficult integrity threats to manage in upstream oil and gas production. Sand erosion at wellheads and flowline bends results in damage occurring at unpredictable, highly localized points across a pipe surface. Manual ultrasonic inspection covers a wider area but is infrequent, labour-intensive, and exposes personnel to repeated visits to hazardous locations. Indirect techniques such as sand probes confirm that erosive conditions exist but cannot quantify whether metal loss is actually occurring on the pipe wall.

This presentation introduces a new class of online monitoring sensor designed to close this gap. The Rosemount LA120 Area Monitor uses a dense array of Electromagnetic Acoustic Transducer (EMAT) elements to deliver direct ultrasonic wall thickness measurements continuously across a defined area of the pipe surface. The array provides full coverage with full coverage between elements, generating a real-time map of wall thickness that allows operators to see where, when, and how fast localized damage is developing. Because EMAT transduction works without couplant and through coatings up to 500 microns, the sensor is fully non-intrusive, requires no hot work, and can be retrofitted in hours to existing assets in Zone 0 and Class I Division 1 hazardous environments.

The presentation will cover the underlying transduction principle and overview of the specification, as well as the signal processing approach behind the Early Defect Detection algorithm, which is designed to flag the onset of metal loss before it reaches a critical threshold. Practical applications will be discussed in detail, including sand erosion monitoring at production flowline bends, wellhead piping integrity, and complementary deployment alongside acoustic sand monitoring systems where risk identification can be paired with direct impact quantification.



Corrosion management considerations for assets Approaching CoP and Decommissioning

Dr. Eugene Ogosi is a Materials and Corrosion professional with over 20 years' experience in the oil and gas industry. He holds a PhD in Mechanical Engineering, an MSc in Corrosion Control Engineering and BEng in Materials and Metallurgical Engineering.

Eugene has worked across operators, service companies, and verification bodies, gaining extensive experience in materials selection, cathodic protection, and integrity management. He is currently Materials and Corrosion Advisor at Apache Corporation and provides technical leadership for implementation of Integrity Management practices.

He is a Chartered Engineer (CEng), a Fellow of the Institute of Corrosion (FICorr), and NACE Senior Corrosion Technologist.



**Dr. Eugene Ogosi -
Apache**



Presentation Synopsis

As offshore oil and gas assets progress from late life through to Cessation of Production (CoP) and ultimately decommissioning, operators encounter an increasingly complex and constrained operating environment. Vessels, pipework, pipelines, and structures originally designed for peak production must continue to function under declining throughput, ageing materials, and evolving integrity risk profiles.

During late-life and ultra-late-life phases, degradation mechanisms including corrosion, fatigue, and obsolescence tend to accelerate, while legacy design assumptions and inspection strategies may no longer remain fully applicable. At the same time, declining production and reduced revenue intensify financial pressures. Operators are therefore challenged to sustain safe, compliant operations while simultaneously reducing costs and simplifying asset integrity management.

As assets move from CoP towards decommissioning, operators must make increasingly critical decisions regarding which systems to maintain, inspect, mitigate, or defer. Robust, risk-based corrosion assessments become essential; however, their implementation is often challenged by data gaps, ageing infrastructure, and limited resources.

This transition represents not only an operational phase but a significant strategic integrity management challenge. This presentation outlines the key issues encountered during this stage of operation and presents an approach to corrosion management for offshore assets approaching CoP and decommissioning. It highlights practical, risk-based strategies designed to maintain asset integrity while aligning with late-life objectives and constraints. Emphasis is placed on techniques to optimise inspection, monitoring, anomaly management, fabric maintenance, and corrosion mitigation through streamlined processes, targeted technologies, and data-driven decision-making. Ultimately, it advocates a shift from traditional design-life-based approaches to more agile, proportionate, and risk-informed corrosion management practices that ensure safety, protect the environment, and support efficient asset retirement.



Overview of LR Compliance Services and Case Studies

Fiona Clark is Head of Global Projects at LR, bringing over 25 years of experience in project management underpinned by a systems engineering background and a degree in Mathematical Sciences.

She began her career as a software engineer developing master control stations for subsea control systems before moving into project management and leadership. With a career largely in the offshore subsea sector, Fiona has led major projects across organisations including Aker, Subsea 7, Genesis and Hallin Marine. She now leads a global team of 50, driving delivery excellence and high-performance outcomes.



Fiona Clark - LR

Colin McKenzie is a Principal Project Manager with more than 24 years of experience delivering complex projects within the nuclear, marine, and offshore energy sectors. A degree-qualified Mechanical Engineer, he leads the successful delivery of multidisciplinary projects across Lloyd's Register's service portfolio, specialising in Offshore Safety Case Independent Verification.

Previously, Colin held a senior role with Equinor (formerly Statoil), where he was responsible for Regulatory Compliance on the Mariner Project, ensuring alignment with regulatory requirements and supporting safe, compliant offshore operations.



Colin McKenzie - LR

Presentation Synopsis

Lloyd's Register (LR) is a leading provider of classification and compliance services to the marine and energies industries, helping our clients design, construct, operate, extend and decommission their assets safely and in line with environmental expectations.

In the drive for efficiency, sustainability and resilience in the ocean economy, our technical and business advisory services enable businesses to reach their full potential and achieve a competitive edge – now and into the future. We offer our clients advice, support and solutions during every stage of their asset lifecycle. In the race to zero emissions, our solutions, technical expertise and industry-firsts will support a safe, sustainable energy transition.

This presentation will outline LR's compliance services and the benefits of these services for our clients, using recent examples from real projects.



Overview of LR advisory services

Luke Munro is a pipeline specialist at Lloyd's Register with 4 years of experience in the pipeline engineering field. Luke graduated from Heriot-Watt University in 2017 with a master's degree in civil engineering.

Following graduation, he began employment with Jee Ltd, a subsea engineering consultancy which specialised in pipelines. He worked there for over 3 years gaining experience in pipeline integrity management, pigging project management, and pipeline design.

In January 2026 he started employment at Lloyd's Register. Since being there his work has mainly involved design verification of subsea pipelines, as well as working with the advisory team on a range of scopes.



Luke Munro - LR



Presentation Synopsis

LR Advisory is a team of consultants who perform high added-value work for clients across a range of areas, drawing on the wide range of engineering and industry expertise and experience from within Advisory and the wider LR organisation.

This presentation will provide an overview of the services provided by LR Advisory using case studies of relevance and interest to integrity and corrosion management personnel.



Offshore Wind- Overview of Fixed and Floating Offshore Wind – Engineering and Industry developments

Neil Morgan has over 20 years' experience as an offshore geotechnical engineer and engineering manager for offshore projects in the wind and oil & gas industries.

He has worked on fixed and floating projects globally and is experienced at dealing with a wide variety of foundation and anchor types and seabed environments.

He is convenor of the ISO WG10 committee covering seabed & foundation related content for the ISO 19900 series of standards.



Neil Morgan - LR

Presentation Synopsis

The presentation will give a quick overview of fixed and floating offshore wind. This will cover the current outlook for offshore wind in the UK and globally in terms of demand for offshore wind and expected areas of development.

It will move on to look at typical windfarm layout and assets within a wind farm including the turbines themselves, cables, substations and route to market. It will then give an overview of the engineering process behind designing and installing windfarm assets.



Corrosion Awareness Quiz



Our Next ICorr Event

Date	Event Type	Company / Speaker	Topic	Time	Location
Tuesday 29 th September 2026	IN-PERSON Joint Event with TWI North Scottish Branch	TWI Ltd, Rotherham	Additive Manufacturing: Coatings, Repairs & Net-Shape Manufacture	Start Time: 18:00 Refreshments: 17:45	IN-PERSON at Palm Court Hotel

Closing Remarks, Issue of certificates of Appreciation to Speakers

Dr. Yunnan Gao – ICorr President



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nature continuing to be made available on your
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Advancing Corrosion Science & Engineering



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