

EUROPÄISCHE FÖDERATION FÜR KORROSION

EUROPEAN FEDERATION OF CORROSION

FEDERATION EUROPEENNE DE LA CORROSION



Issue 24 April 2015

E-NEWSLETTER

<http://www.efcweb.org>

Dear fellow corrosionist,

In this issue:

Welcome to our annual e-newsletter This edition coincides with April 24th's **World Corrosion Awareness Day** (<http://corrosion.org>) and contains the latest news on the people and activities that make up our Federation.

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Since January 2015 the new EFC President and Vice-President are Fátima Montemor and Damien Féron. A welcome letter from Fátima is presented below.

All 20 of our working parties each covering a separate corrosion specialty area have evolved over time in response to the ever-changing environmental, economic and ecological conditions They are of course supported by our Science and Technology Advisory Committee, administered through our London, Paris and Frankfurt-based secretariats and sustained by our member societies and corrosion experts like *you*, who are an essential part of our corrosion community.

We are looking forward with much anticipation to **EUROCORR 2015** (<http://www.eurocorr2015.org>) in Graz, Austria, September 6th - 10th. The main theme this year will be "Earth, Water, Fire, Air - Corrosion happens everywhere". A scientific programme consisting of key note lectures, workshops, oral and poster presentations plus an expanded exhibition enabling companies and institutions to showcase their products will be complimented by an extensive social programme.

Our host this year, The Austrian Society for Metallurgy and Materials: ASMET, will be welcoming you this coming 6-10 September. So don't miss the latest chapter in our continuing search for the fifth element - corrosion inhibition!

Other things highlighted in this newsletter include a report on EUROCORR 2014, information about a new task force which has been set up on corrosion in electronics and details about future EUROCORRs. This includes Montpellier (2016) and Prague (2017).

Coming back to Corrosion Awareness Day, George Hays explains the reason behind the creation of this later in the newsletter. Picking up on one important point he makes: the need to get more younger people involved, how do we do this? One way would be broaden the appeal of corrosion by emphasising the protection / conservation aspects. Also, the definition of corrosion could be broadened to include the interaction between ANY material and its environment such as to cause deleterious consequences whether plastic, metal, masonry, artworks George suggests that the amount spent in the World on food and its production is equal to the cost of corrosion. With the suggested broader definition it would be even more! So one important aim of Conferences such as EUROCORR must be to provide a platform to demonstrate and emphasise the broadening out of the subject of corrosion; and hence increase its appeal.

Douglas Mills

EFC Newsletter Editor

Letter from the new President Fátima Montemor

To all the members of the European Federation of Corrosion

Dear members,

It is a great honour to be the incoming President of EFC, an organisation which is making a major international impact on corrosion and corrosion prevention related activities. I started my mandate in January 2015. Thank you to the Board of Administrators for nominating me as President and to the General Assembly for approving this nomination.

The EFC represents over 30 societies from European countries and also a number of well-known overseas societies. The EFC is the largest corrosion organisation in Europe and plays a key role in addressing the global problem of corrosion and its prevention and its leadership role has been increasing. Presently, the growing number and geographical diversity of new organisations joining EFC is a guarantee that EFC is a very reputed and prestigious organisation and a reference around the world. The EFC annual event, the EUROCORR congress, is a flagship that attracts nearly 1000 delegates from more than 50 countries. EUROCORR is undoubtedly a milestone in the yearly agenda of corrosion and corrosion-related events.

The EFC strategic plan envisages consolidating the EFC position in Europe and overseas and aims at implementing new initiatives that require a closer collaboration with the member societies and the international expansion of the EFC. The vision is clear: The EFC must increase its value and brand, must become an internationally recognised reference and must work closely with its members for mutual benefit.

Therefore I commit to provide the leadership the EFC requires to implement its strategy, and to achieve its objectives and ambitions which include:

- to enhance the significance of EFC in the field of corrosion and corrosion prevention;
- to continue strengthening the existing partnerships with European and international societies;
- to establish new partnerships and to attract new member societies in Europe and overseas;
- to encourage higher levels of participation of the member societies in the EFC events and EFC activities;
- to establish EUROCORR as the most prestigious corrosion congress in Europe and in the world, attracting more young scientists, academics and Industry professionals.

I do believe that these objectives can be achieved and that the EFC team, which includes the Science and Technology Advisory Committee (STAC) and the Secretariats in Paris, London and Frankfurt am Main, are deeply committed to strengthen the visibility and presence of the EFC in the Europe and internationally .

As new President of the EFC, I cannot finish this message without expressing my gratitude to all the member societies: thank you for contributing to the EFC activities and for strengthening EFC as a reference in the corrosion field.

There are a few individuals that are references in the EFC that I must recognise and thank for their valuable support: the past Presidents: Prof. Philippe Marcus and Prof. Lorenzo Fedrizzi who have strongly contributed for the EFC growth and actual standards; the actual STAC chairman, Prof. Arjan Mol for his commitment in strengthening the scientific activities and of course the Vice-President, Dr. Damien Féron for his close support and valuable knowledge on the EFC matters. I also wish to thank all the people in the EFC Secretariats who support the EFC activities and handle the daily issues.

I am looking forward to great years ahead and I am honoured to have the opportunity to serve as your president.

Thank you very much. See you in Graz for the EUROCORR 2015.

Sincerely yours,

Fátima Montemor



Who's Who

EFC Presidency

President:

In September 2014, the EFC General Assembly elected **Professor Fátima Montemor**, Lisbon, Portugal, as the new EFC President for a two-year term of office from 1 January 2015. Fátima succeeded Prof. Lorenzo Fedrizzi.

M. F. Montemor graduated in Chemical Engineering at Instituto Superior Técnico (IST), the school of engineering of the Technical University of Lisbon in 1989 and obtained her Ph.D, also from the Technical University of Lisbon, in 1995. She has a permanent position as Assistant Professor in the Department of Chemical and Biological Engineering of Instituto Superior Técnico. Her research objectives are focused in the area of new surface functionalisation strategies and development of novel coatings for metallic substrates (steels, Mg and Al alloys). Further information is available on the EFC website.

Vice President:

In September 2014, the EFC General Assembly elected **Professor Damien Féron**, France, as the new EFC Vice-President. He succeeded Prof. Fátima Montemor.

Damien Féron graduated in chemical engineering at the Institute of Chemical Engineering of Toulouse in 1976 and obtained his PhD in chemical engineering from the National Polytechnic Institute of Toulouse (1979). He is Director of Research at the Nuclear Energy Division of the French Atomic Energy and Alternative Energies Commission (CEA) since 2007. He is also the Deputy Head of the "Service of Corrosion" (SCCME) since 2002 at CEA-Saclay. Further information is available on the EFC website.

Remembering Corrosionists

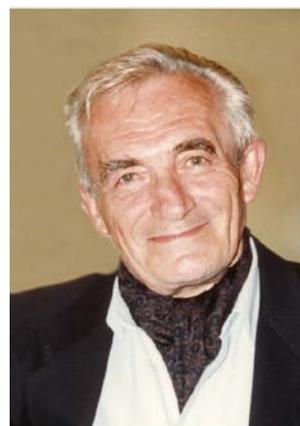
A great corrosion scientist remembered - Professor Giordano Trabanelli

The team of the "A. Daccò" Corrosion and Metallurgy Centre of the University of Ferrara are very sad to announce the death in Ferrara on 31 October 2014 of Prof. Giordano Trabanelli.

Prof. Trabanelli (Emeritus Professor of the University of Ferrara) was, an internationally well-known and highly esteemed scientist in the field of corrosion and corrosion inhibition. He was born in Ferrara on March 3rd 1928, took the degree in Chemistry in 1951 at the University of Ferrara, and started his academic career in Prof. Leo Cavallaro's group, working in the field of metal corrosion and corrosion protection. From 1956, he assisted the birth and growth of the "A. Daccò" Corrosion Study Centre, of which he became Director in the period 1970-2003. With his scientific activity, he brought significant progression in the comprehension of corrosion and corrosion inhibition mechanisms. In particular, he addressed the issues of inhibition of general and localised forms of corrosion by organic compounds, investigated from both a theoretical and a practical point of view, and highlighted many aspects of the relationship between molecular structure and inhibitor performances.

Prof. Trabanelli's scientific work is documented by more than 350 papers, many of them still cited, such as the reviews on corrosion inhibitors "*Mechanism and Phenomenology of Organic Inhibitors* (Advances in Corrosion Science and Technology", Vol. 1, p.147-228, Plenum Press, 1970); "*Corrosion Inhibitors Corrosion Mechanism*", p. 119-163, F. Mansfeld Ed., Marcel Dekker Inc. 1987), "*Fundamental and General Aspects of Inhibition Science*" (CORROSION 89, paper n.133, 17-21 April 1989, New Orleans, Louisiana); "*Inhibitors, An Old Remedy for a New Challenge*" (Corrosion, 1991, 47, 410-419). This research activity was greatly appreciated by the community of corrosionists which assigned him many international awards, such as Grande Médaille du CEFRACOR (1973); Cavallaro Medal (1983); NACE Whitney Award (1991); AIM, Medaglia di Titanio (2002); Honorary Membership of the EFC (2003). He was also appointed to cover important roles, such as Chairman of the International Corrosion Council (1983-1987) and Chairman of EFC WP 1 on Corrosion and Scale Inhibition (1994-2001).

Every 5 years from 1960 to 2005, he organised ten very successful European Symposia on Corrosion Inhibitors at the University of Ferrara. He founded and directed the Specialisation School in Science and Technology of Corrosion Phenomena (1968-2001) as well as the International School of Corrosion (1982-1988), both organised at the University of Ferrara.



Notwithstanding the infirmity, which struck him at the apogee of his career, he continued to work at the Corrosion Study Centre with unchanged enthusiasm for a long time, supported by his great fortitude and a Christian vision of life. We, his collaborators, owe much to him and, like many other people, we will always remember his great humanity, courage and inexhaustibility, coupled with scientific excellence.

EFC Administration

President:	Fátima Montemor, Lisbon, Portugal
Vice President:	Damien Féron, France
STAC Committee Chairman:	Arjan Mol, Delft, The Netherlands
Scientific Secretary:	Roman Bender, Frankfurt, Germany
Frankfurt Secretariat:	Willi Meier, Frankfurt, Germany
Paris Secretariat:	Pascale Bridou Buffet, Paris, France
London Secretariat:	Julija Bugajeva, London, United Kingdom
EFC Newsletter Editor:	Douglas Mills, Nottingham, United Kingdom

Report on EUROCORN 2014

Short report on EUROCORN 2014

“Improving Materials Durability - from Cultural Heritage to Industrial Application”, held in Pisa, Italy, 8th – 12th September 2014

The most recent EUROCORN was held in the Palazzo dei Congressi about a couple of kilometers from the leaning tower. Despite some inclement weather (very hot for the reception on the Monday; but cool and wet at times thereafter), this was an enjoyable and very well organised event.

Thanks must be extended to **Professor Luciano Lazzari**, the congress chairman and his team for this. Lunches (with wine) were provided and a good feature was that these, and the coffee and tea breaks, did not involve long queues. There were over 948 attendees from 58 countries worldwide with Italy, France and Germany and UK, providing, between them, over half the delegates. The proceedings consisted of nine parallel sessions of mainly twenty minute presentations, preceded each day by a forty minute plenary lecture held in the main auditorium. The main sessions running over at least one two days were Coatings, Mechanisms Methods and Modelling, Archaeological and Heritage Artifacts, Inhibitors, Nuclear, Microbial, Concrete, Oil and Gas and Automotive. Hot Gases, Refinery, Cathodic Protection, Aerospace and Environment Sensitive Fracture all ran for at least a day. Plus there were four half day working party sessions on Marine, Education, Polymers and Drinking Water. There were also workshops on Corrosion Reliability of Electronic Devices, Valuable Building and Workshop Decoration, CO₂ Corrosion in Industrial Applications, Assembly of Multimaterials in Hybrid Structures and Surface and Bulk Degradation. There were a couple of joint sessions between Refinery/Hot Gases and between Cathodic Protection/Marine. There were also several fringe meetings including a NACE Working Group on Corrosion Protection of Wind Power Units and a joint EFC/NACE task group looking at NATO standards. The exhibition was medium size (21 companies) with a good range of products being exhibited. Meetings of at least twenty working parties were held throughout the week. The welcome party on the Monday evening was an enjoyable networking opportunity. The General Assembly of the EFC held its meeting on the Tuesday evening.

There was an enjoyable poster party on the Wednesday evening although the number of posters displayed was somewhat smaller than usual (130). The winner of the best poster prize was from the coatings session and was given to **Ashokanand Vimalanandan** working at the Max-Planck Institute fuer Eisenforschung-MPIE, Duesseldorf, Germany, the title being “Redox responsive coatings for corrosion protection”. On Thursday evening there was the Gala Dinner. This was well attended with over 400 people enjoying the event.



Going back to the plenaries the first of these was entitled "Critical approaches to reveal corrosion mechanisms" and was given by the European Corrosion Medal winner Hermann Terryn from Vrije University, Brussels, Belgium. He emphasised how essential it is to understand local electrochemistry and then went on to give a whole range of techniques from bulk through micro to nano including SVET and ESTM to study this. The plenary on the Wednesday was "From the object scale to the nanometer: issues associated with the corrosion of archaeological iron artifacts" by Philippe Dillmann from the Commissariat à l'Énergie Atomique (CEA), Gif sur Yvette, France. Depending on the environment, several corrosion patterns are observed on the archaeological iron, forming a thick layer constituted of various phases the physicochemical properties of this layer will drive the corrosion kinetics and over the centuries there will be different main mechanisms and average corrosion rates. On Thursday the plenary was "Theory and practice of cathodic protection and cathodic prevention" given by Luciano Lazzari from Politecnico di Milano, Milan, Italy. The main milestones of cathodic protection (CP) were reviewed from the theory to the most important industrial applications, with emphasis to the concept of CP by immunity, quasi-immunity and by passivity as introduced by Pourbaix first up to the later concept of cathodic prevention, introduced by Pedferri. On Friday it was the turn of the Cavallaro Medal recipient Mario Ferreira from University of Aviero near Lisbon who gave "Development of Inhibitor containing Zeolites for protective coatings". Zeolites were loaded with cerium, lanthanum and molybdate species and were incorporated in sol-gel coatings and applied to AA2024-T3. The sol-gel coatings modified with a mixture of zeolites showed the best protective properties.

In the main sessions a total of 440 papers were presented in about 25 different sessions.

A reasonable fraction of the papers on the memory stick were full papers. There is not space to report even a selection of these here. The Corrosion Engineering Science and Technology Journal (<http://www.maneyonline.com/loi/cst>) will report the EUROCORR conferences in detail over four issues.

Douglas Mills

New Members and Membership Enquiries

The EFC welcomes on board its newest Affiliate Member:

New Affiliate Member since 1st January 2015: Water Technologies Laboratory Limited

Water Technologies Laboratory Limited (WTL Ltd, website: <http://www.wtlspb.ru>) is a Russian company (St.-Petersburg) established in 2007.

The sphere of Company's business activity is development (along with invention and research) and sales of complex chemical reagents for water treatment, such as corrosion and scale and bio inhibitors, and chemical reagents for water purification, such as coagulants and flocculants. The Company uses different initial pure chemicals for blending and combining complex chemical reagents for different purposes in water treatment technologies. All developed reagents (chemical compounds) are product of scientific research and technological developments, as the WTL Ltd. is strongly focused on scientific research and has for it the solid scientific base.

The WTL Ltd. is the inventor and producer of own products. It is the line of highly effective and cross-functional reagents for water treatment which is used in cooling production cycle (water cooling circles (towers) and in heat supply systems. The main purpose of this type of products is to ensure the complex protection from saline deposits, corrosion and biofouling of cooling and other type of facilities with usage of water in different sectors of economy: steel and machine-building industries, electric power industry (thermal power plants, nuclear heat and power plant), oil and gas producing industry, chemical industries and municipal facilities (centralized hot water supply systems (both open and closed types).

EFC Membership Enquiries

For European, international and Affiliate EFC membership inquiries please contact the EFC Frankfurt office (honndorf@dechema.de). EFC Members include European and Non-European national corrosion societies, research institutes, universities, and private and public entities.

For a listing of current EFC member societies, go to the EFC website's "Member Societies" section at: www.efcweb.org/Who+we+are/Member+Societies.html

For a listing of current EFC Affiliate members, go to the EFC website's "Affiliate Members" section at: www.efcweb.org/Who+we+are/Affiliate+Members.html

News from Working Parties and Task Forces

Corrosion reliability of Electronics Devices

At the EFC meetings in September last year, it was decided to establish the above-named new Task Force.

Chair: Rajan Ambat, DTU, Centre for Electronic Corrosion, Lyngby, Denmark

Continued miniaturisation and the explosive increase in the use of electronics have increased the demand for climatically reliable devices. Electronic systems are built by multi-material combinations which introduce problematic factors such as the presence of residues due to corrosion during processing, as well as bias voltage and the unpredictable user environment. Consequently, both industrial electronics and consumer electronics suffer from reliability issues when used in humid and harsh environments. Incorporating enhanced corrosion performance at the design stage requires interaction between electronics, electrical, and corrosion specialists as a number of remedial measures could be taken with proper understanding of corrosion principles.

Details on workshop:

This workshop "Corrosion reliability of Electronics Devices" at EUROCORR 2015 aims to provide a platform bringing together academics and industry people on various aspects of electronic corrosion issues. The workshop aims to focus on the following topics and more: Failure modes and mechanisms, process cleanliness, design aspects, humidity, corrosion mitigation strategies and suitable devices and sensors for corrosion prediction. Prospective industrial sectors include: Power electronics and control systems, electronics for offshore applications, automotive electronics, consumer electronics and medical electronics.

Ongoing activities of working parties

To view the ongoing activities of all 20 of the EFC's working party corrosion specialty areas, please go to the individual Working Party web pages on the EFC website at: www.efcweb.org/wp.html

Would you like to become an EFC Working Party Member?

If you adhere to an EFC member society or affiliate member, you are eligible to become a Working Party member in any of our 20 working parties of corrosion specialty areas. For further details on Working Party membership, please contact EFC Scientific Secretary Dr. Roman Bender at: bender@dechema.de

EFC Publications

EFC-appointed publisher for our noteworthy EFC "Greenbook" Series, **Woodhead Publishing** based in Cambridge, England, was acquired by Elsevier in August 2013. Publications 38, 41-51, 53-55, and 65 onwards are distributed by Elsevier. All members of an EFC Member Society are entitled to a 30% discount on any EFC "Greenbook" Series titles. For more information and to browse the titles, please visit the Elsevier store: www.store.elsevier.com.

Prior to Woodhead the publisher was Maney.

A complete list of EFC publications is given at: <http://www.efcweb.org/List+of+EFC+Publications.html>



Details on Recent publication

Understanding Biocorrosion: Fundamentals and Applications (EFC 66)

Edited by T Liengen, Statoil ASA, Norway, D Féron, CEA Saclay, France, R Basséguy, CNRS Laboratoire de Génie Chimique, France and I Beech, University of Oklahoma, USA on behalf of Working Party 10 on Microbial Corrosion.

Biocorrosion refers to corrosion influenced by bacteria adhering to surfaces in biofilms. Biocorrosion is a major problem in areas such as cooling systems and marine structures where biofilms can develop. Based on the course material that was presented during BIOCOR Summer School "Understanding Biocorrosion: Fundamentals and Applications" in July 2011 at the University of Portsmouth, School of Pharmacy and Biomedical Science, this book summarises key recent research in this subject. Part one looks at theories of biocorrosion and measurement techniques. Part two discusses how bacteria and biofilms result in biocorrosion. The final part of the book includes case studies of biocorrosion in areas as diverse as buildings, fuels, marine environments and cooling systems.

Woodhead Publishing, November 2014, 446 pages, hardback, ISBN-13: 978 1 78242 120 7

Online ordering:

http://store.elsevier.com/product.jsp?locale=en_EU&isbn=9781782421207&requestid=2266656

EFC "Greenbooks" Nos 1-37, 39, 40, 52 and 56-64 can be purchased from **Maney Publishing**.

Quite recent books include:

EFC64: Recommended Practice for Corrosion Management of Pipelines in Oil and Gas Production and Transportation

Edited by Bijan Kermani and Thierry Chevrot

~~£60.00~~ £42.00

EFC63: The Corrosion Performance of Metals for the Marine Environment: A Basic Guide

Edited by Carol Powell and Roger Francis

~~£30.00~~ £21.00

EFC62: Testing Tribocorrosion of Passivating Materials Supporting Research and Industrial Innovation: A Handbook

Edited by J-P Celis and P. Ponthiaux

~~£120.00~~ £84.00

To obtain your 30% discount take the following steps:

- Visit the distribution website of the EFC publications at:
<http://www.oxbowbooks.com/oxbow/catalogsearch/advanced/result/?seriesname=European%20Federation%20of%20Corrosion%20Series>
- Select the books you would like to purchase and add to basket
- When you checkout, enter this code into the 'discount codes' box: **efc30**
- Alternatively please quote **efc30** when you email or telephone (+44 (0)1865 241249 / oxbow@oxbowbooks.com)

Corrosion Engineering, Science and Technology

Corrosion Engineering, Science and Technology (CEST), one of the EFC journals, provides broad international coverage of research and practice in corrosion processes and corrosion control. Peer-reviewed contributions address all aspects of corrosion engineering and corrosion science; there is strong emphasis on effective design and materials selection to combat corrosion and the journal carries failure case studies to further knowledge in these areas. The scope encompasses degradation of all metallic and non-metallic materials and composites. The journal publishes 8 issues per year including regular updates on international developments in corrosion standards and reviews of important international meetings.

Read 10 free articles that have been hand-picked by the Editor at:

<http://www.maneyonline.com/action/showMostReadArticles?journalCode=cst>

Is CEST a valuable resource for you and your colleagues? If so, let your librarian know that institutional discounts are currently available for EFC members at 30% off. Subscriptions are available at the reduced institutional rate of £734 for print + online, and £682 for online-only. Simply email subscriptions@maneypublishing.com and quote order number efc30.

www.maneyonline.com/cst

Future EUROCORRs *The European Corrosion Congress*

EUROCORR 2015

EUROCORR 2015 will take place in **Graz, Austria** from Sunday (pre-meetings) **6th September to Thursday 10th September 2015**

Theme: *Earth, Fire, Water, Air, Corrosion happens everywhere*

ASMET, the Austrian Society for Metallurgy and Materials will be your hosts in Graz, a delightful student city located in a forested region southwest of the Alps and 200 km from Vienna. This conference will assert the critical role of corrosion science, technology and engineering in extending the lifecycle of materials in different fields of applications (earth, fire, water, air).

Important Dates:

13 May 2015 Authors registration deadline for inclusion in the programme

29 May 2015 Deadline for Early and Promo registration fees

10 July 2015 Deadline for submission of full manuscripts

The registration fee includes coffee breaks, lunches, Welcome Reception, Poster Party, access to oral sessions, access to exhibition and a complimentary USB Stick containing the proceedings of the congress. The promo and the accompanying registration also include the conference dinner. For the most up-to-date details on EUROCORR 2015, please refer to the website at: <http://www.eurocorr2015.org>

In addition to the regular EFC working party sessions the following joint sessions and workshops are scheduled:

Joint Sessions:

- Anodic oxide layers for corrosion protection and bonding of Al and Ti alloys (WP 14 + 22)
- Corrosion in Sustainable and Green Technologies (WP 13 + TF CO₂)
- Hydrogen issues in Oil & Gas and Marine Environment (WP 5 + 9 + 13)
- Cathodic Protection in Marine Environments (WP 9 + WP 16)
- Coatings for High Temperatures (WP 3 + WP 14)

Workshops:

- Refractory Metals and their Alloys
- Marine Corrosion in Renewable Energy
- Electrochemical Sensors

For a complete listing of all EFC working party sessions, joint sessions, workshops, committee meetings and other scheduled events, please refer to the Sessions/Scientific Programme section of the EUROCORR 2015 website at: <http://www.eurocorr2015.org>

**EUROCORR 2015 Pre-Congress Graduate COURSE “Corrosion Science”
4, 5 & 6 September 2015**

This pre-EUROCORR 2015 course will once again be led by the esteemed Prof. Christofer Leygraf, winner of the 2013 European Corrosion Medal, and is designed for graduate students or researchers working in academic or industrial environments with an interest in materials science and engineering.

Aim and contents: Corrosion is a truly interdisciplinary science and the aim is to discuss the underlying chemistry and physics of the most important forms of metal corrosion. Mechanistic as well as applied aspects will be dealt with.

Lectures: The course includes lecture hours on three consecutive days prior to EUROCORR 2015. Most lecturers are part of KorrosionsCentrum™ (a collaboration between Swerea KIMAB and KTH) in Stockholm and most competent experts in their respective fields.

For the complete course plan, lectures, fees, and registration details, please refer to the “Graduate Course” section on the EUROCORR website at: <http://eurocorr2015.org/graduate-course/>

Contact for EUROCORR 2015:

Congress Secretariat, Mrs. Yvonne Dworak
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Franz-Josef-Str. 18, 8700 Leoben, Austria
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Fax: +43 3842 402 2202
Email: eurocorr2015@asmet.at
Website: <http://www.eurocorr2015.org>



Other Important dates for your diary

**EUROCORR 2016
11-15 September 2016, Montpellier, France**

Theme: *Advances in linking Science to Engineering*

CEFRACOR, the Centre Français de l'anticorrosion, will be hosting you for EUROCORR 2016 in Montpellier, capital of the Languedoc-Roussillon region on the south coast of France on the Mediterranean Sea and neighbouring the delightful region of Provence. The programme will include lectures and poster presentations in all areas covered by the EFC Working Parties with additional topical workshops. A large exhibition is planned which will feature the latest developments in corrosion resistant materials, corrosion monitoring, coatings, inhibitor, and cathodic protection. The call for papers will open in autumn 2015.

Contact:

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Email: info@cefracor.org
Website: <http://www.cefracor.org>



EUROCORR 2017 & International Corrosion Congress-ICC 2017
3-7 September 2017, Prague, Czech Republic

Theme: *Corrosion Control for Safer Living*

Prague, an architectural, musical and cultural jewel of a city will be the location for EUROCORR 2017 which will be jointly hosted by The Czech Association of Corrosion Engineers and DECHEMA e.V.

This 2017 EUROCORR will be held jointly with the International Corrosion Congress-ICC. The latter is held every three years on one of the six continents. Since the last ICC in Europe (in Granada in 2002), recent ICCs have been in Beijing, China (2005), Las Vegas, USA (2008), Perth, Australia (2011) and Jeju, Korea (2014).



Contact:

Czech Association of Corrosion Engineers (AKI)

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Fax: +420 22044 4400

Email: aki@vscht.cz

Website: <http://www.aki-koroze.eu>

Forthcoming EFCE Events and Courses

17–21 May 2015, Madeira Island, Portugal (EFC Event No. 387)

7th International Aluminium Surface Science and Technology Symposium - ASST VII

Website: <http://www.asst2015.com>

20–22 May 2015, Venice, Italy (EFC Event No. 395)

European Conference on Heat Treatment 2015 and the 22nd International Federation for Heat Treatment and Surface Engineering Congress (IFHTSE)

Website: <http://www.aimnet.it/allhtml/22ht/org.htm>

24–29 May 2015, Troia, Portugal (EFC Event No. 386)

11th International Symposium on Electrochemical Methods in Corrosion Research - EMCR

Website: <http://www.emcr2015.org>

28–29 May 2015, Amsterdam, The Netherlands (EFC Event No. 397)

Stress Corrosion Cracking Course

Scope: Mechanisms, systems and control of SCC; SCC systems; stress, environmental and metallurgical factors; most susceptible locations; SCC testing and detection.

Website: <http://oilgas.flemingeurope.com/stress-corrosion-cracking-training>

15–17 June 2015, Ferrara, Italy (EFC Event No. 389)

Corrosione e Protezione 2015

Giornate Nazionali sulla Corrosione e Protezione

Website: <http://www.aimnet.it/gncorr2015.htm>

15–19 June 2015, Frankfurt am Main, Germany (EFC Event No. 388)

ACHEMA 2015

31st International Exhibition-Congress on Chemical Engineering, Environmental Protection and Biotechnology

Website: <http://www.achema.de>

05–10 July 2015, Bled, Slovenia (EFC-Event No. 392)

Nuclear Corrosion Summer School - NuCoSS-15

Website: <http://www.zag.si/nucoss>

20-24 July 2015, Cambridge, UK (EFC Event No. 381)

6th International Conference on Advances in Corrosion Protection by Organic Coatings (ACPOC)

Website: <http://www.acpoc.net>

15-17 September 2015, Budapest, Hungary (EFC Event No. 399)

HUNGAROKORR 2015

International Corrosion Science Conference and Exhibition

Website: <http://www.corrosion.hu/index.html>

28–30 October 2015, Frankfurt a. M., Germany (EFC Event No. 393)

EFC Workshop Insight, Mechanisms and Modelling in High Temperature Corrosion

Website: <http://www.dechema.de/efcws2015>

18-21 April 2016, Warsaw, Poland (EFC Event No. 398)

Transport Research Arena (TRA) 2016

6th European Transport Research Conference

Website: <http://www.traconference.eu/>

For full details of these and a complete listing of many other future corrosion events held in Europe and throughout the world, go to the EFC Calendar of Events at: <http://www.efcweb.org/Events.html>

EFC Event Publicity

If you are an EFC member society and are organising a corrosion-related event or course, you are entitled to EFC endorsement via an EFC Event number and a full publicity write-up of your event in our newsletters, including a listing in the EFC Calendar of Events and on the home page of the EFC website.

Event and Course Application Forms can be downloaded on our website at:

<http://www.efcweb.org/Events.html> and sent to EFC Scientific Secretary Dr. Roman Bender at: bender@dechema.de

Note to non-members:

The EFC Calendar of Events aspires to be the most comprehensive listing of corrosion-related events in the world. If you are not currently an EFC member but would like your corrosion-related event to be listed in the Calendar of Events on our website, please send your event announcement to: honndorf@dechema.de

Newsletter subscription

If you wish to subscribe to our EFC newsletters please send your name and full contact details to Ines Honndorf: honndorf@dechema.de

News from Member Societies and related organisation

From the World Corrosion Organisation – WCO

Corrosion Awareness Day April 24, 2015



Corrosion Awareness Day was intended as a means to educate the public, industries and government agencies regarding the deleterious effects of corrosion on our infrastructures worldwide. The worldwide cost of corrosion is currently in the same order of magnitude as the cost of producing and distributing food worldwide. The difference is that the public is somewhat aware of issues related to hunger and the cost of food, but totally unaware of the cost of corrosion and its effect on our infrastructure.

The corrosion industry is rapidly losing its expertise as our top technologists retire and are not replaced. The opportunities for those entering the field have been greatly reduced due to the economic changes of recent decades. For example, in the 80's and early 90's, virtually every oil refinery and most petrochemical plants had their own resident corrosion staff. Then industry restructuring led to replacement of in-house corrosion experts with consultants hired on an as needed basis. Furthermore, a number of universities which previously offered metallurgical engineering programs have replaced these with materials engineering, focusing on advanced materials and nano technologies that are more attractive to both students and industry, but which neglect the basic corrosion issues.

Consequently, we now have a pressing need for more personnel in the fields of corrosion research and applications, but the industry has yet to find ways to capture the interest youth and young adults. At the same time the number of students in other engineering specialties appears to be at least steady if not growing.

The corrosion industry needs to become proactive and develop programs for students in middle school and high school, say from age 12 and up. Indeed, the original concept of Corrosion Awareness Day was to get local corrosion societies to team up with universities and industries to develop and implement educational programs for the general public in terms that they can easily understand. To address this issue, ASM International has developed a week-long program for high school science teachers which includes one day on corrosion. That program is presently available in the USA, Canada and India.

It is high time that the various societies began to work together to promote the field of corrosion to the youth of the world. I would envision the focus beginning with students as young as 8 or 9 and continuing through high school and university or technical school. That is the goal of Corrosion Awareness Day!

George Hays

Job Banks

Managing Officer of the European Federation of Corrosion (EFC)

For details on the job description and requirements for employment, see:

<http://www.efcweb.org/Recruitment+Forum.html>

Deadline for applications: **29 May 2015**

If you would like to publicise a job opening or are looking for qualified professionals, please consult our website at: <http://www.efcweb.org/Recruitment+Forum.html>

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Imprint

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