

Newsletter - August 2019

Introduction by the FEMS President



Last year I began the welcome address, saying that in January 2018 I had confronted one of the most important challenges in my professional life: the Presidency of FEMS. One and a half years later, I still think the same, but now I feel much more honoured to have been elected for this position, because I have

had the opportunity to share many unique moments with the materials community. I have had the opportunity to meet incredible people and all these experiences will accompany me for the rest of my life. Now it is the time to have a look at what we have done, to reflect about what we wanted to do, but did not, and to assume new challenges for the future. During my period as President I have done my best to follow the track initiated by my predecessors. They have made impressive progress. I am afraid I have not been always successful, but I have always tried. A major effort has been made by FEMS to be closer to the Member Societies: our essence, our raison d'être. We continue to strive to offer more to our Member Societies, and I must thank all the Executive Committee officers for their work and their commitment. Special thanks for Efi Fragkou, our Secretary, for doing all the paperwork, and organizing all the EC and MC meetings, make compatible the busy agendas of all us, reminding us to book hotels for the meetings, or sending the same e-mail several times. Also, thanks to Frans Vos, the best Treasurer all over the world. I am sure that without his dedication, I would already be in jail, with all the complications of European laws. And of course, thanks to Hugh Dunlop, our Communication Manager, always asking for news, and scolding us, rightly, about updating of the web pages. Some of the initiatives undertaken during the previous year are already coming to fruition. European Materials Day is now

a special day for some of our Member Societies, and hopefully this number will increase in the coming years. The Master Thesis Award is a reality now. In a few months the European Journal of Materials Science will be launched as a result of a closer collaboration with Taylor & Francis. The relationship with our American colleagues from TMS is well consolidated. And the number of events endorsed by FEMS is increasing. As promised, special attention will be paid to our young researchers; they are the future. As you know, last year for the first time, Junior EUROMAT was not held in Lausanne but in Budapest. Junior EUROMAT is a unique opportunity for young researchers in the materials world to get together with their contemporaries. The Junior EUROMAT conference, held in Budapest in 2018, was a great success. The quality of the communications and the presentations was impressive and showed unequivocally that betting on our young people is a safe bet. We are moving in the right direction, but we must continue to get young people more closely involved, and give them the opportunity to develop new initiatives. With these lines I would like to call the young members to help us to improve our work and our world.

This year we celebrate the anniversaries of two of the FEMS founder members. Deutsche Gesellschaft für Materialkunde (DGM) celebrates its 100th anniversary, and the Institute of Materials, Minerals, and Mining (IOM3) its 150th anniversary. CONGRATULATIONS FROM THE MATERIALS COMMUNITY. Next year, a new President, Eric Le Bourhis and Vice-President, Anna Zervaki will receive the baton. I wish them all the best, and offer all my support, and I ask you, our Member Societies, for your invaluable support for them. Without you, we are nothing and can do nothing. Thanks for your support. Finally, let me dedicate these few lines to one of the FEMS Past Presidents, Prof. Robert Singer, who passed away in January 2019. Our best homage to him is keep FEMS alive.

My best Regards and Wishes

Prof. Paloma Fernández-Sánchez
President FEMS 2018-2019

WELCOME TO EUROMAT 2019

This year's Meeting Point for the Materials Science and Engineering Community in Europe and worldwide !



This is the 16th event in the series of EUROMAT conferences, which are organised under the auspices of the Federation of European Materials Societies every 2nd year since 1989, and is recognised internationally as the prime venues in Europe for the gathering of a wide community of academics and industrialists who are active in the field of Materials Science and Engineering (MSE). The EUROMAT 2019 conference is organised by the Swedish Society for Materials Technology (SFMT). The conference has been supported by an impressive number of sponsors and exhibitors, offering educational, networking and promotional opportunities for the conference delegates.

Sweden has, since medieval times, continued to produce iron of high quality due to good sources of ore and charcoal from the forests. Also, materials processing has been stimulated by famous Swedish chemists and metallurgists laying the ground for advanced products including cemented carbides and advanced stainless steels. Many famous companies like SANDVIK, Swedish Steel, SKF, Atlas Copco, Gränges, Husqvarna and many others are active and well known worldwide.

The conference comprises 70 Symposia grouped into 9 Areas, including Functional and Structural Materials, Processing, Characterisation and Modelling, Energy, Transport and Environment, Materials for Healthcare, Biobased Materials and Raw Materials and an area specifically dedicated to Education, Strategy and Technology Transfer. Four symposia are jointly organized by FEMS and TMS reflecting their strategic choice for cooperation on both sides of Atlantic. Over 2300 abstracts were received from countries worldwide, and more than 2000 participants will take part in the various sessions, in tutorials and also in the Matchmaking event about research and development crucial for the innovation and the work force of the European industry.

The programme is particularly highlighted by **plenary lectures** to be given by renowned scientists from the MSE community and include the FEMS awardees :

- **Caroline Körner**, Prof. Mat Sci. and Eng., Friedrich-Alexander University Erlangen-Nürnberg, Germany.
- **Jeff TH.M. De Hosson**, Prof. Applied Physics, University of Groningen, the Netherlands
- **Kristina Edström**, Prof. Dept. of Chemistry, Ångström Laboratory, Uppsala University, Sweden.
- **Emmanuel P. Giannelis**, Prof. Materials Science and Engineering, Cornell University, USA.
- **Zhaoping Lu**, Vice president and Prof. University of Science and Technology Beijing, PR China.
- **João F. Mano**, Prof. Dept. of Chemistry, CICECO – Aveiro Inst. of Materials, University of Aveiro, Portugal
- **Johnny Sjöström**, Executive Vice President and Head of the Special Steel division at SSAB.

FEMS 2019 prize laureates

- **Ehrenfried Zschech**, **FEMS European Gold Medal**, Professor and Department Head, Fraunhofer Institute for Ceramic Technologies and Systems IKTS, Germany.
- **Rubén D Costa**, **FEMS Materials Science & Technology Prize**, Head of the Hybrid Optoelectronic Materials and Devices lab, IMDEA Materials Institute, Spain.
- **Maria Vallet-Regi**, **FEMS Materials Innovation Prize**, Professor at Universidad Complutense de Madrid
- The **TMS-FEMS Young Leader International Scholar Program Award** will be presented at EUROMAT 19 this year to **Jennifer L.W. Carter**, Assistant Professor at Case Western Reserve University, Ohio.
- The finalists competing in the 2019 **FEMS Master Thesis Award Competition** during the conference are: **Adriana Eres-Castellanos – Spain**, “*Effect of ausforming on the bainitic transformation in medium carbon steels*”
- **Amélie Thiriet – France**, “*Multiscale analysis of two interfaces on a buffer material*”
- **Rafael Vieira – Portugal**, “*Numerical micromechanical analysis on the influence of monocrystalline parameters on the elastic and yielding response of polycrystalline aggregates*”
- **Vihn Tu – Sweden**, “*Modelling and finite element simulation of the bifunctional performance of a microporous Structural Battery Electrolyte (SBE)*”

(More details on the FEMS Master Thesis Award Competition are given in the next article).

The Executive Committee of the Federation of European Materials Societies (FEMS), the Scientific and Managing Committees of EUROMAT 2019 as well as the organizing Swedish Society for Materials Technology are looking forward to seeing you in Stockholm and wish you an interesting and unforgettable event! For more information: <https://euromat2019.fems.eu>

The FEMS Masters Thesis Award

The new FEMS Masters Thesis award, inaugurated in 2018 at Junior EUROMAT, Budapest, is intended to recognize the best Masters Thesis on Materials Science and Engineering, presented in any academic Institution from the country of any FEMS member Society. FEMS Member Societies may nominate one candidate per year. To be eligible the Masters Thesis should have been obtained up to a maximum of two academic years before the FEMS final takes place.

The next European final of the FEMS Masters Thesis Award will take place during the EUROMAT conference in Stockholm, Sweden in September 2019. Each FEMS member society taking part in the competition organises their own society heat well in advance of the final, for example, a number of societies organize their heats or society final in conjunction with the European Materials Day, is scheduled for the first Wednesday in November each year, and which last year took place on Wednesday 7th November 2018, with the winner from each society event going forward to the European final.

It is important to note that FEMS acknowledges the support from all of our societies in organising national heats and providing the resources to cover their winners travel and subsistence costs to attend the European final in Stockholm. This we have found is a significant selling point for candidates to enter the competition and take part in the hope of winning the trip to the European final. FEMS provides a fee waiver to each society finalist in order that they can attend EUROMAT or Junior EUROMAT (depending on the year the final takes place) free of charge. The winner will also receive a certificate and be featured in the next FEMS Newsletter and on the FEMS website. Further details can be found at <http://www.fems.org/fems-masters-thesis-award>.

At the Final, candidates will give a 10 minute presentation on their Master Thesis. This will be followed by a short Q&A session of questions posed by members of the judging panel. The panel will score each candidate and this mark along with the results of the poll taken by the audience will be taken into account in deciding the overall winner who will be announced later in the conference during the awards ceremony.

The 2018 FEMS Inaugural Masters Thesis competition was a new and hugely successful initiative for FEMS which brought together a number of young people from various national societies competing to be crowned the best master's thesis in Europe. Following individual institutional heats and finals organised by member societies, the winners from each society attended the inaugural final which took place at Junior EUROMAT in Budapest in July in 2018.

The results from the inaugural final were as follows :



1st place :

Beatriz J. Coelho (Portugal)

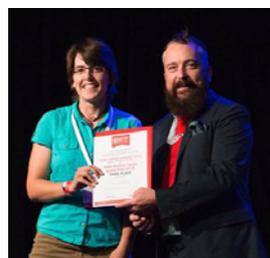
"A digital microfluidics platform for loop-mediated isothermal amplification of DNA"



2nd place

Manuel Alonso Orts (Spain)

"Synthesis and characterization of complex semiconducting oxide nanostructures"



3rd place

Flore Villaret (France)

"2D grain growth modeling in ODS steel with different full field approaches"

FEMS would like to congratulate all of the winners in 2018 and extend its congratulations to all of the 2019 national finalists and wish them the best of luck in the final taking place at EUROMAT in Stockholm, Sweden in September.

Dr Brett Suddell, Immediate Past President & Chair FEMS Awards Committee

If you are interested in taking part as a candidate in national heats then please contact your national society for further information, details of which can be found on the FEMS website at www.fems.org.

If any organisation is interested in sponsoring this competition then please get in touch with Dr Brett Suddell, Chair of the Awards Committee at brettsuddell@biobasedsolut.co.uk

FEMS JUNIOR EUROMAT 2018

Review of FEMS JUNIOR EUROMAT 2018 held in Budapest



It was a great honour to welcome the young material scientists to FEMS Junior EUROMAT 2018 for the first time in Budapest, Hungary!

Organised every two years, the FEMS Junior EUROMAT Conference is the place to be for young students willing to have direct access to one of the largest communities of international experts of materials science and technology. 2018 year's edition took place in Budapest, Hungary, 8-12 July, under the auspices of the Hungarian Society of Materials Science. The homepage of the conference can still be visited at <http://junior-euromat2018.fems.eu>.

The conference was organized around 7 research topics: Functional Materials; Structural Materials; Design & Processing; Manufacturing & Recycling; Energy, Transportation and Environment; Life Science and Health; and Modelling and Characterisation.

Over 250 abstracts were received from 40 countries worldwide, and more than 230 participants exchanged in the various sessions in tutorials including Nano-Calphad: Thermodynamics of Nano-materials by George Kaptay or the Workshop related to Future European R&D Materials programmes by Bernard Rickinson. 6 Round Tables focused on Start-Ups and Challenges; Woman in Science; Scholarship and Grants for PhD and PostDoc Students; Raw materials; clean and efficient energy; and Publishing. Thanks to the Round Table chairs and lecturers, the events had a great impact and many participants followed the interesting discussions.

The programme was highlighted by nine plenary lectures given by renowned scientists, experts from the MSE community, including serving FEMS Executive Officers:

- **Dr. Fabrice Stassin**, Managing Director, EMIRI Association, Belgium;
- **Professor Eric Le Bourhis**, Poitiers University, France;

- **Professor Maria Letizia Ruello**, (COST EXTREME) Università Politecnica delle Marche, Italy;
- **Dr. Márton Herczeg**, European Innovation Communities Management (EIT);
- **Professor Amy J. Clarke**, George S. Ansell Department of Metallurgical and Materials Engineering, Colorado School of Mines, Golden, USA;
- **Professor Jenő Gubicza**, Eötvös Loránd University, Hungary;
- **Professor Aldo R. Boccaccini**, University of Erlangen-Nuremberg, Germany;
- **Professor Ján Dusza**, Institute of Materials Research, Slovak Academy of Sciences, Slovakia;
- **Steve Hant**, Thermo Fisher Scientific, UK.

The FEMS **Master Thesis Award** was organized for the first time in Budapest to recognize the best Master Thesis in Materials Science and Engineering (see separate article). The **FEMS Communication Award for Excellence in MSE** was awarded to Thomas Duguet (France) for his research on "*Towards the modelling of the surface treatment of composite components for satellites: the case study of the metallization of waveguides*"

Awards for the **top 3 oral presentations** were sponsored by Taylor & Francis and the **Poster Awards** were sponsored by FEMS. For the first time in the history of Junior EUROMAT conferences, the publication of oral and poster contributions was offered in high quality peer-review journals by Taylor & Francis and AKCongress Gold Open access journal Resolution and Discovery. Extensive societal events were also organised: ruin pub tours, welcome and conference dinner, and the unforgettable The Scarlet LIVE concert.

Thanks go to all participants for their great contributions!
Csaba Balázs, Katalin Balázs, George Kaptay
FEMS JE2018 chairs

FEMS JUNIOR EUROMAT 2020

The next edition of Junior EUROMAT will be held in Granada, 5-9 July 2020. If you are a young Materials Scientist or Engineer, this conference is made for you!



Junior EUROMAT has been organised every even year since 1992, and it is the best opportunity for young scientists to meet with other young, and not so young scientists. It can be the entrance to one of the largest communities of materials scientists and engineers, the right way to begin a professional career in this field and, without any doubt, a unique opportunity to enjoy. Knowledge is very important, but enjoyment also.

Junior EUROMAT 2020 will be organized by the Spanish Materials Society (SOCIEMAT) in Granada. Almost a legend city, evoked by so many authors – how can one forget the book by Washington Irving, “Tales of Alhambra”. At the cross-roads of civilizations since immemorial times, Granada was the last Muslim enclave in Europe during the reconquest by the Catholic King and Queen (Isabel and Fernando). In an unparalleled location, Granada is a vibrant, friendly and lively metropolis that is full of culture. The Alhambra, the flagship of the city’s vast historical heritage, stands on a hilltop overlooking a city that attracts around three million visitors every year.

Granada, capital of the province of the same name, is in south-eastern Spain, in the autonomous region of Andalusia. Traditionally, it was the capital of High Andalusia, or eastern

Andalusia, which comprised the provinces of Jaén, Granada and Almería, as opposed to Lower Andalusia or western Andalusia. In addition to being the traditional capital, Granada is the judicial capital of Andalusia, as the home of the High Court of Justice of the autonomous region.

The Conference will be organized mirroring EUROMAT, with areas focused on Functional and Structural Materials, Design, Processing and Characterization, and with special emphasis on the role of Materials in the Sustainable Development Objectives.

The finals of the European FEMS Master Thesis Award will be also held during the Conference. We encourage all the Member Societies to select their candidates for this competition. Also, the FEMS Communication Award for Excellence in MSE will be part of the program. This award has been created to recognize young materials scientists, distinguished by the relevance of their work and their ability to communicate. Again, Member Societies are encouraged to nominate candidates for this award.

We are waiting for you in Granada!

*Prof. Paloma Fernández-Sánchez,
chair of Junior EUROMAT 2020*

Conference website: <https://junioreuromat2020.com>

News from the FEMS Executive Committee and General Assembly



In December 2018, **Professor Albano Cavaleiro** of SPM, stepped down from the FEMS Executive Committee after 4 years of service. His contribution, background knowledge and experience are greatly valued by the Committee and Professor Cavaleiro will remain involved as the non-executive chair of a new Working Group examining FEMS links with industry.



In January 2019, we welcomed **Professor Rodrigo Moreno**, leader of the Synthesis and Colloidal Processing Group at ICV. Professor Moreno will be representing SOCIEMAT. For more information, please visit the FEMS website <http://www.fems.org/rodrigo-moreno>

Congratulations to Professor Aldo Boccaccini (DGM) and Dr Bernie Rickinson (IOM3), who were re-elected at the GA in 2018 for a further 2 years (2019-2020) as executive committee officers.

Member

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As a MEMBER of your National Society (and if they are a member of FEMS), you will receive the following benefits:

- As a member you would be entitled to the member registration fee (of the national society) at 'FEMS endorsed events' which can include conferences and workshops (where you see the FEMS logo on event promotional materials and also advertised via the FEMS website)
- Reduced rates (15% or member rate offered by the organising society) to EUROMAT
- Reduced rates (15% or member rate offered by the organising society) to Junior EUROMAT
- Preferential rates to Taylor & Francis publications and books and CRC publications (25% discount using special code available from your National Society)
- Membership and access to a vast European network of over 20,000 materials professionals
- Receive copies of the FEMS newsletter
- You can be nominated for FEMS awards by your National Society (subject to meeting the relevant criteria)
- Opportunities to network with materials professionals at FEMS events
- Access to FEMS conference proceedings via secure area of FEMS website and other Knowledge Exchange Materials
- FEMS has developed valuable links to the European Commission and to important European Technology Platforms being a member of the Alliance for Materials (A4M). As a member of your National Society you will shape the future of materials R&D and by this actively contribute to the societal challenges in Europe.

If you are unsure whether your national society is a member of FEMS please check our website for further information.



Associate

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1987 – 2017
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As an ASSOCIATE MEMBER, you will receive the following benefits:

- Preferential exhibition rates at FEMS organised events
- Opportunity for your staff and officers to become members of the National Society
- Membership of a vast European network of over 20,000 materials professionals
- Your organisation profile on the FEMS website
- Jobs Fair opportunities
- Industrial matchmaking events with companies and members
- Publicity for your organisation as an Associate Member within the FEMS newsletter (once per year)
- Reduced fees for attending EUROMAT and Junior EUROMAT conferences
- Preferential sponsorship opportunities at FEMS organised events
- FEMS has developed valuable links to the European Commission and to important European Technology Platforms being a member of the Alliance for Materials (A4M). As an Associate Member of FEMS you will shape the future of materials R&D and by this actively contribute to the societal challenges in Europe.

Associate member level costs are based on organisation size and are available on application.

If your organisation is interested in becoming an Associate Member of FEMS please contact our membership team at membership@fems.org

Elections at the FEMS General Assembly, Dresden, 23rd May 2019

Eric Le Bourhis (SF2M), current FEMS vice-president, was elected FEMS President for the term 2020-2021 and Anna Zervaki (HMS), current FEMS EC officer, was elected FEMS vice-president.



Participants at the General Assembly held at IKTS Dresden, left to right: E. Zschech (Fraunhofer IKTS & FEMS past president), S Klein (DGM), J-L Garagnani (AIM), P Åström (SFMT), P Vilarinho (SPM), H Dunlop (FEMS, communications & SF2M), A Zervaki (HMS), F Vos (FEMS treasurer & BvM), E Le Bourhis (SF2M, FEMS vice-president), D Kata (PTM), R Moreno (Sociemat), S Johansson (SFMT), M Nosko (SNMT), P Fernández-Sánchez (FEMS President & Sociemat), N Michailidis (HMS), B Rickinson (IOM3), A Boccaccini (DGM), B Hribernik (ASMET), L Paulik (SNMT), and staff and PhD students at Fraunhofer IKTS. Not in photo: J. Hornikova (CSNMT), P. Šandera (CSNMT) and E. Fragkou (FEMS secretary & IOM3).

FEMS 2019 Materials Day, Dresden



On Wednesday 22 May, the FEMS Executive Committee and General Assembly members attended the Materials Day, organised by DGM at Fraunhofer IKTS in Dresden. Professor Ehrenfried Zschech (pictured left) welcomed everyone to the event entitled Materials Research and Innovation in the Central European Triangle Germany-Poland-Czech Republic which gave the opportunity for attendees to enjoy a series of presentations from Institutes and Universities from Dresden, Krakow and Brno.

The presentations covered a series of topics from additive manufacturing of superalloys, titanium alloys and titanium aluminides made by selective electron beam melting to new challenges on phase transformations at moving grain boundaries, x-ray microscopy applications in materials science and microelectronics, and growth characterisation of 1D nanostructures.

During their closing remarks, Professors Zschech and Leyens from Fraunhofer and IWS thanked everyone for attending the event and looked forward to welcoming future events.

FEMS General Assembly visits the transparent car factory in Dresden



FEMS members studying the new VW MEB electric car platform.

The Transparent Factory (die Gläserne Manufaktur) is a Volkswagen car factory and exhibition space in the centre of Dresden, designed by architect Gunter Henn. It originally opened in 2002, producing the luxury VW Phaeton until 2016. As of 2017 it produces the electric version of the Golf.

<https://www.glaesernemanufaktur.de/en/>

After the visit we were welcomed to a dinner at e-Vitrum to celebrate the 100 years anniversary of DGM

FEMS - TMS continue to develop their collaboration

The collaboration between FEMS and the American society TMS (The Minerals, Metals and Materials Society) has grown from strength to strength over the years. We collaborate on conferences, international scholar programmes and have high level face-to-face leadership discussions between both organisations on an annual basis. These activities are covered by a reciprocal arrangement between both organisations in the form of an MoU which allows for TMS to organise symposia at our flagship event namely EUROMAT during the odd years and then on even years FEMS organises what has become a keynote symposium at the TMS annual conference with the next one taking place at the 149th TMS annual event in 2020 which will be held in San Diego from 23rd-27th February.

The last FEMS keynote symposium was organised at TMS in Phoenix (March 2018) on the subject of 'Energy and Transportation from a European Materials Perspective' and was very well attended. We had a number of high pro-

TMS

The Minerals, Metals & Materials Society

file speakers giving engaging talks on the challenges facing the Energy and transportation sectors in the future. This special invited speaker symposium allows for a very unique perspective to be given from a European standpoint to our US colleagues. I know from first-hand experience that this has been well received and provided interesting

perspectives from both sides of the Atlantic with a great amount of audience questioning, something we hope to replicate with the symposia in 2020.

Turning to EUROMAT 2019 we are pleased to identify the following symposia which have been organised by representatives of TMS under the TMS banner and form part of the extensive EUROMAT technical programme. This includes symposia on the following interesting and current hot topics of:

- Light weight metals (B2)
- Additive Manufacturing of Composites and Complex Materials IV (C5)
- Critical Materials: Driving Advanced Technologies (H3)
- Raw Materials for Refrigeration (H4)

In addition the TMS-FEMS Young Leader International Scholar Program Award will be presented at EUROMAT 19 this year to Jennifer L.W. Carter, Assistant Professor at Case Western Reserve University, Ohio who will give a keynote lecture at the conference. Her work focuses on the characterization and modelling of the microstructure and mechanical properties of metal alloys for elevated temperature applications.

The FEMS TMS 2020 symposia next February will again bring together world class speakers to provide a European perspective to supplement themes at TMS2020.

Further details on the 2018 event and the other FEMS-TMS activities such as the International Scholar program can be found on pages 5 & 6 of the July 2018 FEMS newsletter available on the FEMS website.

Dr Brett Suddell, Immediate Past President.

Discover the *European Journal of Materials Science*

The new **Open Access** journal from the Federation of European Materials Societies and Taylor & Francis

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FEMS contributions to EuMaT



During the past year FEMS has been actively involved in the activities of the **European Technological Platform for Materials (EUMAT)**. EuMaT includes members from Industry, public authorities, scientific and technical community, associations and consortia from other EU projects, the financial community and civil societies. It was launched in 2004 as an internal EU project and since then has been behind the organization of several events. Among the main objectives of EuMaT is the identification of needs and priorities in the area of advanced materials and related technologies. It covers all steps in the life cycle of an industrial product (from the materials perspective): design and development of advanced materials, advanced production and processing, materials selection, life cycle considerations such as reliability, hazards or recyclability, etc.

FEMS and EuMaT have been active partners in the EU project MATCH (Materials Common House) within which a position paper “**Towards a System Approach for Materials Research, Development and Innovation for Europe**” was elaborated.

In February 2019, with the **Alliance for Materials**, an Opinion Paper was released and presented to the EU Commission “**Opinion Paper on Governance and Strategic programming of Materials Research and Innovation in Horizon Europe**”. A further step in the collaboration between FEMS and EuMaT is the joint event that will take place during EUROMAT 2019 in Stockholm “**Materials Role in EU Missions, Society and Gender Aspects**”. The session will be co-chaired by Amaya Igartúa (EUMAT co- secretary) and Paloma Fernández Sánchez (FEMS President)

FEMS endorses IYPT2019

A Common Language for Science



The Periodic Table of Chemical Elements is one of the most significant achievements in science, capturing the essence not only of

chemistry, but also of physics, medicine, earth sciences and biology.

1869 is considered as the year of discovery of the Periodic System, and Dmitri Mendeleev was a major discoverer. 2019 will be the 150th anniversary of the Periodic Table of Chemical Elements and has therefore been proclaimed the “International Year of the Periodic Table of Chemical Elements (IYPT2019)” by the United Nations General Assembly and UNESCO.

Discover everything about IYPT2019 via at <https://www.iypt2019.org>. Join the celebrations!

Prof. Ashby awarded the degree of Doctor Honoris Causa by the Polytechnic University in Madrid.

Paloma Fernández Sánchez, as FEMS President, was invited to the solemn academic act which took place on the 9th May 2019. The Laudatio was pronounced by Prof José Ygnacio Pastor, who emphasized the contributions of Prof. Ashby not only in materials science but also to teaching materials science. During the speech he underlined some of the reasons that make Mike Ashby worthy of this recognition. In Professor Pastor’s own words referred to Prof. Ashby’s “unique scientific contributions, his ability to renew teaching methods, and the opening of the doors of Materials Science and Engineering to a new field of knowledge, the Selection of Materials, from an unpublished perspective.”

After the Laudatio, Professor Ashby pronounced his acceptance speech. He began by recalling his early years,

and how he attended schools in Sydney, Auckland, Manchester, Belfast and of course Cambridge, because his father, Scientific Advisor during M. Thatcher’s government, moved frequently. Then he focused on materials engineering students, with a special mention to the time in GRANTA and the evolution of materials teaching.



Paloma Fernández Sánchez (left), and Prof José Ygnacio Pastor (right).

International Materials Education Symposium

IMES-19 was held in Clare College, University of Cambridge, April 11-12, 2019



The International Materials Education Symposium is now, after eleven editions, firmly established and worthy to be included in the agenda of any person interested in university level materials education. It constitutes an excellent opportunity to discuss ideas and to share new tools and experiences. The different experiences presented cover all aspects of materials teaching: engineering, design and science.

In the 2019 edition more than 150 delegates attended the symposium. The first session was dedicated to Innovation and Teaching. It was chaired by Kiara Bruggeman (Australian National University) and Hugh Shercliff (University of Cambridge). The session included a very active poster session preceded by a teaser poster session where the contributors had the opportunity to briefly present their work (in one minute) and invite the delegates to visit their posters. The title for the second session was Biobased and Sustainable related Education, chaired by Bill Clyne (University of Cambridge) and Alessandra Hool (ESM Foundation). The second day of the symposium was also divided into two sessions: Entrepreneurship and Industry, chaired by Jessica Gwynne (University of Cambridge) and Marc Fry (Granta Education Division); and, after the second poster session, Additive Manufacturing chaired by Paloma Fernández Sánchez (University Complutense and FEMS Pdt) and Noel Rutter (Monash University).

The Presenters Dinner on Wednesday 10th at Clare College was a nice opportunity to talk and exchange opinions and

experiences, but also to relax and share a good time with all the presenters. The Conference Dinner with all the delegates was celebrated at Corpus Christi College.

During this edition Peter Goodhew was awarded for his contributions to materials teaching. The Ceremony award was chaired by Bill Clyne (Univ. Cambridge & FEMS Past Pdt.) and Paloma Fernández Sánchez (current FEMS Pdt.). Paloma Fernández Sánchez expresses her gratitude to Mike Ashby and Mark Fry and to all the GRANTA team for the great experience during the days of the symposium and for giving her the opportunity to be part of the Academic Advisory Board.



Peter Goodhew awarded for his contributions to materials teaching. On his left is Bill Clyne and on his right, Paloma Fernández Sánchez

Dates for your diary

forthcoming international FEMS conferences.

Junior EUROMAT, Granada, Spain - 5-9 July 2020

17th EUROMAT, Graz, Austria - 12-16 September 2021

Junior EUROMAT, Guimarães, Portugal - 6-10 July 2022

18th EUROMAT, Dresden, Germany - 3-7 September 2023

For more information about these and many other FEMS events: <http://www.fems.org/events>

Members of FEMS affiliated societies can benefit from reduced registration fees for the above conferences and other FEMS recommended events. For more information contact your national Materials Society.



FEMS newsletter

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FEMS Member Societies:

Austria: Austrian Society for Metallurgy and Materials (ASMET)

Czech Republic: Czech Society for New Materials and Technologies (CSNMT)

France: Société Française de Métallurgie et de Matériaux (SF2M)

Germany: Deutsche Gesellschaft für Materialkunde (DGM)

Germany: Deutscher Verband für Materialforschung und -prüfung (DVM)

Greece: The Hellenic Metallurgical Society (HMS)

Greece: Hellenic Society for the Science and Technology of Condensed Matter (HSSTCM)

Hungary: Hungarian Society of Materials Science (MAE, Magyar Anyagtudományi Egyesület)

Italy: Associazione Italiana di Metallurgia (AIM)

Italy: Associazione Italiana Compositi & A ni (Assocompositi)

Latvia: Latvian Materials Research Society (LMRS)

Lithuania: Lithuanian Materials Research Society (LTMRS)

Netherlands: Bond voor Materialenkennis (BvM)

Norway: Norsk Metallurgisk Selskap (NMS)

Poland: Polskie Towarzystwo Materialoznawcze (PTM)

Portugal: Sociedade Portuguesa de Materiais (SPM)

Serbia: Materials research Society of Serbia (Serbia-MRS)

Slovak Republic: Society for New Materials and Technologies in Slovakia (SNMST)

Slovenia: Slovensko Društvo za Materiale (SDM)

Spain: Sociedad Española de Materiales (SOCIEMAT)

Sweden: Svenska Föreningen för Materialteknik (SFMT)

Switzerland:

Schweizerischer Verband für Materialwissenschaft und Technologie (SVMT)

Switzerland: The Foundation for Rare Metals (ESM, Entwicklungsfonds Seltene Metalle) Associate Member

United Kingdom: Institute of Materials, Minerals and Mining (IOM3)

United Kingdom: Granta Design, Associate Member

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