

## Newsletter - November 2014



### Junior Euromat 2014

Lausanne welcomed the participants of Junior EURO-MAT in July 2014. Since 1992 Junior EUROMAT, has been the congress of choice for young investigators, and takes place every two years in this beautiful Swiss city situated on Lake Geneva. More than 330 participants from more than 48 countries came together in the new Swiss Tech Conference Centre to present their research results and to network with their colleagues. Each conference day was opened by an invited plenary lecture given by the following experts :



**Michael F. Ashby**, Emeritus Professor at the Department of Engineering, University of Cambridge, a world-renowned authority on engineering materials design ;



**Michel Rappaz**, full Professor and head of the Computational Materials Laboratory at Ecole Polytechnique Fédérale de Lausanne (EPFL) and was recipient of the FEMS European Materials Medal in 2013 ;



**Thomas Lippert**, head of the Materials group at the Department of General Energy Research, Paul Scherrer Institute (PSI), Switzerland, Professor in the Department of Chemistry and Applied Biosciences at ETH Zurich and President of E-MRS ;



**Jacques Komornicki**, Innovation Manager at the European Chemical Industry Council (CEFIC) and partner in the European Project MatVal (FEMS is also a partner in this project) focused on various materials topics covering the whole value chain.

About 15 different sessions covered all materials from fundamental aspects, processing and engineering of materials to materials properties and their characterisation. On Wednesday July 23, the participants voted for the best two presentations out of five for the FEMS Lecturer Awards. The highly interesting presentations were given by:

H. Proudhon, Centre des Matériaux Mines Paris Tech, France - "Deformation and cracking of structural materials: from synchrotron X-ray investigations to computational mechanics"

- L. Malfatti, University of Sassari, Italy - “Getting order into matter: a top-down and bottom-up approach towards the processing of hierarchical porous thin films”;
- C. Greiner, Karlsruhe Institute for Technology (KIT), Germany - “Materials Tribology: An emerging field in materials science”;
- F. De Geuser, CNRS, SIMAP, Grenoble, France - “Precipitation kinetics in multicomponent structural hardening alloys: how to get the full picture?”
- R. Oliver, University of Cambridge, UK - “Nitrides at the Nanoscale”.

C. Greiner and H. Proudhon were selected to become FEMS lecturers for 2015 - 2016 and to present their research at the biennial EUROMAT conference, to be held in September 2015 in Warsaw.

In addition to the many discussions during the conference at the various poster presentations the participants had the opportunity to continue networking at

the welcome event and the barbeque evening. We are now looking forward to organise the next Junior EURO-MAT in 2016 with continued support from DGM. FEMS wishes to thank especially Céline Babic and her team, who organised JE2014 in an excellent way.



*Delegates in discussion during the poster session at Junior EUROMAT 2014*

## Executive Committee Meeting

The Executive Meeting of FEMS was held on July 24 at the Swiss Convention Centre in Lausanne. M. Hofmann as FEMS President, welcomed the FEMS Executive Committee (EC) officers (Ehrenfried Zschech, Immediate Past President, Brett Suddell, Vice President, Ludo Froyen, Honorary Treasurer, Hugh Dunlop, Executive Secretary and the Executive Officers Livio Battezzati from Italy, Michel Bussouge, France, Jana Horniková, Czech Republic, Pawel Zieba, Poland and Paloma Fernandez-Sanchez from Spain. The President started by highlighting some of the major activities undertaken by FEMS.

Initiation of meetings aimed at the development of **closer links with the member societies** including in a first instance IOM3, DGM, SF2M, and SOCIEMAT. To link further with industry, expert groups or specific FEMS “chapters” which could be either expert groups on particular materials or regional groups were proposed however this would need a higher budget to fulfil the requirements of a professional FEMS secretary.

FEMS contributes to several major **European network technology platforms** (MatSEEC, EMIRI, Industrial technologies on critical materials in Athens) and International associations (TMS) and current / future European projects including MatVal in FP7 and MATCH, a new CSA project in HORIZON 2020. The EC was informed that MatSEEC required a letter of intent from FEMS to continue its participation and the EC agreed, provided there will be more links with industry and that actions will not just concern “pure science”. The FP7 project MatVAL ends in September 2014 with a final meeting in Bologna during the LETS EU Congress, 30 Sept. 2014.

**Metallurgical initiatives.** A workshop on precipitation provided a 4 page white paper for the EUMAT recommendations for the Horizon 2020 roadmap.

**Advanced materials training courses** were again organised by FEMS over the previous 12 months. In October 2014, the third European Advanced Training Course “Nano-scale Materials and Advanced Characterization Techniques” was held in Dresden (Germany). This form of training course, organized by the German Society of Materials Science (DGM) with support of FEMS and in collaboration with the Dresden Fraunhofer Cluster Nanoanalysis (DFCNA), contained 9 lectures given by experts from industry and science. For the first time, a practical lab training in small groups was offered. The course provided knowledge in the field of high resolution analytical techniques for characterization of nano-scale materials and structures. The participants had the opportunity to visit the analytical labs at Fraunhofer IKTS and TU Dresden. Encouraged by the success of the first FEMS-supported European Advanced Training Courses, FEMS will continue to organize such courses jointly with national materials societies. Suggestions for topics and initiatives for organizing such courses in English are welcome!



**FEMS communication** has been considerably improved with the introduction of the new “societies” newsletter; the development of the FEMS Strategic Brochure / Flyer (ongoing); the SWOT analysis of FEMS organised by Brett Suddell and the publication of the first FEMS Annual Report. The Annual Report was prepared by the FEMS management Committee together with contributions from the member societies who provided information for the period 2013-2014. This is the first time in the history of FEMS, since 1987 that an extensive activity report has been prepared.



Another important topic at the EC Meeting was the preparation for **EUROMAT 2015** Warsaw (EM15) where a status report was given by Dariusz Kata (PTM), on

behalf of the EM15 management committee. Prof. Kata indicated the members nominated to the EM15 MC; described the flyer that was distributed during JEM14 in Lausanne, gave the details of the WUT conference venue, the organisation for the plenary sessions, the exhibition and many more topics. (Webpage: [www.euromat2015.fems.org](http://www.euromat2015.fems.org))



At the EC meeting the candidates applying for the organization of **EUROMAT 2017** presented their projects. This is the first time FEMS organized a rigorous call for tender with defined guidelines. 4 projects were received from member societies. The candidate venues presented were Berlin (DGM), Thessaloniki (HMS & HSSTCM), Lille (SF2M) and Budapest (MAE). HMS & HSSTCM were elected with an absolute majority for their high class and professional proposal to organize EUROMAT 2017 in Thessaloniki, Greece. FEMS thanks those societies who all submitted high quality tenders.

## General Assembly and President's Day

### Lausanne 25 July 2014

The General Assembly and the President's Day were attended by the Presidents of the FEMS Member Societies or their Representatives.

M. Hofmann as President and L. Froyen as Honorary Treasurer gave their annual reports (not mentioned here again but all information can be taken from the Annual Report 2013/14 (see news at <http://www.fems.org>). The General Assembly gave its unanimous approval to the annual report and financial report 2013 and the proposed budget for 2015 as well.

The Hungarian Society of Materials Science (MAE, Magyar Anyagtudományi Egyesület) was elected to be a new FEMS member society, and was presented to the FEMS GA by the President Prof George Kaptay. The MAE was founded in 2000 and has about 75 fee paying members and about 45 young researchers / PhD students benefitting with free membership. Every 2 years the MAE organises the Hungarian Materials Science Congress. One of the MAE board members, Csaba Balazsi, is a candidate to be elected as a new FEMS EC officer (see below).

The General Assembly also elected four new FEMS Executive Committee Officers for the term 2015 – 2016 :

- Eric Le Bourhis (proposed by SF2M)
- Bernie Rickinson (proposed by IOM3)
- Albano Cavaleiro (proposed by SPM)
- Csaba Balazsi (proposed by MAE)

Hugh Dunlop was unanimously elected for a second term of office as Executive Secretary for the period July 2014 – June 2018. He informed the GA that he would be leaving Constellium early 2015 and would thus be able to dedicate significantly more time to this role. Members of the GA expressed appreciation of his efforts as Secretary of FEMS for the period 2010 – 2014 and underlined the importance for long term stability for this role in the FEMS management team.

The Vice- President, Brett Suddell, presented the results of the SWOT analyses of FEMS (strengths, weakness, opportunities, threats,) which he initiated on 2 levels: firstly within the FEMS EC during the EC meeting in Milano, Jan. 2014 and then following the invitation to the FEMS member societies to provide their SWOT analysis of FEMS. 7 member societies replied to this invitation. His presentation included all comments made. These wide ranging observations are too numerous to report here but they will be valuable for FEMS in its action of building the FEMS strategic plan and for prioritising

the road-map. Certain aspects will also be employed for FEMS communication. The GA made some specific comments after the presentation. These included: the idea of creating sub-groups by geographic region or for specific groups of materials; that FEMS activities be further promoted on the national member society websites; and that FEMS has greatly aided member societies in developing links with European partners.

For the afternoon two speakers were invited to give presentations at the President's Day:

- Dr Jacques Komornicki (CEFIC): "MatVal: Transfer of materials knowledge towards industrial innovation"
- Dr Fabrice Stassin (EMIRI): "Establishing Industrial Leadership of EU in Advanced Materials for low-carbon energy & energy efficient technologies."

These presentations can be found on the webpage of FEMS. They clearly showed the importance for researchers and scientists to be more informed about the whole value chain from material to components and finally to innovations (products) in the various industrial sectors. MatVal is a first step towards the exchange between FEMS and industrial platforms, such exchange will continue as upcoming European projects will demand more collaboration with companies and more research and development including focus towards higher technical readiness levels (TRL's).



### FEMS Executive Committee with some society presidents.

From left to right: Michel Bousuge (SF2M), Céline Babic (Inventum), Brett Suddell (IOM3), Jana Hornikova (CSNMT), Hugh Dunlop (FEMS Secretary), Anna Zervaki (Pdt HMS), Beate Tölle-Kortmann (DGM), Margarethe Hofmann (Pdt FEMS), Pavel Sandera (CSNMT), Livio Battezzati (AIM), Pawel Zieba (PTM), Dariusz Kata (PTM), Ehrenfried Zschech (FEMS past pdt), Jean-Marc Chaix (pdt SF2M), Paloma Fernandez-Sanchez (pdt SOCIEMAT), Ludo Froyen (FEMS treasurer), George Vekinis (pdt HSSTCM).

#### FEMS newsletter

Editorial Committee: Hugh Dunlop (Chairman), Margarethe Hofmann-Antenbrink, Jana Hornikova, Brett Suddell, Ehrenfried Zschech

Production: Gilles Wenger, Pi-Com, Switzerland

Please send comments and contributions to [secretary@fems.org](mailto:secretary@fems.org)

#### FEMS Member Societies:

**Austria:** Austrian Society for Metallurgy and Materials (ASMET)

**Belgium:** Benelux Métallurgie (BM)

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

**Czech Republic:** Metal Science Society of the Czech Republic (MSS)

**Estonia:** Estonian Material Science Society (EMSS)

**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 Anyagtudomani Egyesület)

**Italy:** Associazione Italiana di Metallurgia (AIM)

**Italy:** Associazione Italiana d'Ingegneria dei Materiali (AIMAT)

**Italy:** Associazione Italiana Compositi & A ni (Assocompositi)

**Latvia:** Latvian Materials Research Society (LMRS)

**Lithuania:** Lithuanian Materials Research Society (LTMR)

**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 (SNMTS)

**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)

**Ukraine:** The Ukrainian Materials Research Society (U-MRS)

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

**Subscribe now to get the FEMS newsletter and to stay updated with what's new with FEMS !**

<http://www.fems.org/index.php/contactform.html>