

PROGRAMME

FEMS JUNIOR EUROMAT CONFERENCE 2018

The Main Event for Young Materials Scientists

July 8–12, 2018

BUDAPEST, HUNGARY

Organised under the auspices
of the Hungarian Society of Materials Science
junior-euromat2018.fems.eu



AKCongress

Akadémiai Kiadó / AKCongress
P.O.Box 245, H-1519 Budapest, Hungary
euromat@akcongress.com

Table of Contents

■ Welcome	4
■ Chairs & Advisory Board	6
■ Committees	8
■ Plenary speakers	11
■ Exhibitors, sponsors, partners	12
■ Useful information	15
■ Information for presenters	18
■ Social programmes	20
■ Publication	21
■ Cost Action Training School	22
■ Round tables	23
■ European Master Thesis Award / FEMS Communication Award	30
■ Tutorial programme	31
■ Programme overview	32
■ Floor plan	34
■ Conference programme	35
■ Poster presentation	43
■ Room overview	46
■ Notes	47

Welcome

Welcome to Fems Junior EUROMAT 2018!

Budapest, Hungary, 8–12 July, 2018

It is 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 a direct access to one of the largest community of international experts of materials science and technology. This year's edition will take place in Budapest, Hungary, 8–12 July, 2018 under the auspices of the Hungarian Society of Materials Science. The homepage of conference can be visited at <http://junior-euromat2018.fems.eu>.

Materials science and technology has been practiced in Hungary for several years. Education started in separated institutions under the code-names of metallurgy, ceramics, polymers, mechanical technology, physics and chemistry in many cities of the country (Budapest, Debrecen, Szeged, Veszprém, Miskolc, Pécs, Kecskemét, Győr, Dunaújváros, Sopron). The Hungarian Society for Materials Science (in Hungarian: Magyar Anyagtudományi Egyesület, MAE) was founded in 1993 in Dunaújváros, the capital of Hungarian metallurgy. During the last 2 decades this society has gradually transformed into a truly fresh and interdisciplinary society, uniting metallurgical and chemical engineers, chemists and physicists interested in the thousands of facets of millions of materials.

The conference is organized around 7 research topics:

- Functional materials,
- Structural materials,
- Design & processing,
- Manufacturing & recycling,
- Energy, transportation and environment,
- Life science and health,
- Modelling and characterisation.

Over 250 abstracts were received from 40 countries worldwide, and more than 250 participants will exchange their knowledge in the various sessions like Tutorials, Workshop related to Future European R&D Materials programmes. Six exhaustive Round Tables will focus on Start-Ups and Challenges, Entrepreneurship, Woman in Science, Scholarship and Grants for PhD and PostDoc Students, Raw Materials, Clean and Efficient Energy and Publishing.

The programme is specially highlighted by nine plenary lectures given by renowned scientists, experts from the MSE community, among them FEMS Executive Officers:

Dr. Fabrice Stassin, EMIRI Association, Belgium

Prof. Eric Le Bourhis, Poitiers University, France

Prof. Maria Letizia Ruello, (COST EXTREME) Università Politecnica delle Marche, Italy

Dr. Márton Herczeg, European Innovation Communities Management (EIT)



Prof. Amy J. Clarke, George S. Ansell Department of Metallurgical and Materials Engineering
Colorado School of Mines, Golden, USA

Prof. Jenő Gubicza, Eötvös Loránd University, Hungary

Prof. Aldo R. Boccaccini, University of Erlangen-Nuremberg, Germany

Prof. Ján Dusza, Institute of Materials Research, Slovak Academy of Sciences, Slovakia

Steve Hant, Thermo Fisher Scientific, UK

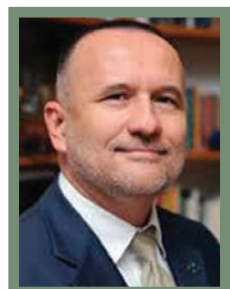
The European Master Thesis Award, or FEMS “Master Thesis Award” will be organized and intended to recognize the best Master Thesis on Materials Science and Engineering, presented in any Academic Institution from the country of any FEMS member Society.

The FEMS Lecturer Session or FEMS Communication Award for Excellence in MSE is highlighted in the programme. These Awards go to young European materials scientists (aged less than 40 at the time of nomination) who have distinguished themselves by the significance of their work and their ability to communicate effectively whether that be in Industry or Academia.

For the first time in the history of Junior EUROMAT conferences the publication of oral and poster contributions will be offered to high quality referred journals handled by Taylor&Francis and AKCongress.

Extensive social events as ruin pub tours, conference dinners with DJ and live music will be organized during the conference.

We welcome you in Budapest and wish you an exciting and unforgettable event!



George Kaptay
Conference Honorary Chair



Katalin Balácsi
Conference Co-Chair



Csaba Balácsi
Conference Chair

Chairs & Advisory Board

Chairs & Advisory Board



George Kaptay
Conference Honorary Chair
University of Miskolc and President
of Hungarian Society of Materials Science



Katalin Balázsi
Conference Co-Chair
Centre for Energy Research,
Hungarian Academy of Sciences and Secretary
of Hungarian Society of Materials Science



Csaba Balázsi
Conference Chair
Centre for Energy Research,
Hungarian Academy of Sciences
and Executive officer of FEMS

International Advisory Board

Pedro Dolabella Portella
Federal Institute for Materials Research
and Testing (BAM)
Berlin, Germany
PAST President of FEMS

Ioanna Zergioti
National Technical University of Athens, Greece
President of Hellenic Society for the Science
and Technology of Condensed Matter

Roberto Frassine
Politecnico di Milano, Italy
President of Italian Composite Materials
Industrial Association

Dragan Uskokovic
Institute of Technical Sciences of SASA,
Belgrade, Serbia
President of Materials Research Society
of Serbia

Nikolaos Michailidis
Department of Mechanical Engineering,
School of Engineering
Aristotle University of Thessaloniki, Thessaloniki
President of Hellenic Metallurgical Society

Juan J. de Damborenea
CENIM-CSIC, Madrid, Spain
President of Sociedad Espanola de Materiales

Luc Segers
President of the Benelux Métallurgie, Belgium

Pavel Šandera
Brno University of Technology, Czech Republic
Vice-President of Czech Society
for New Materials and Technologies

Vladimir Cihal
President of the Metal Science Society
of the Czech Republic, Czech Republic

Priit Kulu

President of the Estonian Materials Science Society, Estonia

Eric Le Bourhis

President of the Société Française de Métallurgie et de Matériaux, France

Jürgen Hirsch

President of the Deutsche Gesellschaft für Materialkunde, Germany

Hans Albert

Richard President of the Deutscher Verband für Materialforschung und -prüfung e.V., Germany

Ehrenfried Zschech

Institute for Ceramic Technologies and Systems IKTS
Past President of FEMS, Germany

Dagnija Loca

Rudolfs Cimdins Riga Biomaterials Innovations and Development Centre of Riga Technical University, Riga, Latvia
President of the Latvian Materials Research Society

Sten Johansson

Linköping University, Linköping, Sweden
President of the Svenska Föreningen för Materialteknik

Paula Vilarinho

University of Aveiro, Portugal
President of the Sociedade Portuguesa de Materiais

Alexander Hartmaier

DGM – Deutsche Gesellschaft für Materialkunde e.V., Germany

Virginija Jankauskaite

President of the Lithuanian Materials Research Society, Lithuania

Guido Verhoeven

President of the Bond voor Materialenkennis, The Netherlands

Gustav Heiberg

President of Norsk Metallurgisk Selskap, Norway

Pietro Kula

President of Polish Society for Materials, Poland

Karol Izdinsky

Society for New Materials and Technologies in Slovakia, Slovakia

Franc Vodopivec

President of the Slovensko Drustvo Za Materiale, Slovakia

Valery V. Skorokhod

President Ukraine Materials Research Society, Ukraine

Mike Hicks

President of Institute of Materials Minerals and Mining, United Kingdom

Carlo Mapelli

President of the Associazione Italiana di Metallurgia, Italy

Conference coordinator



AKCongress

Krisztina Tóth

AKCongress

Budapest, Hungary

euomat@akcongress.com

Committees

Technical Program Committee

Csaba Balázs

Centre for Energy Research,
Hungarian Academy of Sciences
and Executive officer of FEMS

Katalin Balázs

Centre for Energy Research,
Hungarian Academy of Sciences
and Secretary of Hungarian
Society for Material Science

Hugh Dunlop

FEMS Executive Secretary

International Scientific Programme Committee

Paloma Fernandez Sanchez

Facultad de Ciencias Físicas
Universidad Complutense de
Madrid, Spain
President Elect of FEMS

Dariusz Kata

Akademia Górniczo-Hutnicza
im. St. Staszica w Krakowie
Wydział Inżynierii Materiałowej
i Ceramiki, Kraków, Poland
Executive Officer of FEMS

Heinrich Hofmann

Powder Technology Lab, EPFL
Lausanne, Switzerland
Chair of the last Junior Euromat
2016

Albano Cavaleiro

Departamento de Engenharia
Mecânica
University of Coimbra, Portugal
Executive Officer of FEMS

Jana Horníková

Institute of Solid Mechanics,
Mechatronics and Biomechanics
Brno University of Technology,
Brno, Czech Republic
Executive Officer of FEMS

Aldo R. Boccaccini

Institute of Biomaterials
University of Erlangen,
Nuremberg, Germany
Executive Officer of FEMS

Brett Suddell

Biobased Solutions Ltd
Swansea, South Wales,
United Kingdom
President of FEMS

Eric le Bourhis

Poitiers University, France
Executive Officer of FEMS

Anna Zervaki

Laboratory of Materials
Department of Mechanical
Engineering
University of Thessaly, Greece

Margarethe Hofmann

Immediate Past President
of FEMS

Livio Battezzati

Dipartimento di Chimica
Università di Torino, Italy
Executive Officer of FEMS

Bernie Rickinson

The Institute of Materials,
Minerals and Mining,
United Kingdom
Executive Officer of FEMS

Gian Luca Garagnani

University di Ferrara, Italy
Executive Officer of FEMS

Plenary speakers

Fabrice Stassin
EMIRI Association, Belgium

**EMIRI activities
and future perspectives**



Jenő Gubicza
Eötvös Loránd University,
Hungary

**Defect structure
characterization
in advanced materials**



Eric Le Bourhis
Poitiers University, France

**Mechanical properties
of nanostructured materials**

Maria Letizia Ruello
Università Politecnica delle
Marche, Italy

**CRM-EXTREME COST
action activities
and future perspectives**



Aldo R. Boccaccini
University of Erlangen-
Nuremberg, Germany

**Bioactive materials
and biofabrication
for tissue
engineering:
progress and
challenges**



Márton Herczeg
European Institute of Innovation
and Technology

**European Institute of Innovation
and Technology (EIT):
innovation model and results**

Ján Dusza
Slovak Academy of
Sciences, Slovakia

**Nano-mechanical
testing of advanced
ceramics**



Amy J. Clarke
Colorado School of Mines,
Golden, USA

**New insights into metallic
alloy microstructural
evolution by in-situ
characterization**



Steve Hant
Thermo Fisher Scientific,
UK

**Materials
characterization
down to the atomic
scale using electron
microscopy**

Exhibitors, sponsors, partners

Bronze Sponsor

Thermo-Calc Software AB

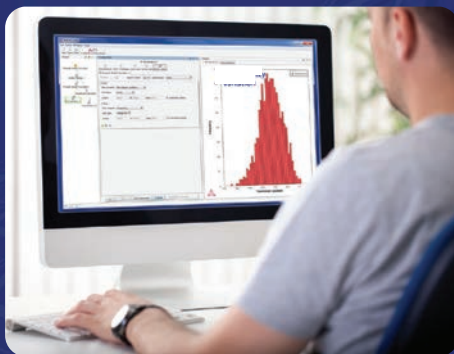
The company Thermo-Calc Software AB was founded in 1997 as an offspring from the department of Materials Science and Engineering at KTH, Stockholm, Sweden. The mission of Thermo-Calc Software is to develop and supply software, databases and services for technical calculations involving thermodynamics, diffusion and precipitation.

Thermo-Calc Software

Powerful Software for Thermodynamic and Diffusion Calculations

Software packages:

- ✓ Thermo-Calc for thermodynamics and phase equilibria in multicomponent systems
- ✓ DICTRA: Diffusion module for modelling diffusions controlled transformations
- ✓ TC-PRISMA: a precipitation module for modelling precipitation kinetics
- ✓ SDK: software development kits for linking Thermo-Calc to external applications, including the new TC-Python
- ✓ Over 30 databases for thermodynamic & mobility applications



www.thermocalc.com

Coffee break sponsor

MICRESS® – the MICRostructure Evolution Simulation Software

MICRESS® – the MICRostructure Evolution Simulation Software – allows for the simulation of microstructure formation in technical alloys during solidification, heat treatment, solid state transformations, recrystallization and grain growth. MICRESS® installations in more than 20 countries are currently used by customers from industry, governmental research and universities.

More info:

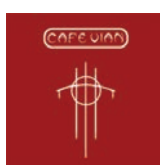
info@micress.de

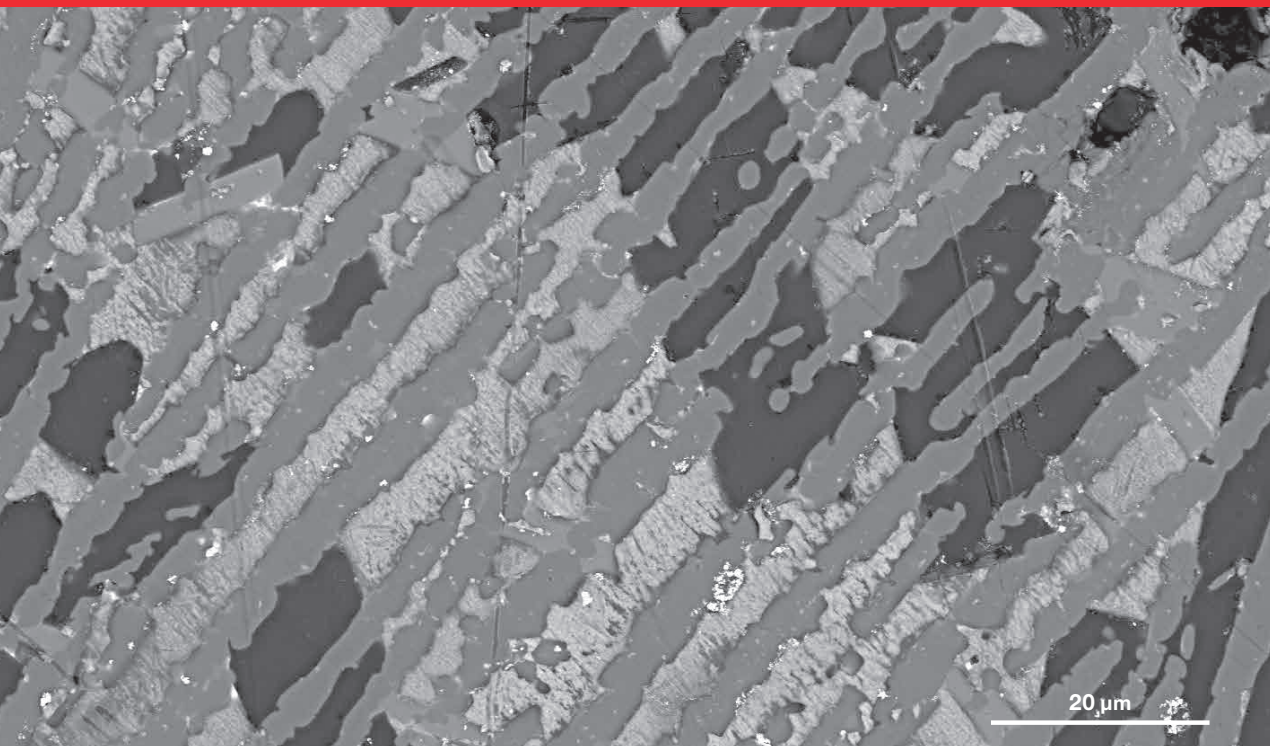
www.micress.de

www.access-technology.de



Special partners





Defects in glass due to the reduction of silica glass into silicon and the relative oxidation of metals (Fe, Cu and others) in their corresponding oxides.
Sample courtesy of Stazione Sperimentale del Vetro, Murano – Venezia.

Versatile high-resolution SEM with unique environmental capability

Building on our history of innovations in environmental scanning electron microscopy (ESEM) technology, the new Thermo Scientific™ Quattro™ ESEM combines performance in imaging and analytics with a unique environmental mode that allows samples to be studied closer to real-world conditions. The Quattro ESEM allows researchers to obtain high-resolution imaging and analytical results of any sample, including samples that are insulating, wet or at high temperature.



Find out more at thermofisher.com/EM-Sales

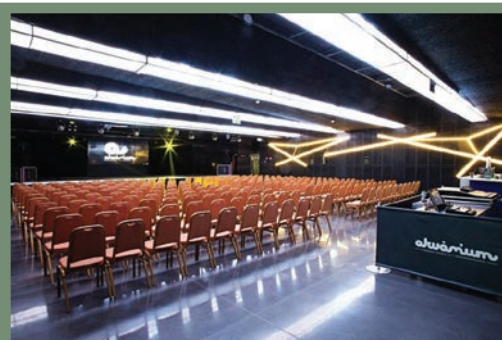
ThermoFisher
SCIENTIFIC

Useful information

Conference venue

Akvárium Klub

The renewed and expanded Akvárium Klub is characterized by multifunctional spaces, a bistro restaurant, elegant design and professional architectural solutions. Budapest's newest venue is suitable for the uncompromised hosting of conferences, workshops, partner meetings, corporate events, press conferences and other promotional events. Apart from featuring Budapest's largest open-air terrace, the club consists of four individual venues which can be utilized separately or in unison.



Address & contact

Erzsébet sqr. 12., 1051 Budapest, Hungary

Email: info@akvariumklub.hu

Website: akvariumklub.hu



Parking:

Erzsébet Parking Garage

Parking fee:

07:00-19:00 ■ 600 HUF/hour

19:00-07:00 ■ 400 HUF/hour

Daily ticket: 7000 HUF

Website: <http://www.erszebet-parkolo.hu/index.php/en/>

Access with Public Transport

Take off at Deák square from every bus, metro line and look around – Akvárium Klub is right there.

Check the public transport ticket prices on page 16!

Conference Language

The official language of the Conference is English. No translation will be provided.

Registration and Information Opening Hours

8 July / Sunday 15:00–19:00

9–10–11 July / Monday, Tuesday, Wednesday / 08:00–19:00

12 July / Thursday: 08:00–17:00

Name Badges & Wristbands

Participants, accompanying persons and exhibitors are kindly asked to wear their name badges and wristbands during all conference events. Admittance to the conference venue will be refused if the required badge and wristband cannot be presented.

Book of Abstracts

The book of abstracts is downloadable in PDF format from the website of the conference:

<http://junior-euromat2018.fems.eu>

WIFI and Internet

A free network is available in the whole building.

User name and password can be requested at the registration desk.

Network: Akvarium free

Password: akvariumklub

FEMS Junior EUROMAT 2018 Mobil App

Bring the conference to your fingertips. Download the FEMS Junior EUROMAT 2018 Conference Mobil App to your Android or iPhone, iPad device.



1. Download, install and open the application.
Apple: <https://itunes.apple.com/hu/app/smartevents/id917174612>
Android: <https://play.google.com/store/apps/details?id=com.SmartEvent>
Windows phone: <https://www.microsoft.com/hu-hu/p/smartevents/9wzdncrdlp3p>
2. Click on the button in the top left corner.
3. Choose „Add new event” in the menu.
4. Click on „Scan QR code”.
5. Scan this QR code.

Gastronomy

Eat good + drink good = feel good!

The following restaurants and bistros offer special discount for the Junior Euromat participants.

Please note that you have to wear and show your conference badge in order to use the discount!

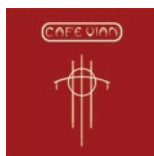


Callas Café & Restaurant

H-1062 Budapest, Andrássy út 20.

10 % discount from all drinks & food

<http://callascafe.hu/en/home/>



Café Vian Bistro Bazilika

H-1051 Budapest, Hercegprímás u. 15.

10 % discount from drinks & food except for the daily lunch menu

<https://www.cafevian.com/en>



Restro Puskin

H-1052 Budapest, Semmelweis u. 2.

10 % discount from all drinks & food

<https://www.facebook.com/restropuskin/>

About Budapest

Budapest is famous not only for the monuments reflecting its own 1,000-year-old culture, but also for the relics of others who settled here. Remains from both Roman occupation and much later, when ruled by the Turks can still be seen in the city. After the Ottoman Empire the union with Austria has a particular influence on the city's form and style.

The capital has two sides, Buda and Pest, stretching along the banks of the Danube, representing two different characters of the city. Suburban Buda and its historic castle district offer medieval streets and houses, museums, caves and Roman ruins. The dynamic Pest side boasts the largest parliament building in Europe, riverside promenades, flea markets, bookstores, antique stores and café houses. Budapest has a lot to offer. Museums and galleries, churches and synagogues, palaces and historic buildings, baths and pools are presented together with the influence of Secession in the city. There is an unmistakable feeling that something out of the ordinary is just around the corner, but what it will be is up to you to find out...



Getting Around

Main Taxi Companies

We recommend to use the main taxi companies. They are available at the airport. You can find their contact information below:

Fő Taxi	Phone: +36 1 222 2222 ■ Web: http://fotaxi.hu/?lang=en
City Taxi	Phone: +36 1 2 111 111 ■ Web: http://www.citytaxi.hu/index.php?lang=en
6 x 6 Taxi	Phone: +36 1 666 6666 ■ Web: http://new.6x6taxi.hu
Airport Shuttle	Web: https://www.minibud.hu/en

Getting around in town

Public Transport

Metro: <http://www.hungarybudapestguide.com/wp-content/uploads/Budapest-Metro-Map.pdf>

Tram ■ Trip Planner: <http://futar.bkk.hu/?map=13/47.501/19.053&layers=GSVB n>

Ticket Prices • Single ticket: 350 HUF • Single ticket bought on the spot: 450 HUF • Block of 10 tickets: 3 000 HUF • Airport shuttle bus single ticket: (Bus nr. 100E) 900 HUF • Transfer ticket: 530 HUF • Short section metro ticket for up to 3 stop: 300 HUF • Single ticket for public transport boat: 750 HUF

Short-term Rentals

Bike rental: MOL Bubi ■ Web: <https://molbubi.bkk.hu/>

Car rental: MOL Limo ■ Web: <https://www.mollimo.hu/en/>

Budapest metró- és hév-hálózata

Metro and Suburban Railway Network in Budapest



Information for presenters

Oral Presentations

Oral presentation will take place at Nagy Hall, Kis Hall, Volt Lokál and Arany Hall I.

PowerPoint presentations are accepted with 16:9 ratio. If you wish to show web pages, instead of live links to the Internet, please, use screen shots within your presentation.

Please, bring your presentation on a USB memory stick with you. Upload and check your presentation preferably in the morning but at the latest in the break before your session in the Slide Check Room (see on floor plan). Please don't use your own laptop for the presentation.

Opening hours of the Slide Check Room:

8 July, Sunday: 15:00–19:00

9–11 July, Monday – Wednesday: 8:00–19:00

12 July, Thursday: 8:00–15:00

You can also send your presentation before the event to the following e-mail address (please refer to Junior Euromat 2018 in the subject): bence.varga@hotelavs.hu

The lecture rooms will be equipped with microphone, projector, remote controller and a laptop. Technical assistance will be guaranteed during the whole conference.

Length: Plenary talks are 40 minutes long (including Q&A), while oral presentations are 5 minutes long (4 + 1 Q&A)

Poster Presentations

The poster session will take place at Glass Hall (see on floor plan).

Poster session I.

**Functional materials / Design & processing / Manufacturing & recycling /
Life science and health**

9 July, Monday: 10:00–12:00 / 17:00–19:00

10 July, Tuesday: 10:00–12:00

You can mount your poster from 08:00 on 9 July, Monday and posters are expected to remain up until the end of the Poster session. Posters must be taken down no later than 20:00 on 10 July, Tuesday.

Poster session II.

Structural materials / Energy, transportation and environment / Modelling and characterization

11 July, Wednesday: 10:00–12:00 / 13:10–16:30

12 July, Thursday: 10:00–12:00 / 13:10–15:30

You can mount your poster from 08:00 on 11 July, Wednesday and posters are expected to remain up until the end of the Poster session. Posters must be taken down no later than 17:00 on 12 July, Thursday.

Posters are presented throughout two days for each session. During the poster sessions the authors can present their posters parallelly with each other, via informal discussions. The posters will be arranged according to topic and alphabetical order.

Size of the poster: Your poster should be printed in size A0 (841 mm × 1189 mm) and be in portrait orientation. You will be given sticky tack/blue tack to affix your poster to the board.

The “**BEST POSTER**” competition will be organized during Poster session I and II.

FEMS will offer 1000 EUR for poster prizes. The first (500 EUR), second (300 EUR) and third (200 EUR) prize will be selected and awarded by FEMS Award Committee. Winners will be announced at the Award ceremony / Closing.

Posters will be viewed by the FEMS Award Committee during the Poster session indicated in the Conference Programme, on 9 July, Monday, 11:00–12:00 (Poster session I.) and on 11 July, Wednesday, 14:00–15:00 (Poster session II). If you wish to participate in the competition you are kindly asked to stand next to your poster then in order to answer any question.

Social Programmes

Welcome Dinner

At the Welcome dinner participants will have a chance to get acquainted with the venue, mingle with other conference attendees and party together with DJ. Fingerfood and alcoholic/non-alcoholic drinks will be served.

Each participant will be provided 2 drinking tickets. One drinking ticket is redeemable for 1 glass of beer 0,33 l / 1 glass of wine 0,1 l / 1 Natur aqua 0,2 l / 1 Cappy juice 0,2 l / 1 Coca cola 0,2 l.

Date: 8 July / Sunday 19:00–00:00

Venue: Aqua Bistro / Volt Lokál

Price: Included in the FEMS Junior EUROMAT 2018 registration fee



Ruin Pub Tour

Have you ever heard about the famous ruin pubs of Budapest? About our extraordinary clubs? Neverending parties? Let us show you the famous nightlife of Budapest!



During our tour we will take you to at least 4 venues:

- A very popular ruin pub – a place that everybody knows
- A not-so-popular pub – a place that everybody should know
- A place that should be a surprise
- A popular club where you can dance 'till the morning comes

Venue: Downtown Budapest / Meeting point: Entrance of Akvárium Klub

Date: 9 July / Monday 19:30–23:30

Price: 10 EUR / person (drinks are not included)

Payment in cash only on site, before the event.

Info & registration: euromatnighttour@gmail.com

Conference Dinner

Participants are invited to join the Conference dinner at Aqua Bistro. The dinner will be followed by the concert of „The Scarlet“. Dinner and alcoholic/non-alcoholic drinks will be served till 22:00.

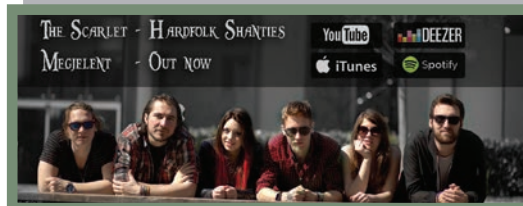
Venue: Aqua Bistro / Kis Hall

Date: 10 July / Tuesday 19:00–22:00

Price: Included in the FEMS Junior EUROMAT 2018 registration fee

The Scarlet Live at 21:00

The Scarlet is one of the pillars of the Hungarian Celtic Punk scene since 2013. The six-piece band has been performed at the famous Sziget Festival on several occasions, and on 10 July, on the stage of the Akvárium Klub, they will rock out all the luck-of-irish!



Publication

The Junior EUROMAT 2018 Conference will publish scientific papers for participants in some different scientific journals. Participation in the proceedings is optional. All manuscripts are peer-reviewed. Each accepted publication will also be available in SCOPUS and will be assigned a DOI.

The deadline for submitting your manuscript is 15 July, 2018.

Tribology – Materials, Surfaces & Interfaces

The journal focuses on tribocorrosion, lubricant additives, surface analysis, bio tribology, nanoscale tribology, surface and coatings technology, lubrication challenges in the boundary and mixed lubrication regimes, manufacturing processes and molecular tribology. This journal is published by Taylor & Francis on behalf of the Institute of Materials, Minerals and Mining.



Materials Technology

The journal provides an international medium for the communication of progress in the field of functional materials (advanced materials in which composition, structure and surface are functionalised to confer specific, applications-oriented properties). The focus is on materials for biomedical, electronic, photonic and energy applications. Contributions should address the physical, chemical, or engineering sciences that underpin the design and application of these materials.



Resolution and Discovery

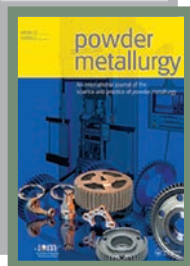
Resolution and Discovery is a Gold Open Access, peer-reviewed journal covering all kinds of microscopy in materials science and in life sciences, new developments on instrumentation and microscopy techniques. The journal provides a forum for the publication of original research papers of the following subject areas: structure and imaging of biomolecules and live cells; multidisciplinary approaches; materials for nanotechnology, metal alloys and intermetallics, ceramics, composites, minerals; scanning probe microscopy, 3D imaging and tomography.



Powder Metallurgy

Powder Metallurgy is an international journal publishing peer-reviewed original research on the science and practice of powder metallurgy and particulate technology. Coverage includes metallic particulate materials, PM tool materials, hard materials, composites, and novel powder based materials. In addition to structural applications, the journal welcomes submissions on biomaterials, energy materials, electronic and other functional materials, membranes and porous materials fabricated via a powder route.

All aspects of the process are included, from the production and handling of powders, through compaction and consolidation, to the properties, secondary processing, and applications of components.



Cost Action Training School

9 July / Monday 08:00–19:00 Arany Hall I.

The COST Action CRM-EXTREME organizes the Training School “**CRMs in extreme conditions: focus to young material scientist, challenges and perspectives**” in order to give to the next generation of material scientists a multidisciplinary overview of the different points of view from which it is possible to face the challenge of Critical Raw Materials used under extreme condition.

Programme:

Morning session

09:35–10:35 Andreas Bartl: “Critical Raw Materials: What actually is criticality?”

11:05–12:05 Pavel Novak: “The role of CRMs in tool materials”

Afternoon session

13:05–14:05 Pavel Novak: “Intermetallics as CRM-free materials for extreme conditions”

14:10–15:10 Maria Luisa Grilli: “Coatings for space applications or the recovery of Li and Co from spent Li-ion batteries”,

15:45–16:15 Zara Cherkezova-Zheleva: “Material characterization – a step forward in understanding of CRMs role in extreme materials”

16:15–18:00 **Lecture Panel discussion trainees and trainers** – chaired by two Action’s ECI **Saurav Goel** and **Vyacheslav Lapkovsky**.

The discussion will be based on the presentations of:

Saurav Goel: “The critical role of atomic simulations to understand the full picture on the role of CRM”

Vyacheslav Lapkovsky: “Processing of secondary materials which contain CRMs: Recycling of Tungsten-Containing Composite Materials”

Andrei Shishkin: “Reducing CRM content via Metal Matrix Syntactic Foam approach”.

18:00–19:00 Concluding remarks

Attendance is free for the Junior EUROMAT 2018 Conference participants, but registration is mandatory at the following email address till 8 July / Sunday:

crm-extreme@sm.univpm.it

More info:

<https://www.crm-extreme.eu/WP/2018/06/07/budapest-training-school/>

https://www.cost.eu/COST_Actions/ca/CA15102 ■ <https://www.crm-extreme.eu>



Round tables

3 × 20 min. presentations from experts in different fields followed by 60 min. discussion

Scholarship and Grants for PhD and PostDoc Students

9 July / Monday 17:00–19:00 Nagy Hall

Looking for help covering the cost of your doctorate? PhD funding is available from a range of sources, but it's important to know where to look. That's where this guide comes in. We've put together a summary of the main sources of PhD funding, with links to our own in-depth guides and other resources. So, whether you're looking for a Research Council grant, a scholarship, or even a PhD loan, we'll help you get started. Postgraduate research may be challenging. Finding funding for a PhD doesn't have to be. How to apply a succesful project application?

Chairs:



Gian Luca Garagnani
Full Professor
Ordinario di Metallurgia
Dipartimento di Ingegneria
Università degli Studi di Ferrara,
Italy

Albano Cavaleiro
Full Professor
Mechanical Engineering Department
FCTUC – University of Coimbra,
Portugal



Speakers:



Gergely Böhm
Head of Department
International Relations
Hungarian Academy of Sciences
Hungary

Zsuzsanna Kovács
Programme Officer
Study Hungary Unit Stipendium
Hungaricum Programme
Tempus Public Foundation,
Hungary



Women in Science

9 July / Monday 17:00–19:00 Volt Lokál

Why it's so important for girls to find role models in female scientists? Aim of this round table discussion is to highlight the value of supporting women in their career choices by creating a platform for dialog between experienced professionals and motivated young women scientists.

Chairs:

Paloma Fernandez Sanchez

Professor
Universidad Complutense de Madrid
Facultad de Ciencias Físicas
Depto. Física de Materiales
Madrid, Spain



Katalin Balázsi

Head of Department
Centre for Energy Research
Hungarian Academy of Sciences
Secretary of Hungarian Society for Material Science
President of Association of Hungarian Women in Science
Hungary



Speakers:

Anna Zervaki

Professor
Laboratory of Materials
Department of Mechanical Engineering
University of Thessaly, Greece



Fanni Szigeti

General Manager
Association of Hungarian Women in Science
Hungary



Erzsébet Illés

Research Fellow
Department of Physical Chemistry
and Materials Science University of Szeged,
Hungary





Anikó Gregor
Assistant Professor
Eötvös Loránd University (ELTE)
Faculty of Social Sciences
Hungary



Joe D'angelo
Executive Publisher,
Materials Engineering,
Elsevier
United Kingdom

Raw materials, clean and efficient energy

9 July / Monday 17:00–19:00 Kis Hall

This session will cover short talks and discussion related to raw materials, clean and efficient energy from research to market with a new focus on innovation-related activities, such as piloting, demonstration, test-beds, and support for public procurement and market uptake.

Chair:

Csaba Balázs
Scientific Advisor
Centre for Energy Research,
Hungarian Academy of Sciences, Hungary



Speakers:

Fabrice Stassin
Managing Director
EMIRI Association, Belgium



Maria Letizia Ruello
Professor
Department of Materials
Università Politecnica delle Marche,
Italy



Sebastian Balos
Associate Professor
Department of Production Engineering
Faculty of Technical Sciences, Serbia



Industrial needs

11 July / Wednesday 17:00–19:00 Nagy Hall

Considering alternative careers for PhD students? One of the most difficult decisions for any PhD student is whether or not to pursue a career in academia. In order to make this decision, you first need to understand what other alternative careers for PhD students are out there. How to find the good position with PhD degree in industrial company? The most common alternative careers for PhD students along with a brief description of what each career entails will be showed.

Chair:

Sten Johansson
Senior Professor
Department of Management and Engineering
Division of Engineering Materials
Linköping University, Sweden



Speakers:

Zschech Ehrenfried
Division Director
Institute for Ceramic Technologies and Systems IKTS
Dresden, Germany



Frans Vos
Founder and General Manager Materials Consult
Visiting Professor
KU Leuven / Belgium



Robert Octavian Grasin
Group Leader, RBRO/EQV-A
Robert Bosch S.R.L.
Cluj-Napoca, Romania



Publishing

11 July / Wednesday 17:00–19:00 Volt Lokál

How to prepare the good scientific paper? In this round table discussion, you will outline a complete scientific paper, choose an appropriate journal to which you'll submit the finished paper for publication, and prepare a checklist that will allow you to independently judge whether your paper is ready to submit.

Chairs:

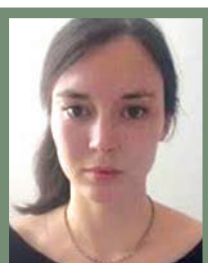


Jana Horniková
Assistant Professor
Institute of Solid Mechanics,
Mechatronics and Biomechanics
Brno University of Technology,
Czech Republic

Eric Le Bourhis
Professor
Poitiers University, France



Speakers:



Rose Worrell
Managing Editor
Taylor & Francis,
United Kingdom

András Ferenc Bálint
Head of Publishing and Content Development
Akadémiai Kiadó Zrt. / Wolters Kluwer Group
Hungary



Joe D'angelo
Executive Publisher, Materials Engineering,
Elsevier
United Kingdom



Start-Ups and Challenges, Entrepreneurship

11 July / Wednesday 17:00–19:00 Kis Hall

A startup company is an entrepreneurial venture which is typically a newly emerged, fast-growing business that aims to meet a marketplace need by developing a viable business model around an innovative product, service, process or a platform. Start-ups have high rates of failure, but the minority of successes include companies that have become large and influential. How to create your own start-up company?

Chair:

George Kaptay
Professor
University of Miskolc and
President of Hungarian Society for Material Science
Hungary



Speakers:

Norbert Babcsán
Managing Director
Innobay Hungary Ltd.
Hungary



Vilmos Simon
Associate Professor
Head, Multimedia Networks and Services Laboratory
Deputy Head, Department of Networked Systems and Services
Budapest University of Technology and Economics
Hungary



Student's success story

We are the Kefo Motostudent team, Neumann Janos University's official racing motorcycle builder team. In 2016 we achieved the third place in innovation category on the IV. International Motostudent Competition, within we built a unique Moto 3 category racing motorcycle. Our last year's innovation was a new material structure (aluminium foam and carbon fiber composite sandwich structure) by the frame and swingarm. Next year we are going to build 2 different motorcycle for the 5th International Motostudent Competition, one in petrol and one in electric category. Now we have over 20 team members, most of them are still students in various university faculties.



Workshop – Future European R&D Materials programmes

11 July / Wednesday 16:45–19:00 Arany Hall I.

Chair:

Bernard Rickinson
Chief Executive
The Institute of Materials, Minerals and Mining, London,
United Kingdom



Background

Within the next Framework research programme, it is fully expected that any materials activities will need to be strongly related to those challenges that European society currently faces. The overriding emphasis will make it easier for European citizens to see research activity as relevant to their own lives and, importantly, groups of projects will need to be aligned towards the achievement of major 'Mission' for the European community as a whole.

Previously attempts have been made to understand what materials projects might be included within such an overarching programme but FEMS feels that the views of young researchers are critical to the development of this consultation process.

Workshop session

A short workshop is planned for Wednesday, 11 July. We require the help of up to 20 Junior Euromat delegates who can support this development, preferably from different countries and with a range of different materials interests. The workshop will encourage your own views on materials topics for:

- Health, demographic change and well being
- And transformation to a sustainable society.

For the workshop please register at the Registration desk upon arrival!

European Master Thesis Award

10 July / Tuesday 15:00–16:30 Nagy Hall

The European Master Thesis Award, or FEMS “Master Thesis Award” will be organized and intended to recognize the best Master Thesis on Materials Science and Engineering, presented in any Academic Institution from the country of any FEMS member Society.

The following nominations have been received from National Societies:

- **Manuel Alonso** (France): Synthesis and characterization of complex semiconducting oxide nanostructures
- **Beatriz J. Coelho** (Portugal): A digital microfluidics platform for loop-mediated isothermal amplification of DNA
- **Konstantinos Fountas** (Greece): Experimental determination of the adhesion of hard CAPVD coatings
- **Athanasios Skandalis** (Greece): PLMA-b-POEGMA amphiphilic block copolymers: Synthesis, characterization and properties in aqueous solutions
- **Flore Villaret** (France): 2D grain growth modeling in ODS steel with different full field approaches

During the award session, all the candidates will defend their works in a 10 minutes oral presentation. Responsibility for the selection of the recipient rests with the Award Selection Committee. The winner will be presented at the Award Ceremony/Closing on 12 July, Thursday.

FEMS Communication Award for Excellence in MSE for 2019

10 July / Tuesday 16:30–19:00 Nagy Hall

The FEMS Lecturer Session or FEMS Communication Award for Excellence in MSE go to young European materials scientists (aged less than 40 at the time of nomination) who have distinguished themselves by the significance of their work and their ability to communicate effectively whether that be in Industry or Academia.

The following nominations have been received:

- **Justin Dirrenberger** (France): Cellular architected materials obtained via additive manufacturing
- **Thomas Dugué** (France): Toward the modeling of the surface treatment of composite components for satellites: the case study of the metallization of waveguides

During the award session, all the candidates will defend their works in a 15 minutes oral presentation. This will be followed by a short Q&A session of questions posed by members of the judging panel. The winner will be presented at the Award ceremony/Closing on 12 July, Thursday.

Tutorial programme

Nano-Calphad: thermodynamics of nano-materials by prof. dr. George Kaptay

10 July / Tuesday 15:00–17:30 Arany Hall I.

The Calphad method is a well-established way to collect, assess and present thermodynamic information on materials systems, including their phase diagrams. The original Calphad method does not include any surface term, as it is negligible for macroscopic phases. As nanotechnology is being constantly developed, it is an urgent need to extend the Calphad method to nano-materials. This extended method can be called “nano-Calphad”. A surprisingly large number of details have been revealed in which nano-Calphad is different from the Calphad method. The present tutorial is a short collection of our results from the last decade on the development of the nano-Calphad method.

For the tutorial please register at the Registration desk upon arrival!

Programme Overview

FEMS Junior EUROMAT 2018

8–12 July, 2018 ■ Akvárium Klub – Budapest, Hungary

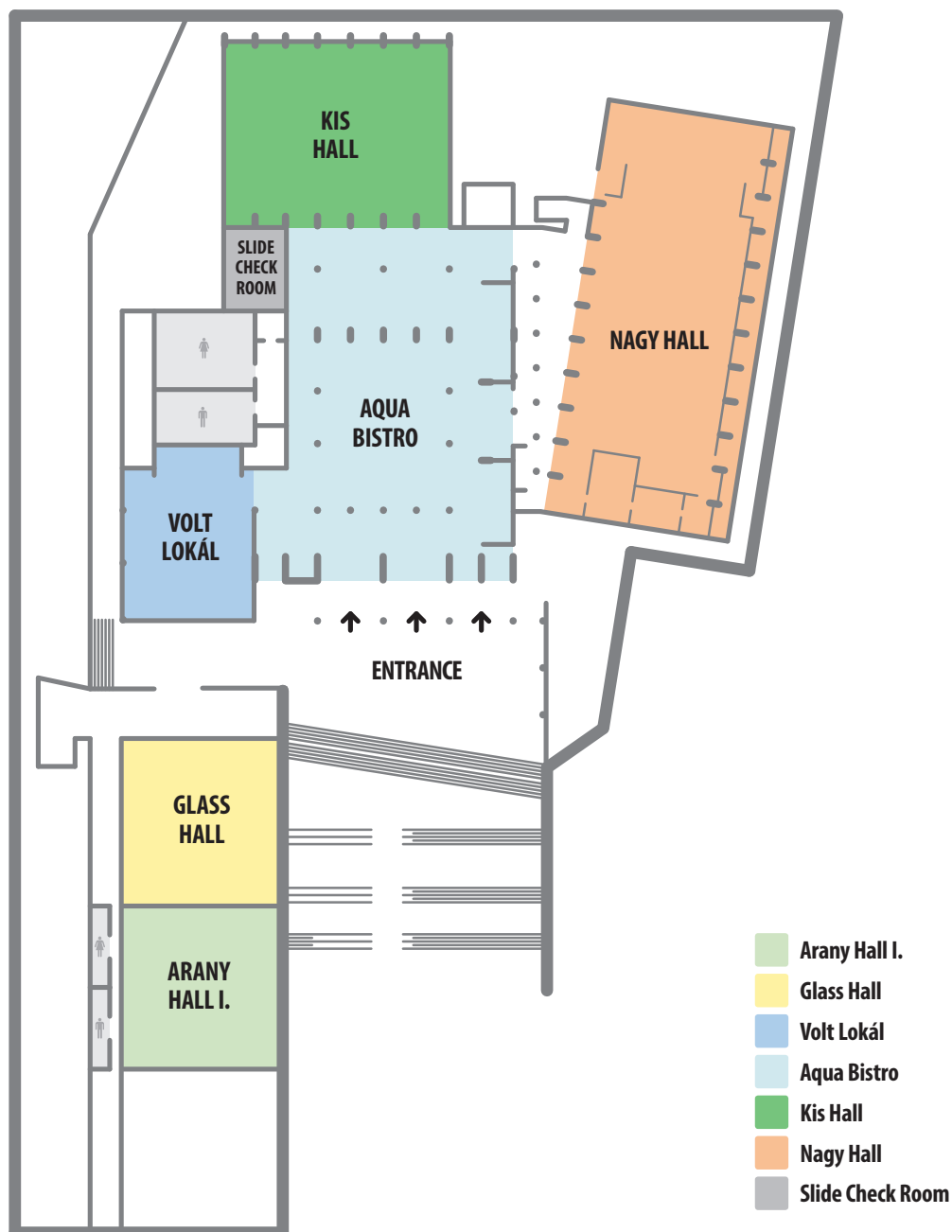
	8 JULY / SUNDAY		9 JULY / MONDAY		10 JULY / TUESDAY	
08:00–08:30			Registration		Registration	
08:30–08:50			Opening ceremony			
08:50–09:30			Plenary talk I.		Plenary talk IV.	
09:30–10:00			Coffee break		Coffee break	
10:00–10:30						
10:30–11:00			Short oral I.	Poster I.	Short oral IV.	Poster I.
11:00–11:30						
11:30–12:00						EC meeting 9:00–12:00
12:00–13:10			Lunch break		Lunch break	
13:10–13:50			Plenary talk II.		Plenary talk V.	
13:50–14:30			Plenary talk III.		Plenary talk VI.	
14:30–15:00			Coffee break		Coffee break	
15:00–15:30			Short oral II.		European Master Thesis Award	
15:30–16:00						
16:00–16:30			Short oral III.			Tutorial programs
16:30–17:00						
17:00–17:30			Round tables/ Scholarship and grants for PhD and PostDoc students	Round tables/ Women in science	Round tables/ Raw materials, clean and efficient energy	Poster I.
17:30–18:00						
18:00–18:30					FEMS Communication Award for Excellence in MSE for 2019	
18:30–19:00						
19:00–19:30						
19:30–20:00	Welcome dinner				Conference dinner	
20:00–21:00			Ruin pub tour 19:30–23:30 (optional) Meeting point: Entrance of Akvárium			
21:00–22:00	DJ 21:00 <				The Scarlet Live	

Arany Hall I.	Kis Hall	Volt Lokál
Glass Hall	Nagy Hall	Aqua Bistro
		Slide Check Room

	11 JULY WEDNESDAY	12 JULY THURSDAY	
	Registration	Registration	08:00–08:30
			08:30–08:50
	Plenary talk VII.	Plenary talk IX.	08:50–09:30
	Coffee break	Coffee break	09:30–10:00
	Short oral V.	Short oral IX.	10:00–10:30
	Short oral VI.	Poster II.	10:30–11:00
			11:00–11:30
			11:30–12:00
	Lunch break	Lunch break	12:00–13:10
	Plenary talk VIII.		13:10–13:50
	Short oral VII. 13:50–14:50	Poster II.	13:50–14:30
	Short oral VIII. 14:50–16:30		14:30–15:00
			15:00–15:30
	Coffee break	Coffee break	15:30–16:00
		Award ceremony/ Closing	16:00–16:30
			16:30–17:00
	Round tables/ Industrial needs		17:00–17:30
	Round tables/ Publishing		17:30–18:00
	Round tables/ Start-ups and challenges, entrepreneurships		18:00–18:30
	Workshop / Future European R&D materials programmes 16:45–19:00		18:30–19:00
			19:00–19:30
			19:30–20:00
			20:00–21:00
			21:00–22:00

Floor Plan

AKVÁRIUM KLUB



Conference Programme

SUNDAY, 8 JULY

13:00–19:00	Aqua Bistro	Registration
19:00–00:00	Aqua Bistro / Volt Lokál	Welcome dinner & party

MONDAY, 9 JULY

08:00–08:30	Aqua Bistro	Registration
08:30–08:50	Nagy Hall	Opening ceremony
08:50–09:30		Plenary talk I. / Amy J. Clarke (USA): New insights into metallic alloy microstructural evolution by in-situ characterization / Session chair: George Kaptay
09:30–10:00	Aqua Bistro	Coffee break
10:00–12:00	Nagy Hall	Short oral I. / Structural materials / Session chair: Katalin Balázs
		Olivier Andreau (France): Microstructure and texture control of 316L stainless steel parts
		Annalisa Fortini (Italy): On the role of alloying element interactions in the modification level assessment of foundry aluminium alloys via thermal analysis approach
		Apostolos Arvanitidis (Greece): In-situ thermal cycling and fatigue of high temperature shape memory alloys
		Otman Bazta (Spain): Structural, morphological and optical properties of yttrium modified ZnO thin films
		Haroun Rachid Ben Zine (Hungary): Investigation of silicon carbide dispersion strengthened austenitic steels
		Thibaut De Terris (France): Influence of SLM process parameters and heat treatments on the microstructure of inconel 625 superalloy
		Evangelia Delli (United Kingdom): Epitaxial growth of GaSb based devices onto Silicon wafers
		Friederike Emeis (Germany): Grain boundary engineering parameters for ultrafine grained microstructures: Proof of principles by a systematic composition variation in the Cu-Ni system
		Michaela Fousova (Czech Republic): Aspects of selective laser melting technology considered in preparation of trabecular structures
		Nafisul Haque (United Kingdom): The development of plate and lath morphology in Ni ₅ Ge ₃
		Robert J. Howell (United Kingdom): A method for the production of titanium-tantalum alloys via the electrolytic reduction of their respective oxides using the Metalysis-FFC Process
		Jan Urbánek (Czech Republic): Adhesion of refractory materials
		Anna Knaislová (Czech Republic): Preparation of TiAl ₁₅ Si ₁₅ intermetallic alloy by mechanical alloying and spark plasma sintering
		Daria A. Komkova (Russia): Structure and texture of magnesium plates and foils obtained by low-temperature severe plastic deformation
		Jonas F. Kutschmann (Germany): Impact of microstructure and geometric length scales on miniaturized tensile tests of advanced steels

MONDAY, 9 JULY		
10:00–12:00	Nagy Hall	Smain Mebrek (Algeria): Contribution of the comprehension of nanostructured (Fe ₆₅ Co ₃₅) _{100-x} Cr _x (x=0,10) some structural and magnetic properties
		Mikael P. Mille (Switzerland): Anisotropic influence of hydrides on fatigue properties of zirconium based nuclear fuel claddings
		Awais Qadir (Hungary): The effect of oxidized nanosized silicon nitride powder particles on the structural and mechanical properties of Si ₃ N ₄ /CNTs composite by hot isostatic pressing
		Stephen Edward Repper (United Kingdom): The development of titanium alloy powders produced via the metalysis process
		Abdelaziz Sabbar (Morocco): Structural and inhibitor characteristic of Bi ₂ O ₃ -P ₂ O ₅ -Nb ₂ O ₅ phosphates glasses
		Mohamed Sadek (Sweden): 3-point bending fatigue testing of automotive bar steel grades at 20 kHz
		Baran Sarac (Austria): Remarkable plasticity in iron-based metallic glass via finely-dispersed nanocrystals
		Malik Shukeir (France): Simulation of interactions between screw dislocations and radiation-induced defects in alpha-Iron using dislocation dynamics
		Andrea Školáková (Czech Republic): Formation of phases in Ti-20 wt. % Al mixture during reactive sintering
10:00–12:00	Glass Hall	Poster I.*
12:00–13:10		Lunch break
13:10–13:50	Nagy Hall	Plenary talk II. / Jan Duszka (Slovakia): Nano-mechanical testing of advanced ceramics / Session chair: George Kaptay
13:50–14:30	Nagy Hall	Plenary talk III. / Fabrice Stassin (Belgium): EMIRI activities and future perspectives / Session chair: George Kaptay
14:30–15:00	Aqua Bistro	Coffee break
15:00–16:00	Nagy Hall	Short oral II. / Modelling and characterisation / Session chair: Csaba Balázs
		Viktor Kripak (Germany): Influence of segregation, primary precipitation and process chain on grain size stability in case hardening steels
		Luís C. Martins (Portugal): Electrical conductive thermoplastic compounds for electromagnetic shielding applications
		Máté Sepsi (Hungary): Advanced non-destructive methods for residual stress and anisotropy determination by centreless X ray diffractometers
		Emmanouil Stavroulakis (United Kingdom): Functionally graded components for nuclear applications
		Dheeraj Varanasi (Hungary): Effect of chromium content of steel on grain boundary penetration of liquid copper
		Ábris Dávid Virág (Hungary): Modelling of the yarn pull-out process for the characterization of reinforcing woven fabrics
		Anna Wildeis (Germany): Consideration of the impact of residual stress on the short crack growth behavior in martensitic steels
		Mikhail I. Yagofarov (Russia): New aspects of relationship between enthalpies of fusion and solution of aromatic compounds in benzene

MONDAY, 9 JULY		
16:00–17:00	Nagy Hall	Short oral III. / Life science and health / Session chair: Csaba Balázs
		Péter Bélteki (Hungary): Aggregation behavior of silver nanoparticles in biorelevant conditions
		Tatána Fenclova (Czech Republic): Bioceramic microspheres based on Si_3N_4 – $\text{Ca}_3(\text{PO}_4)_2$
		Mónika Furkó (Hungary): Electrochemical characterization of bioceramic coatings on metallic implants
		Franco Furlani (Italy): Mimicking biological mechanical behavior by a bioactive lactose-modified chitosan
		Żaneta Górecka (Poland): Novel printed biodegradable fiducial markers – how the preparation process influence on the physical properties
		Kunn Hadinoto (Singapore): Enhancing storage stability and bioactivity of small-molecule biopharmaceuticals via nanocomplexation with polyelectrolytes
		Dae Lee (South Korea): Effect of metal ion doping on electrical conductivity and antibacterial activity of ZnO nanoparticles
		Laëtitia Mayen (France): Effect of various synthesis parameters and characterisation of a new family of calcium phosphate amorphous biomaterials
		Hugo Mora (Spain): Microstructure and mechanical characterization of thin bioactive PEO coatings fabricated on UFG CP Ti
		Katharina Schuhladen (Germany): Comparison of the dissolution behavior of silicate, borosilicate and borate bioactive glasses under static and dynamic conditions
		Maria A. C. S. Susano (Portugal): High performance magneto-fluorescent nanoparticles based on lanthanide (III) complexes for bioapplications
		Federica Vecchies (Italy): Polysaccharides – based coacervates as drug delivery system for inflammatory diseases
15:00–17:00	Glass Hall	Poster I.*
17:00–19:00	Kis Hall	Round tables – Raw materials, clean and efficient energy
17:00–19:00	Volt Lokál	Round tables – Women in science
17:00–19:00	Nagy Hall	Round tables – Scholarship and grants for PhD and PostDoc students
19:30–23:30		Ruin pub tour (optional) – Meeting point: Entrance of Akvárium Klub
08:00–19:00	Arany Hall I.	Cost Action Training School

* Poster I: Functional materials / Design & processing / Manufacturing & recycling / Life science and health

TUESDAY, 10 JULY		
08:00–08:50	Aqua Bistro	Registration
08:50–09:30	Nagy Hall	Plenary talk IV. / Márton Herczeg (Hungary): European Institute of Innovation and Technology (EIT): innovation model and results / Session chair: George Kaptay
09:30–10:00	Aqua Bistro	Coffee break
10:00–12:00	Nagy Hall	Short oral IV. / Functional materials / Session chair: Katalin Balázsi
		Wael Ali (Germany): Flame retardants (FRs) based on hybrid organic-inorganic materials
		Mohammed Bouzbib (Hungary): Al ₂ O ₃ protective thin film
		Yuchen Chen (Czech Republic): Functional and mechanical property tuning of superelastic NiTi filaments by electric pulse heat treatment
		Monika Czerny (Poland): FeNiCoAlTaB single crystals and their superelastic properties
		Media Ghasem Zadeh Khorasani (Germany): Interphase formation of cured epoxy resin near boehmite surface
		Juan F. Gomez-Perez (Hungary): Black phosphorus oxidation: Problem or opportunity
		Hassanen Jaber (Hungary): Preparation and synthesis of hydroxyapatite bio-ceramic from Hungarian bio-waste by thermal heat treatment
		Attila Zsolt Kenéz (Hungary): Investigation of joining technologies of diamond drilling segments
		Zofia Veronika Kwak (Poland): Microstructure and mechanical properties of 7XXX series aluminum alloys obtained by semi-continuous casting
		Junshan Li (Spain): NiSn Bimetallic nanoparticles as stable electrocatalysts for methanol oxidation reaction
		Nithyapriya Manivannan (Hungary): Magnetite nanoparticle synthesis and study based on stabilization techniques using different biocompatible coatings
		Jacob Obitsø Nielsen (Denmark): Fe-C coatings as an environmental friendly alternative to hard chrome
		Simona Pace (United Kingdom): Semi-insulating FeGaN grown using e-Beam PVD: structural and electrical characterization
		Bogdan Postolnyi (Portugal): Superhard multilayer CrN/MoN protective coatings as a solution for critical raw materials under extreme conditions
		Jakub Rzczkowski (Poland): Acoustic emission aided fracture toughness testing of DCB composite beams with mechanical couplings
		Reza Saadat (Germany): Improved polymers with embedded nanoparticles for lightweight construction
		Alaa Salma (Germany): Micropollutants treatment based on textiles functionalized with polymers network
		Zsolt Sályi (Hungary): Dissolution tests of a selective soldering tool material combination with enhanced lifetime in a calm SAC309 solder melt
		Tobias Schlüter (Germany): Development of melt-spinnable PES/PA blends for the substitution of PA filaments in textile applications
		Katharina Spangenberg (Germany): Optical properties of ALD deposited ZnO as a functional sensing layer based on self-assembled mesoporous membranes
		María Taeño (Spain): Growth and study of NiO wires and ordered cavities showing optical resonant modes
		Ondřej Tyc (Czech Republic): Superelastic fatigue of NiTi filaments and effect of plastic deformation

TUESDAY, 10 JULY		
10:00–12:00	Nagy Hall	Flore Villaret (France): Development of an austenitic/martensitic gradient steel by additive manufacturing Weidan Wang (Germany): Investigations on the microstructure and corrosion behavior of as-cast Mg-Si alloys
10:00–12:00	Glass Hall	Poster I.*
12:00–13:10		Lunch break
13:10–13:50	Nagy Hall	Plenary talk V. / Maria Letizia Ruello (Italy): CRM-EXTREME COST action activities and future perspectives / Session chair: George Kaptay
13:50–14:30	Nagy Hall	Plenary talk VI. / Jenő Gubicza (Hungary): Defect structure characterization in advanced materials / Session chair: George Kaptay
14:30–15:00	Aqua Bistro	Coffee break
15:00–16:30	Nagy Hall	European Master Thesis Award / Session chairs: Paloma Fernandez, Eric Le Bourhis, Brett Suddell, Albano Cavaleiro
		Manuel Alonso (Spain): Synthesis and characterization of complex semiconducting oxide nanostructures
		Beatriz J. Coelho (Portugal): A digital microfluidics platform for loop-mediated isothermal amplification of DNA
		Konstantinos Fountas (Greece): Experimental determination of the adhesion of hard CAPVD coatings
		Athanasios Skandalis (Greece): PLMA-b-POEGMA amphiphilic block copolymers: synthesis, characterization and properties in aqueous solutions
		Flore Villaret (France): 2D grain growth modeling in ODS steel with different full field approaches
16.30–20:00	Nagy Hall	FEMS Communication Award for Excellence in MSE for 2019 / Session chairs: Paloma Fernandez, Eric Le Bourhis, Brett Suddell, Albano Cavaleiro
		Justin Dirrenberger (France): Cellular architected materials obtained via additive manufacturing
		Thomas Duguet (France): Toward the modeling of the surface treatment of composite components for satellites: the case study of the metallization of waveguides
15:00–17:30	Arany Hall I.	Tutorial program
19:00–22:00	Aqua Bistro / Kis Hall	Conference dinner with “The Scarlet”

* Poster I: Functional materials / Design & processing / Manufacturing & recycling / Life science and health

WEDNESDAY, 11 JULY		
08:00–08:50	Aqua Bistro	Registration
08:50–09:30	Nagy Hall	Plenary talk VII. / Steve Hant (United Kingdom): Materials characterization down to the atomic scale using electron microscopy / Session chair: George Kaptay
09:30–10:00	Aqua Bistro	Coffee break
10:00–10:30	Nagy Hall	Short oral V. / Structural materials / Session chair: Csaba Balázsi
		Arjun Kumar Talgotra (Hungary): PLC effect in austenitic TWIP steels
		Robert P. Thompson (United Kingdom): Softening of complex crystals by elastic heterogeneity
		Matthias Weber (Germany): High temperature oxidation behaviour of Mo-Si-B-Ti alloys in dry and wet environments
		Kang Yang (China): Natural silk fibre as a novel reinforcement for strong and tough epoxy composites
		Malgorzata Zasadzińska (Poland): The research on ductile resistance of deformed copper in various temperatures and various velocity of deformation
10:30–12:00	Nagy Hall	Short oral VI. / Modelling and characterisation / Session chair: Csaba Balázsi
		Kai Bläser (Germany): Oxidation behaviour of roughing mill work rolls and effect on thermomechanical fatigue
		Ahmed Kaci Boukellal (France): Equiaxed growth of Al-Cu dendrites : 3D phase-field simulations
		Xavier Boyat (France): Microstructural characterisation of an IN718 linear friction weld
		Luca Braglia (Italy): EXAFS and XANES techniques for studying the type of defects in Ti-zeolites and their role in catalysis
		Tamás Bubonyi (Hungary): Simulation of crystallographic texture evaluation during recrystallization by cellular automaton method
		Tamás Csanádi (Slovakia): Anisotropic slip activation in ZrB ₂ ceramic grains during nanoindentation
		Fabio Emanuel de Sousa Ferreira (Portugal): Correlation between substrate ion fluxes and properties of DLC films deposited by DOMS in Ar and Ar + Ne plasmas
		Claudius Dichtl (United Kingdom): Analysis of segregation effects during heat treatments and the influence on the formation of second phase particles in Titanium-834
		Beatriz Fernandez Silva (United Kingdom): Post-processing technique for macrozones definition in Ti834 alloy textures
		Alexander Garrett (United Kingdom): Characterising coherent Fe-Cu interfaces using density functional theory (DFT)
		Roman Gerzen (Germany): Investigation of deformation behaviour and fatigue damage evolution in nickel 201 using X-ray Laue diffraction and a 2D energy dispersive detector
		Reza Karimi Bakhshandi (Sweden): Damage mechanisms in machinery components of advanced high strength steels and their correlation to laboratory testing
		Efstratios Koufis (Greece): Modelling of hot cracking phenomena of a laser welded Al-Cu-Li (2198) alloy
		Izabella Kwiecien (Poland): Influence of nickel substrate microstructure on diffusion processes in Ni/Al/Ni interconnection
		Martin Lindner (Germany): The effect of work hardening on the time and temperature dependent aging behaviour of a maraging steel

WEDNESDAY, 11 JULY		
10:30–12:00	Nagy Hall	Katalin Litauszki (Hungary): Novel method for accelerated biopolymer aging
		Bruno Oliveira (Portugal): Film thickness effect on the grain growth kinetics of nanocrystalline Cu
		Gábor Péterffy (Hungary): Modelling the effect of irradiation on statistical properties of plastic deformation
10:00–12:00	Glass Hall	Poster II.*
12:00–13:10		Lunch break
13:10–13:50	Nagy Hall	Plenary talk VIII. / Aldo R. Boccaccini (Germany): Bioactive materials and biofabrication for tissue engineering: progress and challenges / Session chair: George Kaptay
13:50–14:50	Nagy Hall	Short oral VII. / Design & processing / Session chair: Katalin Balázs
		Virginia Barbieri (Italy): Use of spelt hull (husk) as natural aggregate in lightweight insulating concrete
		Róbert Boros (Hungary): Thermoplastic overmolding onto in-situ polymerization-based reinforced polyamides
		Guadalupe Cano Castillo (Germany): The recrystallization behavior of extruded Mg-Zn alloys with Rare earths addition
		Drahomír Dvorský (Czech Republic): Magnesium alloys containing RE considered as biodegradable materials
		Mehdi Mohammadi (Italy): Effects of particles sizes distribution on sintering behaviour and properties of hydroxyapatite bioceramic
		Aida Beatriz Moreira (Portugal): White cast iron reinforced with structural ceramics for wear resistance applications
		Hossein Ramezani Dana (France): Effect of printing direction on the mechanical properties of ABS compound manufactured by droplet deposition
		Ivan Shepa (Slovakia): Preparation of Zinc-based oxide ceramic nanomaterials by needle-less electrospinning
		Ricardo O. Sousa (Portugal): Study of chromium nitride precipitation in a cast super duplex stainless steel
		Daniel Suarez-Fernandez (United Kingdom): An assessment of the effect of machining and surface microstructure on fatigue performance of aerospace titanium alloy Ti-6Al-2Sn-4Zr-6Mo.
		Ioannis Theodorakos (Greece): Laser printing of silver nanoparticle inks: simulation and high speed visualization of the jet dynamics
		Amarish Kumar Shukla (India): Studies on microstructure, and mechanical properties of aluminium foam prepared by melting and casting routes
14:50–16:30	Nagy Hall	Short oral VIII. / Manufacturing & recycling / Session chair: Katalin Balázs
		Matija Bušić (Croatia): Microstructure and corrosion resistance in TIG welded joint of Hastelloy C-22 alloy
		Haijun He (Hungary): Effect of needle characteristic on fibrous PEO produced by electrospinning
		Adrienn Hlavacs (Hungary): The kinetic description of texture variation during annealing in the 3103 aluminium alloy
		Aakash Rathore (India): Effect of heat input in the fusion zone of electron beam welded commercially pure aluminum and AISI 304 stainless steel
		Abdollah Saboori (Italy): How the nozzle position affects the geometry of the melt pool in directed energy deposition process
		Jeetendra Kumar Singh (India): Effect of beam oscillation on bead on plate electron beam welded pure niobium

WEDNESDAY, 11 JULY		
14:50–16:30	Nagy Hall	Sarah A. Smythe (United Kingdom): Conform of titanium wire from particulate feedstock Péter Szalva (Hungary): The effect of vacuum degree on the porosity and mechanical properties of die cast (AlSi9Cu3(Fe)) aluminum alloy by life data analysis
13:50–16:30	Glass Hall	Poster II.*
16:30–17:00	Aqua Bistro	Coffee break
16:45–19:00	Arany Hall I.	Workshop – Future European R&D Materials programmes
17:00–18:30	Nagy Hall	Round tables / Industrial needs
17:00–18:30	Kis Hall	Round tables / Start-ups and challenges, entrepreneurship
17:00–18:30	Volt Lokál	Round Tables / Publishing

* Poster II: Structural materials / Energy, transportation and environment / Modelling and characterisation

THURSDAY, 12 JULY		
08:00–08:50	Aqua Bistro	Registration
08:50–09:30	Nagy Hall	Plenary talk IX. / Eric Le Bourhis (France): Mechanical properties of nanostructured materials / Session chair: George Kaptay
09:30–10:00	Aqua Bistro	Coffee break
10:00–12:00	Nagy Hall	Short oral IX. / Energy, transportation and environment / Session chair: Katalin Balázs
		Artem Chesalkin (Czech Republic): Thermography of hydrogen sorption-desorption processes in La-Ni based metal hydrides
		Bartosz Jurkiewicz (Poland): Influence surface quality of EN AW-1370 wires on material fatigue strength
		Sin Myung Kang (South Korea): The electrochemical properties of Na-β"-alumina originated from single crystal alumina prepared by vapor phase process
		Young-il Kwon (South Korea): A study on correlation between improved oxygen permeability and coating materials in fluorite-rich dual-phase membranes
		Soukaina Lamnini (Hungary): Effect of attritor milling and sintering temperature on the thermo-mechanical properties of YSZ/MWCNT composites
		Yang Liu (Germany): Asymmetric oxygen transport membrane prepared by phase inversion tape casting
		Golam Muktedir (Germany): Hydrocarbon energy, environment & water resource management
		András Lajos Nagy (Hungary): The effects of engine oil degradation by OME-diesel fuel blends on friction and wear
		Altantuya Ochirkhuyag (Hungary): Influence of a dopant on birnessite-MnO ₂ and electrochemical activity for oxygen reduction reaction (ORR)
		Joe Pawley (United Kingdom): The relationship between surface finish and performance for stainless steel intermediate level nuclear waste containers
		Dragana Milisavić (Bosnia and Herzegovina): Enhanced nanoporous carbons as adsorbents for mixed phenolic acids
10:00–12:00	Glass Hall	Poster II.*
12:00–13:10		Lunch break
13:10–15:30	Glass Hall	Poster II.*
15:30–16:00	Aqua Bistro	Coffee break
16:00–17:00	Nagy Hall	Award ceremony / Closing

*Poster II: Structural materials / Energy, transportation and environment / Modelling and characterisation

Poster Presentation

POSTER I. / JULY 9, MONDAY 10:00–12:00, 17:00–19:00 / JULY 10, TUESDAY 10:00–12:00

Functional materials

Péter Ádám (Hungary): Fiber drawings from viscous Al-containing systems
Adrienn Boros (Hungary): Production of inorganic polymer foams with combined foaming process (GSP)
Monika Chlewicka (Poland): Effect of structure on corrosion resistance of Mg-Zn-Ca alloy
Karima Chouchane (Algeria): Investigation of the influence of undercoat adhesion of thermal spray deposits on aluminum alloy
Mónika Furkó (Hungary): Investigation of the effect of milling conditions on the morphological and structural properties of hot-isostatic pressed h-BN/Si ₃ N ₄ ceramic composites
Josef Hlinka (Czech Republic): Influence of surface treatment on corrosion and other electrochemical properties of titanium
František Ivanič (Slovakia): Biodegradable polymeric blends based on thermoplastic starch and poly(butylene adipate-co-terephthalate)
Alexandra Kemény (Hungary): Hardness improvement and corrosion resistance examination of nitrated Ti-6Al-4V ELI biomedical material
Ying-Chieh Lee (Taiwan): The formation of Tb doped TiO ₂ thin films using thermal oxidation method
Emanuela Lorusso (Germany): Polyester fabrics modified with zwitterionic polymer brushes to reduce biofilm formation
Štefan Nagy (Slovakia): Cu-ZrB ₂ composites prepared by gas pressure infiltration
Štefan Nagy (Slovakia): Formation and analysis of interphase between carbon fibres and carbide forming elements in Mg based composites
Mattia Pierpaoli (Italy): Growth of boron-doped carbon nanowalls on quartz glass
Emily Radley (United Kingdom): Are nanoparticles the solution to stress whitening in pre-painted metal systems?
Kristýna Rysová (Czech Republic): New electro-optic glasses containing metal nanoparticles for light modulators
Dániel Ábel Simon (Hungary): The effects of processing parameters on the properties of polypropylene-based thermoplastic dynamic vulcanizates
Francesco Torre (Italy): Fabrication of graphite-reinforced Cu matrix composites
Mehvish Zahoor (Germany): Improved photo-catalytic performance of CeO ₂ -TiO ₂ nanocomposite against degradation of crystal violet dye

Design & processing

Aurel Ramon Arnoldt (Austria): Along the process chain of AlZnMg(Zr) alloys
Ioannis Bellos (United Kingdom): Banded heat affected zone (HAZ) microstructures in LMD INCONEL718 repairs
Iulia Graur (Romania): Preparation and characterization of organic-inorganic complexes modified epoxy resins
Benjamin Jones (United Kingdom): Influence of composition and processing on strain ageing in high strength pearlitic wires
Jan Klusák (Czech Republic): 3D-printed droplet-microreactor for chemical synthesis of nanoparticles
Christopher A. Martin (United Kingdom): The effect of thermomechanical processing on the microstructural evolution of nickel-based alloys
S. A. Parekh (Singapore): Electrospun silver coated polyacrylonitrile nanomembranes for water filtration applications
Konstantin Sommer (Germany): Microstructure of additive produced parts
Aleksandra Towarek (Poland): The influence of severe plastic deformation and magnesium content on the corrosion resistance of Al-Mg model alloys

POSTER I. / JULY 9, MONDAY 10:00–12:00, 17:00–19:00 / JULY 10, TUESDAY 10:00–12:00

Manufacturing & recycling

- JiUn **Lee** (South Korea): 3D collagen scaffold fabricated using a bio-printing process for tissue regeneration
- Kanokon **Nuilek** (Hungary): The effect of carbon nanosheet from natural waste materials on aluminium matrix composite properties
- Mian Wasif **Safeen** (Italy): Issues and main solutions in FSW of Al alloys and steel sheets
- Mostafa **Toushekhah** (Italy): Correlation between the laser focus and regularity of deposition in DED of AISI 316L
- Miji **Yeo** (South Korea): Aligned cell-laden alginate fibrous structure fabricated by an electrospinning process for muscle tissue regeneration

Life science and health

- Mahaa M. **Ahmed** (USA): Adsorbents for arsenic removal from drinking water
- Kristina **Čabanová** (Czech Republic): Metal based particles detected in cytological mucus samples from the hypertrophic tissue of the inferior nasal turbinates
- YoungWon **Koo** (South Korea): 3D printing of hierarchical porous/fibrous collagen structure for rapid remodeling of cell-laden scaffold using biodegradable hydrogel
- Markéta **Pišlová** (Czech Republic): Deposition of thin metal layers on chitosan films
- Marketa **Polivkova** (Czech Republic): Metal nanostructures for biological applications: Comparison of Ag and Pd biological suitability and material properties
- Julia **Tan** (United Kingdom): Photodynamic therapy of melanoma cells using ruthenium compounds
- Tamás **Zagyva** (Hungary): Characterization of electrosprayed nanohydroxyapatite coatings on Si3N4 ceramic

POSTER II. / JULY 11, WEDNESDAY 10:00–12:00, 13:50–16:30 / JULY 12, THURSDAY 10:00–12:00, 13:10–15:30

Structural materials

- Martin **Boruvka** (Czech Republic): Structure-related properties of bionanocomposites based on poly(lactic acid), cellulose nanocrystals and organic impact modifier
- Martina **Češková** (Czech Republic): Comparison of FDM manufactured cavity insert and conventional injection moulding: an influence on crystallization, morphology and thermo-mechanical properties of injection moulded parts
- Richard **Dvořák** (Czech Republic): Evaluation of high-temperature degraded concrete with content of blast furnace slag by non-destructive approach
- Martin **Fides** (Slovakia): Mechanical properties and wear damage of silicon carbide composites with carbon nanotubes
- Morihiro **Hariki** (Japan): Deformation behavior of harmonic structure designed SUS304L austenitic stainless steel at elevated temperatures
- Ryohei **Iritani** (Japan): Harmonic structure design of 0.3mass% carbon steel
- Artem **Khomich** (Russia): Atom probe tomography study of nickel-based superalloy
- Damian **Kocłęga** (Poland): Microstructure characterization of the Inconel 686 clad layer after high temperature corrosion tests in aggressive gases and ashes
- Milena **Koralnik** (Poland): The microstructure evolution of bainitic steel after low-cycle fatigue tests
- Saša **Kovačić** (Croatia): Application of surface engineering to reduce tool wear
- Stanislav **Krymskiy** (Russia): On the effect of precipitates on intergranular corrosion of severely deformed 2xxx aluminum alloy
- Ľubomíra **Kuzníková** (Czech Republic): Investigation of mechanism of glycine nitrate processes for preparation of lanthanide oxides nanocrystallites
- Motoki **Miyakoshi** (Japan): Anomalous strain hardening behavior of harmonic structure designed nickel

**POSTER II. / JULY 11, WEDNESDAY 10:00–12:00, 13:50–16:30 /
JULY 12, THURSDAY 10:00–12:00 , 13:10–15:30**

Razilia **Muftakhetdinova** (Russia): Determination of cooling rates in iron meteorites by the structure of spinodal decomposition

Jan **Palán** (Czech Republic): Continuous production of ultrafine to nanocrystalline wires of pure titanium

Dávid **Pammer** (Hungary): Mechanical test of 3D printed titanium samples with oriented inhomogenous material structure

Tatána **Radkovská** (Czech Republic): Evaluation of retained austenite in a TRIP steel using EBSD and X-ray diffraction technique

Richard **Sedlák** (Slovakia): Boron carbide/graphene platelets ceramics with improved fracture toughness, functional and tribological properties

Akito **Shimamura** (Japan): Microstructure evolution of harmonic structure designed pure titanium compacts by thermo-mechanical processing

Attila **Szlanicsik** (Hungary): Fracture toughness of ceramic hollow sphere filled metal matrix composites

Munir **Tasdemir** (Turkey): Investigation on mechanical and flammability properties of high density polyethylene/pinna nobilis polymer composites

Tamás **Temesi** (Hungary): Manufacturing metal-polymer hybrid joints using a non-conventional method

Jozef **Toman** (Czech Republic): Synthesis and properties of free-standing graphene nanosheets at atmospheric pressure conditions

Koki **Yagi** (Japan): Application of bimodal powder process to harmonic structure design of SUS316L austenitic stainless steel

Dang-Hyok **Yoon**: Fabrication and joining of the SiC fiber-reinforced SiC composites

Anastasia **Volodarskaja** (Czech Republic): Microstructure and mechanical properties of CP-Ti-1 processed by ECAP

George **Vourlias** (Greece): Morphological and structural characterization of thermally conductive HDPE/graphene nanocomposites

Eric J. **Zhao** (China): A steel-like unalloyed ductile iron

Energy, transportation and environment

Samuel A. J. **Armson** (United Kingdom): Investigation of the microstructure of autoclave-formed zirconium oxide via top-down EBSD

Jong Hoon **Joo** (South Korea): A new approach to avoid errors from electrode overpotential using an in-plane geometry in Hebb-Wagner method

Younki **Lee** (South Korea): A new approach to accelerate ionic transport of Na- β "-alumina with pre-added phase stabilizer in vapor phase method

Dhinisa **Patel** (United Kingdom): Characterisation of novel low activation high entropy alloys for high temperature and fusion plasma-facing materials applications

Hana **Rajhelová** (Czech Republic): Comprehensive characterization of the automotive brake wear debris is crucial for understanding of its environmental impact

Modelling and characterisation

Fatima Zohra **Baouche** (Algeria): Comparative study between solar thermal and photovoltaic: modeling and characterization

Máté **Czagány** (Hungary): The influence of the phosphorous content on the nano-microstructure and microhardness of electroless Ni-P coatings

Nouara **Chibane** (Algeria): Analysis of the critical conditions for the appearance of PLC instabilities in the Al-2.5%Mg alloy

Mira **Filali** (Algeria): Physico-chemical and mineralogical characterisation of marls deposits (Algiers)

Alberto **Gutiérrez** (Spain): A theoretical study on molten alkali carbonate interfaces

Liam **Hardwick** (United Kingdom): Characterisation and thermodynamic modelling of inconel-718 vacuum brazed joints with nickel-based filler metals

Viktor **Hliva** (Hungary): Detection of delamination in composite structures with DIC method

Agne **Lage** (Lithuania): Comparative analysis of real and virtual garments distance ease

Alistair **Lyle** (United Kingdom): Material characterisation of selectively laser melted haynes 282

Daniel M. **Ogris** (Austria): Grain growth controlled by grain boundary and boundary junction migration

Room Overview

NAGY HALL

Opening ceremony – 9 July / Monday, 08:30–08:50
Plenary talk I. – 9 July / Monday, 08:50–09:30
Short oral I. – 9 July / Monday, 10:00–12:00
Plenary talk II. – 9 July / Monday, 13:10–13:50
Plenary talk III. – 9 July / Monday, 13:50–14:30
Short oral II. – 9 July / Monday, 15:00–16:00
Short oral III. – 9 July / Monday, 16:00–17:00
Round tables / Scholarship and grants for PhD and PostDoc students – 9 July / Monday, 17:00–19:00
Plenary talk IV. – 10 July / Tuesday, 08:50–09:30
Short oral IV. – 10 July / Tuesday, 10:00–12:00
Plenary talk V. – 10 July / Tuesday, 13:10–13:50
Plenary talk VI. – 10 July / Tuesday, 13:50–14:30
European Master Thesis Award – 10 July / Tuesday, 15:00–16:30
FEMS Communication Award – 10 July / Tuesday, 16:30–19:00
Plenary talk VII. – 11 July / Wednesday, 08:50–09:30
Short oral V. – 11 July / Wednesday, 10:00–10:30
Short oral VI. – 11 July / Wednesday, 10:30–12:00
Plenary talk VIII. – 11 July / Wednesday, 13:10–13:50
Short oral VII. – 11 July / Wednesday, 13:50–14:50
Short oral VIII. – 11 July / Wednesday, 14:50–16:30
Round tables / Industrial needs – 11 July / Wednesday, 17:00–19:00
Plenary talk IX. – 12 July / Thursday, 08:50–09:30
Short oral IX. – 12 July / Thursday, 10:00–11:00
Award ceremony / Closing – 12 July / Thursday, 16:00–17:00

ARANY HALL I.

Cost Action Training School – 9 July / Monday, 08:00–19:00
FEMS Executive Committee meeting (private event) – 10 July / Tuesday, 09:00–12:00
Tutorial program – 10 July / Tuesday, 15:00–17:30
FEMS Executive Committee meeting (private event) – 11 July / Wednesday, 09:00–12:00
Workshop – Future European R&D Materials programmes – 11 July / Wednesday, 16:45–19:00
FEMS General Assembly meeting (private event) – 12 July / Thursday, 09:00–14:00

VOLT LOKÁL

Welcome party with DJ – 8 July / Sunday, 21:00–00:00
Round tables / Women in science – 9 July / Monday, 17:00–19:00
Round tables / Publishing – 11 July / Wednesday, 17:00–19:00

AQUA BISTRO

Registration – 8 July / Sunday 15:00–19:00
Welcome dinner – 8 July / Sunday, 19:00–21:00
Registration – 9 July / Monday, 08:00–08:30
Coffee break – 9 July Monday, 09:30–10:00
Coffee break – 9 July Monday, 14:30–15:00
Registration – 10 July / Tuesday, 08:00–08:50
Coffee break – 10 July / Tuesday, 09:30–10:00
Coffee break – 10 July / Tuesday, 14:30–15:00
Conference dinner – 10 July / Tuesday, 19:00–21:00
Registration – 11 July / Wednesday, 08:00–08:50
Coffee break – 11 July / Wednesday, 09:30–10:00
Coffee break – 11 July / Wednesday, 16:30–17:00
Registration – 12 July / Thursday, 08:00–08:50
Coffee break – 12 July / Thursday, 09:30–10:00
Coffee break – 12 July / Thursday, 15:30–16:00

GLASS HALL

Poster session I. – 9 July / Monday, 10:00–12:00
Poster session I. – 9 July / Monday, 17:00–19:00
Poster session I. – 10 July / Tuesday, 10:00–12:00
Poster session II. – 11 July / Wednesday, 10:00–12:00
Poster session II. – 11 July / Wednesday, 13:50–16:30
Poster session II. – 12 July / Thursday, 10:00–12:00
Poster session II. – 12 July / Thursday, 13:10–15:30

KIS HALL

Round tables / Raw materials, clean and efficient energy – 9 July / Monday, 17:00–19:00
The Scarlet Live – 10 July / Tuesday, 21:00–22:00
Round tables / Start-ups and challenges, entrepreneurship – 11 July / Wednesday, 17:00–19:00

Notes

