



**EURO
PM2023**

CONGRESS & EXHIBITION

TECHNICAL GUIDE



**EURO POWDER
METALLURGY**

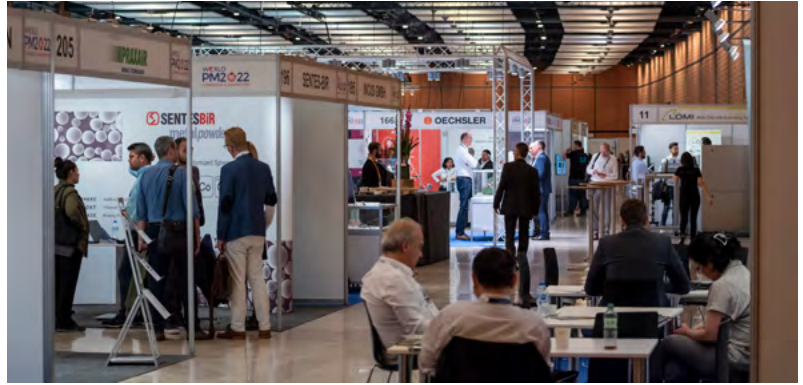
Congress & Exhibition

**1 - 4 October 2023
Lisbon, Portugal**



europm2023.com





About Euro PM2023	4
Welcome to Euro PM2023	7
Congress Chairs	8
Technical Committee	9
General Information	10
Lunch and Social Event Ticket	11
Registration Information	13
Fees	14
Event Sponsors	15
Floor Plans	17
Congress Schedule	18
EPMA Sectoral Groups	21
Congress by Strand	22
Campfire Meeting & Industry Corner	24
Opening Plenary Session	25
Keynote Paper Awards	26
Congress Proceedings	28
Technical Sessions	29
Special Interest Seminars	32
Welcome to the Euro PM2023 Exhibition	36
Exhibition Floor Plan	39
Exhibition Directory	40
Media Partners	58



Why you should attend

The Euro PM Congress & Exhibition is the foremost event for the international powder metallurgy community, and provides the focal point for Industry personnel, researchers, and suppliers to meet, network and develop their business.

The Euro PM2023 Congress programme includes over 300 technical papers presented in oral and poster sessions, including EPMA Keynote Paper Awards presentations, as well as twelve in-depth Special Interest Seminars. Details of the full programme can be found in our mobile app and our website.

Running in parallel to the technical sessions, the Euro PM2023 Exhibition is one of the largest dedicated powder metallurgy industry exhibitions in 2023 with representatives from across the world joining the international Exhibition in Lisbon.

The Euro PM2023 social programme will give delegates additional opportunities to network and will include Welcome reception, Posters reception and Congress dinner.

Congress & Exhibition Organiser

Euro PM2023 is organised by the European Powder Metallurgy Association (EPMA), in co-operation with key members of the PM community in Portugal and across Europe.

Founded in 1989, EPMA is the leading PM trade association representing the interests of the entire European PM community and promoting PM technology throughout the world.

EPMA Members will qualify for special discounts on their registration fees, and further information on membership and EPMA's services can be found at www.epma.com

For Further information on Euro PM2023 Congress & Exhibition, please contact:

European Powder Metallurgy Association



Congress:

Congress Manager: Sabine Hazoume E: sh@epma.com
Congress Assistant: Maurine Lavigne E: ml@epma.com

Sponsorship & Exhibition:

Membership & External Partnership Manager: Andy Cormack
E: ac@epma.com

Registration Secretariat :

AIM Group International - Lisbon Office : epma2023.registrations@aimgroup.eu

The EPMA reserves the right to make changes to the final programme. All programme timings, content and fees correct at the time of creation.

The most up-to-date information is always in the app, and in case of disputes, the mobile app is the authority over the printed guide.

Euro PM2023 Congress & Exhibition and all associated meetings, sessions and events are ruled according to EPMA Antitrust Guidelines. Details of which can be found here: epma.com/antitrust

EURO
PM2023
CONGRESS & EXHIBITION

Euro PM2023 Congress & Exhibition is kindly supported by
TURISMO DE PORTUGAL & Associação Turismo de Lisboa Visitors and
Convention Bureau.



visit
Portugal



THE PERFECT HEAT TREATMENT SOLUTION FOR THE PIM INDUSTRY



***Wide range of standard and customized VACUUM FURNACES
for INDUSTRY and R&D LABORATORIES.***

Our vacuum furnaces solutions:

- HIGH TEMPERATURE VACUUM SINTERING
- DEBINDING & SINTERING
- DEBINDING/PRE-SINTERING
- HIGH PRESSURE SINTER-HIP

***Vacuum thermal technologies:
MIM, CIM, HARD METAL***

Visit us at booth 99

TAV VACUUM FURNACES SPA

Via dell'Industria, 11 - 24043 Caravaggio (BG) - ITALY
ph. +39 0363 355711 - info@tav-vacuumfurnaces.com
www.tav-vacuumfurnaces.com

TAV
V A C U U M F U R N A C E S

EPMA Membership Benefits

10 Reasons to join the EPMA

- 1 Enhance your market knowledge through access to unique industry information using our range of powder metal PM statistics, presentations and papers.
- 2 Improve your product development through access to EU and EPMA Member initiated R&D programmes.
- 3 Save money by receiving substantial discounts on attending and exhibiting at the leading annual Euro PM Congress and Exhibition and our series of training courses.
- 4 Obtain unique international access to government via our lobbying of the EU on key issues such as REACH, ISO standards and health and safety legislation.
- 5 Promote your sales through free advertising via an entry in the EPMA Members Directory on one of the world's most visited PM websites.
- 6 Keep updated on PM industry news and developments through the Email News service and the EPMA Newsletter – free to EPMA Members.
- 7 Develop your high-level networking opportunities through EPMA Sectoral Groups, training seminars and the general assembly.
- 8 Keep compliant with ISO 9001:2000 and ISO/TS 16949:2002 by participating in the EPMA Europe-Wide Benchmarking programme.
- 9 Access Member only content from a range of sources via the EPMA website Members Area.
- 10 Develop the market for your products by supporting promotion of PM technology via exhibitions and web-based information.

Join EPMA at www.epma.com/membership





Mr Ralf Carlström
EPMA PRESIDENT
Höganäs AB, Sweden

Welcome to EURO PM2023

It is a pleasure to welcome you to the fascinating city of Lisbon for the Euro PM2023 Congress & Exhibition.

Lisbon has a very long history, and it is the second oldest capital of Europe (after Athens). It underwent violent times after the break down of the Roman empire and was under Muslim rule from 711. It was reconquered by the Christians in 1147.

The strategic location of Lisbon by the Atlantic Ocean has played an important role for its development. The name Lisbon could be translated as “safe harbour” or “safe haven”. The 16th century was the golden area for Lisbon as Europe’s hub for Africa, India, the Far East and later Brazil. 80% of Lisbon structures were destroyed and 15% of the city’s population lost their life due to the well-known earthquake in 1755.

Today Lisbon metropole consists in around 3 million inhabitants, and it represents an important share of Portugal’s GDP. The container harbour is one of the largest on Europe’s Atlantic coast. There is a large number of companies involved in manufacturing of automotives and components creating about 152 000 direct jobs representing about 14% of Portugal GDP. The automotive component industry generates around 5% Portugal GDP.

More than 500 small and medium enterprises are involved in development and manufacturing of molds, employing around 11 200 workers. The automotive industry in Europe is the main market for this mold business.

The export market generates 85% of value for this industry.

EURO PM2023 offers a unique opportunity to share the latest trends in powder metallurgy.

The extensive technical program provides you access to the latest results in key Powder Metallurgy areas and the exhibition showcases the latest developments from the global PM supply chain. On top of this, EURO PM2023 offers a lot of networking opportunities.

Finally, I would like to thank all involved in making this a successful congress starting from EPMA organisation to all Volunteers (Technical Committee, Sectoral Groups) and Members who have supported the production of the event.

Welcome to Lisbon!

A handwritten signature in black ink, reading "Ralf Carlström".





Prof Teresa Vieira

Retired Full Professor

Department of Mechanical Engineering,
University of Coimbra, Portugal

After finishing her studies in Metallurgical Engineering at Oporto University, Portugal, she was invited to be lecturer in Mechanical Department of Coimbra University.

In 1983 she got a PhD (Doctorat d'État) at University Paris XI, Orsay, France, with a thesis about analyse of structural transformations in high steel steels.

As senior scientist she established a research Centre on Materials Science Engineering and Surfaces (ICEMS), University of Coimbra (1991 up to 2008) and contributed to the creation of Institute Pedro Nunes (Coimbra), which role is to be an interface between university and industry. In last case, firstly she was as director (1991-96) and after leader of the Laboratory of Wear Tests and Materials (1996-2012). In 1999 she got the habilitation degree.

After 2000 she is Full Professor and the responsible for research and development in Powder Technology for Mechanical applications (structural and functional (wear, corrosion)), in particular (μ) PIM and hot embossing.

Since 2008 up to 2016 she became co-director of the Centre of Mechanical Engineering of Coimbra University.

After 2013 the main goal of her research is Additive Manufacturing.



Mr Antonio Homem

Head of Engineering

Durit – Metalurgia Portuguesa
de Tungsténio

Graduated in Mechanical Engineering at the Technical University of Lisbon in 2002. Just prior to finish, in 2001, attended an Erasmus interchange in Aeronautical Engineering at the University of Glasgow in Scotland.

Joined Durit shortly after in 2003 and in 2005 started as Head of Technical Department, assuming responsibilities for Cost Estimation, Product Industrialization and more recently for Process Improvement. In 2008 and 2009 attended a Master's in Business Administration at Porto Business School and a short course at IE Business School in Madrid.

In 2010 accumulated responsibilities for Product Development. Currently is also part of the Research and Development team and collaborates with Strategic Analysis Group.



Register on or before
1st September 2023 to benefit
from the early rate!

www.europm2023.com/register



EURO
PM2023
CONGRESS & EXHIBITION



**Prof Fátima Barreiros**

*Centre for Rapid and Sustainable Product
Development, Polytechnic of Leiria,
Portugal*

Prof Teresa Vieira

*University Carlos III de Madrid, IMDEA
Materials Institute, Spain*



The EPMA would like to express its sincere thanks to the members of the Technical Programme Committee for their support and hard work in structuring the Euro PM2023 programme and for reviewing the submitted papers.

Prof Marco Actis Grande**Dr Iñigo Agote****Dr Paula Alvaredo****Mr Alexander Angré****Dr Miren Aristizabal****Dipl Ing Claus Aumund-Kopp****Ing Naiara Azurmendi****Prof Fatima Barreiros****Prof Thierry Barrière****Dr Cristina Berges****Dr Xavier Boulnat****Dr Martin Bram****Prof Christoph Broeckmann****Prof Monica Campos****Prof Efrain Carreño-Morelli****Prof Riccardo Casati****Dr-Ing Núria Cinca****Prof Ilaria Cristofolini****Prof Dr Herbert Danning****Dr Gian Pietro DeGaudenzi****Dr Raquel De Oro Calderon****Dr Mark Dougan****Dr Thomas Ebel****Dr Cristina Fernandes****Mrs Sofia Fries****Dr José Garcia****Prof Christian Gierl-Mayer****Prof Elena Gordo****Dr Sebastian Boris Hein****Dr Robert Hellein****Dr Gemma Herranz****Dr Björn Hoschke****Dr Iñigo Iturriza****Dr Helio Jorge****Dr Anke Kaletsch****Mr Peter Kjeldsteen****Dr Christian Kukla****Dr Miguel Lagos****Mrs Caroline Larsson****Prof Walter Lengauer****Dr Inge Lindermann****Dr Stefano Lionetti****Prof Luis Llanes****Mr Marko Maetzig****Mr Magnusson Anders****Prof Diego Manfredi****Dr José Manuel Martin****Prof Cinzia Menapace****Dr Ken Mingard****Prof Alberto Molinari****Dr César Molins****Dr Siavash Momeni****Dr Steven Moseley****Dr Juan A. Naranjo****Prof Susanne Norgren****Mr Joel Oliveira Correia Vasco****Dr Nerea Ordas****Dr Beatriz Pérez Polo****Dr-Ing Frank Petzoldt****Dr Yoko Pittini-Yamada****Dr Ing Johannes Pötschke****Dr-Ing Christophe Reynaud****Prof Elisa Ruiz-Navas****Dr Shandra Sainz****Dr Jose Manuel Sanchez Moreno****Dr Georg Josef Schlick****Dr-Ing Markus Schneider****Prof Dr Ana Senos****Mr Jim Shipley****Prof José Torralba****Dr Sofia Tsipas****Dr Ernesto Urionabarrenetxea****Dr Ralph Useldinger****Mr Peter Vikner****Prof Jozef Vleugels****Mr Mathias Von Spalden****Prof Thomas Weißgärber****Dr-Ing Elsa Wellenkamp de Sequeiros****Mr Matteo Zanon**

(Politecnico di Torino, Italy)

(TECNALIA, Spain)

(Universidad Carlos III de Madrid, Spain)

(Linde AG, Sweden)

(CEIT, Spain)

(Fraunhofer IFAM, Germany)

(TECNALIA, Spain)

(Polytechnic Institute of Leiria, Portugal)

(University of Franche-Comte, France)

(Universidad de Castilla-La Mancha, Spain)

(Univ. Lyon, INSA Lyon, MATEIS UMR CNRS 5510, France)

(Forschungszentrum Jülich GmbH, Germany)

(RWTH Aachen IWM, Germany)

(Universidad Carlos III Madrid, Spain)

(University of Applied Sciences and Arts Western, Switzerland)

(Politecnico di Milano, Italy)

(Hyperion Materials and Technologies, Spain)

(Trento University, Italy)

(Technische Universität Wien, Austria)

(F.I.L.M.S. SpA – OMCD Group, Italy)

(TU Wien, Austria)

(AMES SA, Spain)

(Helmholtz-Zentrum Geesthacht, Germany)

(Palbit S.A., Portugal)

(Inst. for Materials Application in Mechanical Engineering-IWM, Germany)

(AB Sandvik Coromant R&D, Sweden)

(TU Wien, Austria)

(University Carlos III of Madrid, Spain)

(Fraunhofer IFAM, Germany)

(MIBA Sinter AT, Austria)

(Universidad Castilla La Mancha, Spain)

(ZCC Cutting Tools Europe GmbH, Germany)

(CEIT, Spain)

(CTCV-Technological Centre for Ceramics and Glass Industries, Portugal)

(IWM, RWTH Aachen University, Germany)

(Sintex a/s, Denmark)

(Montanuniversität Leoben, Austria)

(TECNALIA, Spain)

(Höganäs AB, Sweden)

(Vienna University of Technology, Austria)

(Fraunhofer IFAM Dresden, Germany)

(RINA Consulting Centro Sviluppo Materiali SpA, Italy)

(Universitat Politècnica de Catalunya – Barcelona, Spain)

(ARBURG GmbH + Co KG, Germany)

(Quintus Technologies, Sweden)

(Politecnico di Torino, Italy)

(CEIT-BRTA, Spain)

(University of Trento – DII, Italy)

(NPL – National Physical Laboratory, United Kingdom)

(Trento University, Italy)

(AMES SA, Spain)

(Maschinenfabrik Rieter AG, Switzerland)

(Hilti AG, Liechtenstein)

(DYPAM Group – UCLM, Spain)

(Sandvik / Lund University, Sweden)

(Polytechnic Institute of Leiria, Portugal)

(CEIT-BRTA, Spain)

(CEIT-BRTA, Spain)

(Petzoldt Consulting, Germany)

(Parmaco Metal Injection Molding AG, Switzerland)

(Fraunhofer IKTS, Germany)

(CETIM, France)

(University Carlos III of Madrid, Spain)

(CEIT, Spain)

(CEIT-BRTA, Spain)

(Fraunhofer IGCV, Germany)

(GKN Powder Metallurgy, Germany)

(Aveiro University, Portugal)

(Quintus Technologies AB, Sweden)

(Universidad Carlos III de Madrid. IMDEA Materials Institute, Spain)

(University Carlos III of Madrid, Spain)

(CEIT, Spain)

(CERATIZIT Luxembourg S.à r.l., Luxembourg)

(Aubert&Duval, France)

(KU Leuven, Belgium)

(Fraunhofer IKTS, Germany)

(Fraunhofer IFAM Dresden, Germany)

(Faculdade de Engenharia da Universidade do Porto, Portugal)

(Kymera International/Ecka Granules Germany, Germany)



Onsite Information

The Euro PM2023 Registration and Information Desk will be open:

Sunday 01 October – 16:00 – 19:30

Monday 02 October – 08:00 – 19:30

Tuesday 03 October – 08:00 – 19:00

Wednesday 04 October – 08:00 – 18:30

All registration documentation including tickets, congress guide and proceedings will be distributed from the registration desk onsite.

Name Badges: All participants are required to wear their badge at all times during Euro PM2023 in order to allow access to the technical sessions, exhibition and other associated events.

Badges will be scanned at various key points during the event for the purpose of access, control and security.

Congress Language

The congress will be conducted in English.

Photography

Photography is strictly forbidden in all technical sessions and special interest seminars.

Official photographs, taken by EPMA photographers will be available via www.europm2023.com post event.

Congress Proceedings

The congress proceedings are included in the registration package for all full delegates: Presenting Authors, Session Chairs, EPMA Members, and Non-members. An access will be sent to you.

If proceedings are not included in your registration type, they can be purchased onsite.

Online Presence and Referencing

EPMA has agreements with Scopus and the German National Library of Science and Technology, to enable the wider circulation of papers presented at EPMA conferences and to enhance their standing in the academic community.

The papers from Euro PM2023 will subsequently be made available to the subscribers of these products after October 2024.

The congress proceedings will be published under an ISBN number and each paper is assigned a unique DOI number by Crossref.

Proceedings are also available on www.epma.com/publications including Proceedings more than 4 years old are available to download free of charge.

Going Green



EPMA have made additional changes this year being mindful of being more and more green and the footprint Euro PM2023 leaves behind and we want to share some of these with you. Rather than providing single use plastic water bottles, we ask participants to bring their own reusable water bottles and fill them up at our many water machines. Recycling bins will be made available. We ask that you use these. For most of our events we will use washable dishes.

Away from catering, we have also taken the decision to reduce the number of pages in this Congress guide again by including the full technical programme in the mobile app only to reduce the amount of paper we are using. We will also leave some copies of the congress guide at your disposal in the congress centre. Only delegates wishing to have a hard copy should take it, others could consult it in the PDF format in the congress website.

We also tried to create when possible re-usable roller banners and most of the signage in the Congress Center will be made of recyclable cardboards.

These are small changes, but collectively over the whole event they make a big difference.

General Information on Portugal

Electricity: The electrical current in Portugal is 220 V/50 Hz. Round European-style two-pin plugs are used.

Currency: The monetary unit is the Euro (EUR). Bank notes are printed in values of €5, €10, €20, €50, €100, €200 and €500. Coins in values of 1, 2, 5, 10, 20 and 50 cents, €1 and €2. If changing currency, it is recommended to request smaller value notes of €5-€20 as it can be difficult to find establishments to take larger notes.

It is advised against taking larger notes as problems regarding counterfeiting mean they are rarely accepted.

Major credit and debit cards (some restrictions apply to American Express and Diners) are accepted in shops, restaurants and hotels, but in some they are not, be sure to check before ordering. Cash is withdrawn with your Visa, MasterCard, Maestro or Cirrus card at any ATM. Taxis may not accept card payments so it is essential to have some local currency.

Travel Health: There are no specific health risks associated with travel to Portugal.

Ensure coverage by your own health insurance and bring necessary documents on the trip. If you're a European citizen from within EU/EEA, a European Health Insurance Card (EHIC) gives you access to medically necessary, state-provided healthcare during a temporary stay in Portugal.



Tipping: If you are having a lunch or diner in a cafe or restaurant it is normal to leave a tip for the server. If you are satisfied then it is nice to leave a few Euros; around 5 percent if you are happy with the meal and services. This will be more than appreciated.

Essentially tipping in Portugal is not an obligation but if you receive exemplary service then it is nice to leave a tip to demonstrate your appreciation.

Communications: The international access code for Portugal is +351. The main emergency number is 112 (European emergency number; no area code needed, 114 for deaf or hard of hearing people).

Lunch and Social Event Tickets

Welcome Reception

The Welcome Reception (ticket holders only) is taking place on Sunday 01 October, from 17:30-19:00. Light snacks and drinks will be served while attendees mingle and network with background music. The Welcome reception is sponsored by Höganäs.

Additional tickets can be purchased onsite subject to availability.
Dress Code: Business smart/smart casual.

Höganäs 

Lunch Monday - Wednesday

Lunch (ticket holders only) will be buffet style, held in the Pavilion I at the ground floor, to allow participants maximum flexibility at lunch times, with time to visit the Euro PM2023 Exhibition and Poster Display. Additional tickets can be purchased onsite subject to availability. Post lunch coffee is served in the Exhibition Area. Lunches are sponsored by GKN.



Paybar

For participants without a lunch area ticket, or for any participants who would like refreshments/snacks outside of the allocated break times, lunch and refreshments can be purchased from the onsite pay bar near the exhibition area. The pay bar will be open the same as the Exhibition opening hours enabling participants to purchase drinks and snacks at times outside of the scheduled break times.

Refreshment Breaks

The PM2023 Exhibition area houses three coffee stations, which will provide refreshments throughout the event. These coffee stations are sponsored by Miba.



Congress Dinner

The Congress Dinner (ticket holders only) is taking place on Tuesday 03 October in the botanical garden Estufa Fria de Lisboa.



Coaches will depart from the congress center and take guests to the venue.
Additional tickets can be purchased onsite subject to availability.
Dress Code: Business smart/smart casual.

If you are unable to attend, please return your ticket to the reception desk to assist with final numbers (tickets are non refundable).

Poster Reception

On Monday 02 October the Poster Reception will take place.

Poster Authors will be presenting their posters in and around the exhibition area. Please stop by with a drink to find out more about their work. This event is open to all participants, no ticket required. Drinks will be available from the coffee areas, with a special drinks buffet. The Peter Brewin award will reward the best overall submitted and displayed poster at the event (in the opinion of an independent panel of three judges).

SYMPLIFYING THE COMPLEX

Solutions in metal compounds



PolyMIM is a successful metal and plastics processor in providing customized metal compounds for over 15 years, as part of the family-owned Polymer Group which is located in Germany.



PolyMIM®

Water soluble binder system



PolyPOM

Catalytic binder system

Our wide product range includes low alloy steels, tool steels, stainless steels, tungsten carbides, copper, titanium and titanium alloys.

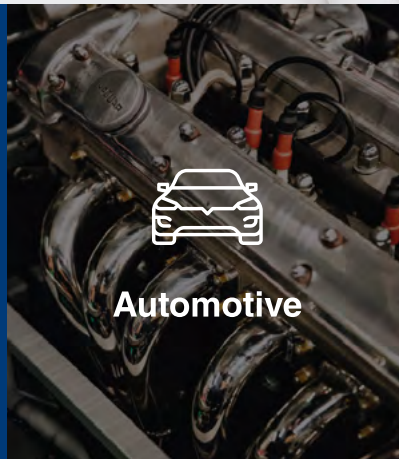
We offer the possibility to implement tailored customer solutions with attractive prices and worldwide availability!



Aerospace



Mechanical



Automotive



www.polymim.com



Medicine



Luxury Goods



Consumer Goods





HOW TO REGISTER

Registration for Euro PM2023 can only be done online via our website www.europm2023.com.

All bookings made before 2nd September 2023 will be at the special early rate. Bookings from 2nd September 2023 will be at the late registration rate. The table below outlines the different delegate types and the fees applicable. The tick indicates what is included in each type of admission package. If you encounter any problems with the registration process, email epma2023registrations@aimgroup.eu for assistance.

AUTHOR/SESSION CHAIRMAN REGISTRATION

Reduced registration fees are available for session chairmen and for presenting authors. Co-authors should register at the regular congress rates.

The registration deadline for presenting authors is 14 June 2023 and the inclusion of papers in the final programme and congress proceedings is dependent upon the submission of registrations and payment by this date.

EPMA MEMBER REGISTRATION

Members of the EPMA will qualify for a discount on the full registration fee. The discount applies to all employees of full, associate and affiliate company members, and also to individual members.

STUDENT REGISTRATION

Proof of student status must be provided. The fee includes participation in the technical sessions and special interest seminars, and refreshment breaks, but does not include meals and other social events. Individual tickets for these can be purchased separately, subject to availability.

ADDITIONAL LUNCH/SOCIAL EVENT TICKETS

Tickets for lunches and social events, where part of the registration package, will be issued to delegates upon registering.

Additional tickets are available for purchase at the time of registration. Additional tickets can be purchased onsite, strictly subject to availability.

The Euro PM2023 lunches will be buffet style to allow participants maximum flexibility at lunch times, with time to visit the exhibition area.

GROUP REGISTRATION

If you would like to register a group of 5 or more delegates, please contact Sabine Hazoume, Congress Manager, for special rates: sh@epma.com

Please note that participants who already benefit from a student rate or exhibition visitor rate cannot benefit from the 15% group discount in addition. Also, an exhibition visitor is not considered as one person in the group.

CANCELLATIONS

Registration cancellations will only be accepted by email to epma2023registrations@aimgroup.eu, a 15% cancellation fee and €50,00 handling fee will be deducted from refunds up to and including 01 August 2023, after which refunds will unfortunately no longer be possible.

REQUESTS FOR VISAS

Some delegates travelling to Portugal may require a visa and should apply for this from their Portuguese Consulate allowing 8-12 weeks before the travel date. Letters of invitation can only be obtained from the congress organisers by selecting this option at the end of the online Euro PM2023 registration form.

EURO PM23 CONGRESS & EXHIBITION		Delegate registration type							
		Full Delegate			Student Delegate	Day delegate			Exhibition Visitors
		Presenting author / Session Chair	EPMA Member / End User	Non EPMA Member	Student	Monday delegate	Tuesday delegate	Wednesday delegate	Exhibition Visitors
Technical sessions / Special Interest Seminars	Monday	✓	✓	✓	✓	✓			not included
	Tuesday	✓	✓	✓	✓		✓		
	Wednesday	✓	✓	✓	✓			✓	
Exhibition and poster area	Monday - Wednesday	✓	✓	✓	✓	✓	✓	✓	✓
Refreshment Breaks	Monday	✓	✓	✓	✓	✓			✓
	Tuesday	✓	✓	✓	✓		✓		✓
	Wednesday	✓	✓	✓	✓			✓	✓
Lunch	Monday	✓	✓	✓	40/45	✓			40/45
	Tuesday	✓	✓	✓	40/45		✓		40/45
	Wednesday	✓	✓	✓	40/45			✓	40/45
Euro PM2023 proceedings		✓	✓	✓	300 €				
Social events	Welcome reception	✓	✓	✓	30/35	30/35			30/35
	Posters & Awards reception	✓	✓	✓	✓	✓			✓
	Congress Dinner	✓	✓	✓	140/150	140/150	140/150	140/150	140/150
Fees before VAT	Early registration - on or before Friday 1st September	1 100 €	1 200 €	1 600 €	300 €	700 €	700 €	700 €	100 €
	Late registration - on Saturday 2nd September or after	1 500 €	1 500 €	1 905 €	380 €	810 €	810 €	810 €	
	On site	1 905 €	1 905 €	1 905 €	N/A	990 €	990 €	990 €	

Payments by Credit card and bank transfer

Please note bank transfer will not be possible after 1st September 2023

Portuguese VAT will be charged

End users are defined as: Original Equipment Makers (OEMs), Tier 1, Tier 2 and system supplier supply chain companies and personnel, who select the PM process to produce the components for their applications (automotive, aerospace, medical, energy, machinery, etc...) but do not produce PM parts themselves.

Students must provide a proof of their status

Want to learn more about Hot Isostatic Pressing?

Available to download at

www.epma.com/hip



Want to learn more about Metal Injection Moulding?

Available to download at

www.epma.com/mim





GKN Hoeganaes is a world-renowned manufacturer of metal powders, serving many industries including automotive, aerospace, and industrial markets. Hoeganaes Corporation was established in 1953 and is celebrating 70 years of operation in 2023. Today, GKN Hoeganaes is a part of GKN Powder Metallurgy, a global leader in the production of powder metallurgy materials and parts.

The company's success lies in its expertise in various production methods of metal powders, including water and gas atomization. GKN Hoeganaes is a global leader in the production of iron powder and ferrous alloys, but also produces several specialty powders for a wide range of applications including part brazing, magnetics, additive manufacturing, and welding.

GKN Hoeganaes has production facilities in each of the key regions worldwide, able to locally serve customers in Asia, Europe, and North America. The company employs advanced technologies to produce high-quality powders under different certifications, including ISO 9001, ISO 14001, and TS 16949.

Apart from manufacturing high-quality powders, GKN Hoeganaes is also committed to sustainability and environmental stewardship. The production processes are designed to reduce waste and emissions and the company has set ambitious sustainability goals for all facilities worldwide.

www.gknpm.com

GOLD SPONSOR



Höganäs develops, manufactures and sells metal powders that open up a world of opportunities.

Our product range includes pure iron powders, low-alloy steel powders, stainless steel powders and press-ready powder mixes. Höganäs products are tailored to meet demands on part precision, productivity, performance and cost, and many of our brands, such as Distaloy®, Astaloy™ and Starmix®, are regarded as industry standards.

In the Höganäs Customer Development Centre, we invite customers and end users to work alongside our expert team with application engineering and prototyping.

www.hoganas.com

Event Sponsors



The Hilti Group supplies the worldwide construction and energy industries with technologically leading products, systems, software and services. Our strategic objective is sustainable value creation through market leadership and differentiation driven by innovation and direct customer relations. About 32,000 employees in more than 120 countries contribute to making our customers' work more productive, safer and more sustainable. In the field of powder metallurgy, Hilti is a user of structural PM and MIM parts as well as cemented carbide inserts, with in-house PM production of diamond tool segments.

www.hilti.group

SILVER SPONSORS



Rio Tinto Metal Powders (RTMP) was established in 1968 as Quebec Metal Powders Ltd. (QMP) and is wholly owned today by Rio Tinto, a renowned large scale international mining and metallurgical company. Rio Tinto Metal Powders' world headquarters are located in Sorel-Tracy, Canada with sales offices, technical representatives and agents around the globe.

RTMP also operates an annealing and blending facility with comprehensive customer support and distribution capabilities in Suzhou, China. RTMP is the only global powder supplier, to manufacture its products entirely from a consistent, single ore base. Consequently, RTMP offers products of exceptional cleanliness and consistency.

RTMP offers a full range of ferrous powder products for virtually all Powder Metallurgy (PM) applications, and is committed to helping customers produce the best quality components possible by supplying superior powder products

www.qmp-powders.com

BRONZE SPONSORS



Miba Sinter Group is a technology leader for powder metallurgy applications. Working together with our customers, we meet the challenges of making products more economical, environmentally friendly and efficient.

Whether automotive applications, robotics, hydraulics or industrial and building automation, our high-precision and high-strength sintered components are used in a wide range of industries and applications. In these industries, sintering technology enables cost savings in production, reduced weight and an improved ecological balance. With Miba you get individual solutions tailored to your needs.

www.miba.com



SACMI is an Italian company world leader in the design, production and supply of industrial technologies and systems, specialized in equipment for ceramics, beverage & packaging, food processing and Powder Metal.

SACMI Group is present in 30 Countries worldwide through a total of 80 Companies. Driven by continuous investments in research, unwavering promotion of technological innovation, conscientious attention to product and service quality, effective responses in the real needs of world markets, SACMI proposes a wide range of new equipment and technologies for the Powder Metal Industry, the result of over 100 year old experience as equipment supplier, exploiting the synergies between the main Companies in the group in their specialized fields and backed up by a worldwide network of after sales service centres.

Hydraulic multi axes presses from 80 to 1000 tons of force, electric presses up to 80 tons of force, customized automations and Sinter Hardening High Temperature Furnaces are the main solutions that make SACMI a complete partner for the powder metal industry.

www.sacmi.com/metals



Part of global industrial engineering group Sandvik, Sandvik Coromant is at the forefront of manufacturing tools, machining solutions and knowledge that drive industry standards and innovations demanded by the metalworking industry now and into the next industrial era.

Educational support, extensive R&D investment and strong customer partnerships ensure the development of machining technologies that change, lead and drive the future of manufacturing. Sandvik Coromant owns over 1,800 patents worldwide, employs over 7,600 staff, and is represented in 150 countries

www.sandvikcoromant.com



**EURO
PM2023**
CONGRESS & EXHIBITION

SPONSORSHIP PACKAGES

GOLD PACKAGES

- Congress Dinner Drinks
- Industry Corner

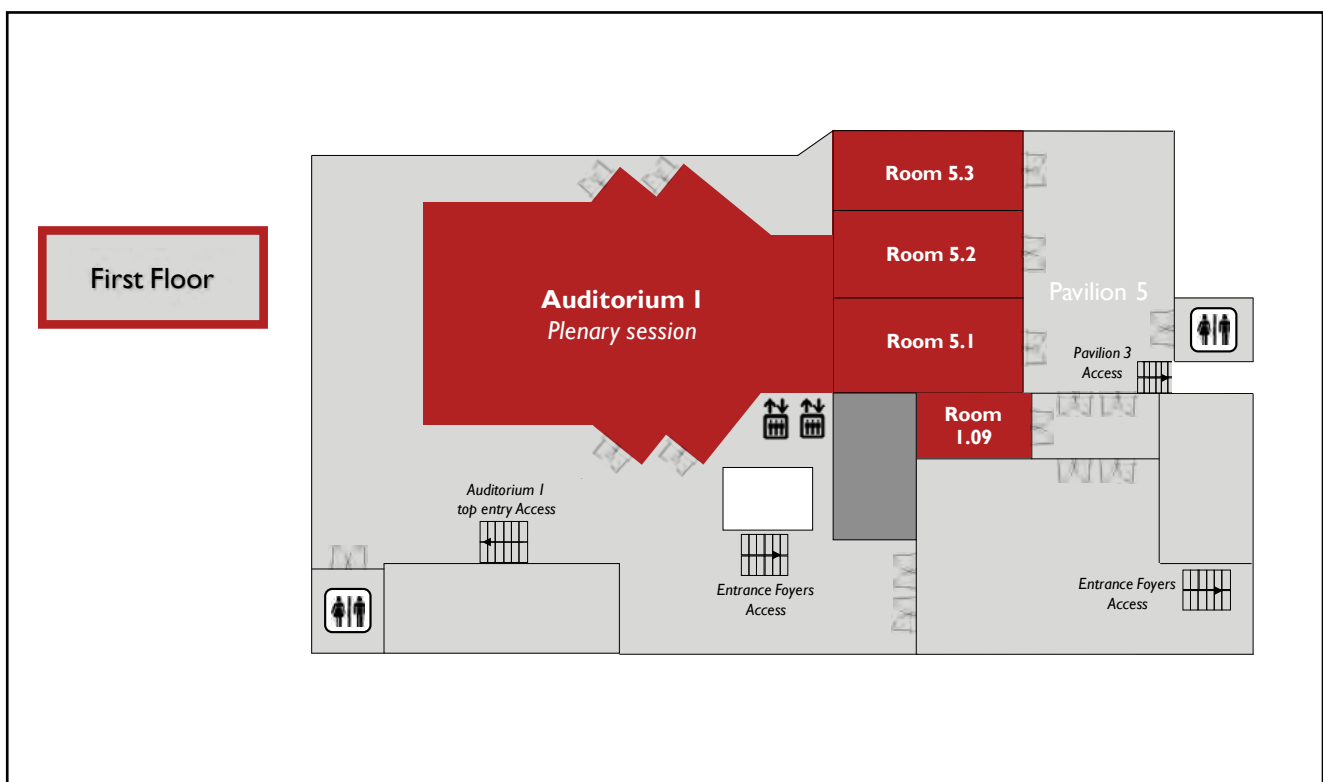
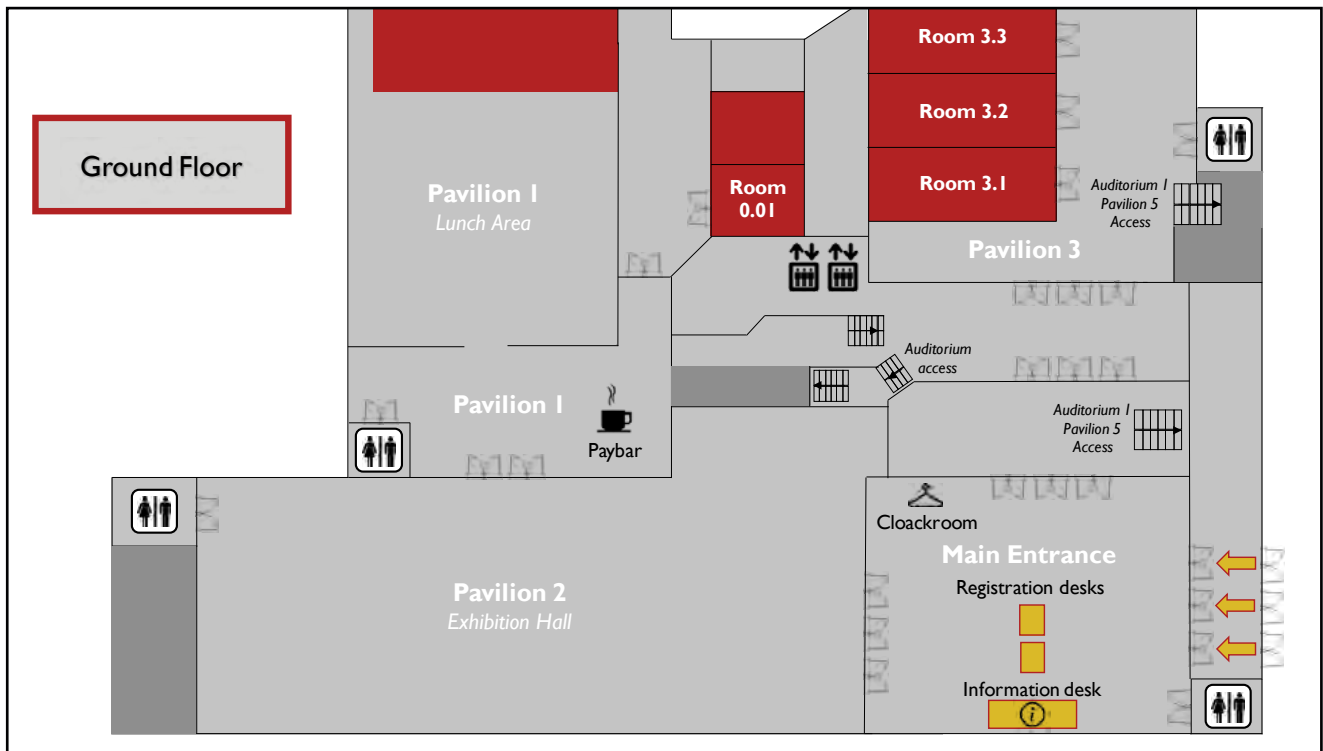
SILVER PACKAGES

- Exhibition and Congress Wi-Fi
- Exhibition and Poster Reception

BRONZE PACKAGES

- Hydration Station
- Euro PM2023 Mobile App

europm2023.com/sponsorship-information





























Registration, Technical Sessions, Special Interest Seminars and satellite meetings all take place at the Lisboa Congress Centre (CCL). Social events take place at the venue as indicated.

Interested in a particular topic?

The following seminars, technical sessions and meetings have been colour-coded to aid faster navigation throughout the Technical Programme and other EPMA booklets. Please see the guide below.

- Materials
- Applications
- SIS** Special Interest Seminar
- Consolidation technologies
- Powder Production
- KNP** Keynote Paper Award Presentation
- Tools for improving PM

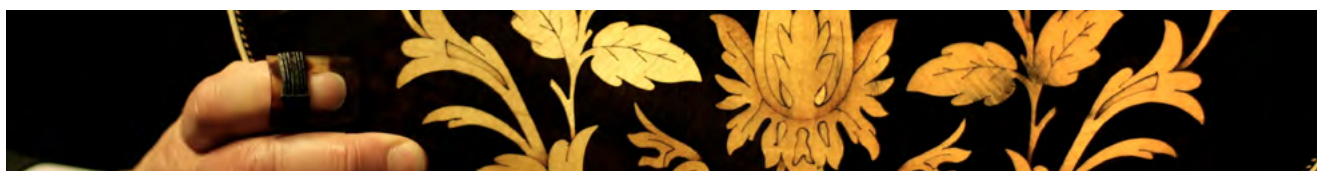
Sunday 01 October 2023				Room
16:00 - 19:30		Registration & Information Desk Open		Main Entrance
17:30 - 19:00		Welcome Reception		CCL Restaurant
Monday 02 October 2023				Room
08:00 - 19:30		Registration & Information Desk Open		Main Entrance
09:00 - 11:00		Plenary Session		Auditorium I
11:00 - 17:00		Exhibition Open		Exhibition Hall
12:00 - 12:30	Session 0	Young Engineers Day Lecture		Pavilion 5 - Room 5.3
12:30 - 14:00		Buffet Delegate Lunch, Exhibition & Poster Time		Pavilion I
14:00 - 15:30	 Session 1	Hard Metals - WC-Based Hard Metals KNP		Pavilion 3 - Room 3.1
14:00 - 15:30	 Session 2	AM Beam Based Technologies - Reusability of AM Powders		Pavilion 3 - Room 3.2
14:00 - 15:30	 Session 3	AM Sinter Based Technologies - AM Sinter Based I		Pavilion 3 - Room 3.3
14:00 - 15:30	 Session 4	Applications - Tooling		Pavilion 5 - Room 5.1
14:00 - 15:30	 Session 5	MIM SIS - Quality and Reliability of MIM		Pavilion 5 - Room 5.2
14:00 - 15:30	Session 6	Young Engineers Day Lectures		Pavilion 5 - Room 5.3
14:00 - 15:30	 Session 7	EHQS SIS - Chemicals Management and Standardization in PM		Pavilion I - Room 0.01
15:30 - 16:30		Break, Exhibition & Poster Time		
16:30 - 18:00	 Session 8	Non Ferrous Materials - Cu-based Alloys		Pavilion 3 - Room 3.1
16:30 - 18:00	 Session 10	AM Sinter Based Technologies - AM Sinter Based II		Pavilion 3 - Room 3.2
16:30 - 18:00	 Session 11	Applications - Energy		Pavilion 3 - Room 3.3
16:30 - 18:00	 Session 12	MIM SIS - Sustainability of MIM		Pavilion 5 - Room 5.1
16:30 - 18:00	Session 13	Young Engineers Day Lectures		Pavilion 5 - Room 5.3
16:30 - 18:00	 Session 14	HIP Sectoral Group Meeting		Pavilion 5 - Room 5.2
17:30 - 19:00		Posters Reception		Exhibition Hall
Tuesday 03 October 2023				Room
08:00 - 19:00		Registration & Information Desk Open		Main Entrance
09:00 - 17:00		Exhibition Open		Exhibition Hall
08:30 - 10:00	 Session 15	Alternative Hard Materials - Hard Phases		Pavilion 3 - Room 3.1
08:30 - 10:00	 Session 16	AM Beam Based Technologies - AM High Entropy Alloys KNP		Pavilion 3 - Room 3.2
08:30 - 10:00	 Session 17	AM Sinter Based Technologies - Special Techniques		Pavilion 3 - Room 3.3
08:30 - 10:00	 Session 18	Design & Modelling - L-PBF Simulation		Pavilion 5 - Room 5.1
08:30 - 10:00	 Session 19	Novel PM Materials and Powders		Pavilion 5 - Room 5.2
08:30 - 10:00	 Session 20	HIP SIS - Industrial Applications of HIP		Pavilion 5 - Room 5.3
08:30 - 10:00	 Session 21	Tools for Improving PM - Secondary Operations		Pavilion I - Room 0.01
08:30 - 10:00	 Session 22	MIM Sectoral Group Meeting		Pavilion I - Room 1.09
08:30 - 10:00		Young Engineers Exhibition Visit		Exhibition Hall
10:00 - 11:00		Break, Exhibition & Poster Time		
11:00 - 12:30	 Session 23	Alternative Hard Materials - Binder Phases		Pavilion 3 - Room 3.1
11:00 - 12:30	 Session 24	AM Beam Based Technologies - Multi AM Materials		Pavilion 3 - Room 3.2
11:00 - 12:30	 Session 25	AM Sinter Based Technologies - Binder Jetting		Pavilion 3 - Room 3.3
11:00 - 12:30	 Session 26	Design & Modelling - Process Modelling		Pavilion 5 - Room 5.1
11:00 - 12:30	 Session 27	MIM		Pavilion 5 - Room 5.2



11:00 - 12:30	● Session 28	AM & HIP SIS - Benefits of combining AM & HIP	Pavilion 5 - Room 5.3
11:00 - 12:30	● Session 29	FM Sectoral Group Meeting	Pavilion 1 - Room 0.01
11:00 - 12:30	● Session 30	Applications - Transport	Pavilion 1 - Room 1.09
11:00 - 12:30		Young Engineers Exhibition Visit	Exhibition Hall
12:30 - 14:00		Buffet Delegate Lunch, Exhibition & Poster Time	Pavilion 1
14:00 - 15:30	● Session 31	Additive Manufacturing of Hard Materials	Pavilion 3 - Room 3.1
14:00 - 15:30	● Session 32	Powder Production - Fundamentals of Gas Atomization KNP	Pavilion 3 - Room 3.2
14:00 - 15:30	● Session 34	Design & Modelling - Compaction	Pavilion 5 - Room 5.1
14:00 - 15:30	● Session 35	AM SIS - Overview of the Evolution of AM Technologies	Pavilion 5 - Room 5.2
14:00 - 15:30	● Session 36	FM SIS - Amorphous Metals by Powder Metallurgy	Pavilion 5 - Room 5.3
14:00 - 15:30	● Session 37	HIP	Pavilion 3 - Room 3.3
14:00 - 15:30	● Session 38	FAST - Materials	Pavilion 1 - Room 1.09
14:00 - 18:00		Young Engineers Industry Tour	
15:30 - 16:30		Break, Exhibition & Poster Time	
16:30 - 18:00	● Session 39	AM Beam Based Technologies - AM Powders and Process	Pavilion 3 - Room 3.1
16:30 - 18:00	● Session 40	Sustainability in Powder Production	Pavilion 3 - Room 3.2
16:30 - 18:00	● Session 41	Light Materials - Titanium Alloys	Pavilion 3 - Room 3.3
16:30 - 18:00	● Session 42	Design & Modelling - Sintering Simulations	Pavilion 5 - Room 5.1
16:30 - 18:00	● Session 43	AM Sectoral Group Meeting	Pavilion 5 - Room 5.2
16:30 - 18:00	● Session 44	FM SIS - Sustainability of Critical Raw Materials by PM	Pavilion 5 - Room 5.3
16:30 - 18:00	● Session 46	FAST - Processing	Pavilion 1 - Room 1.09
20:00 - 00:00		Congress Dinner	Estufa Fria
Wednesday 04 October 2023			Room
08:00 - 18:30		Registration & Information Desk Open	Main Entrance
09:00 - 17:00		Exhibition Open	Exhibition Hall
08:30 - 10:00	● Session 47	Hard Magnetic Materials KNP	Pavilion 3 - Room 3.1
08:30 - 10:00	● Session 48	Powder Production - Atomization for AM	Pavilion 3 - Room 3.2
08:30 - 10:00	● Session 49	AM Beam Based Technologies - Light AM Materials	Pavilion 3 - Room 3.3
08:30 - 10:00	● Session 50	Tools for Improving PM - Test and Evaluation	Pavilion 5 - Room 5.1
08:30 - 10:00	● Session 51	HM SIS - A 100 years development of Hard Materials I	Pavilion 5 - Room 5.2
08:30 - 10:00	● Session 52	P&S SIS - Improving Sustainability and Cost in Pressing and Sintering I	Pavilion 5 - Room 5.3
08:30 - 10:00	● Session 53	High Temperature Materials - Sintered High Entropy Alloys	Pavilion 1 - Room 0.09
10:00 - 11:00		Break, Exhibition & Poster Time	
11:00 - 12:30	● Session 55	Functional Materials - Soft Magnetic Materials	Pavilion 3 - Room 3.1
11:00 - 12:30	● Session 57	AM Beam Based Technologies - Effect of Hard Particles in AM	Pavilion 3 - Room 3.3
11:00 - 12:30	● Session 58	AM Beam Based Technologies - FFF Material Extrusion	Pavilion 5 - Room 5.1
11:00 - 12:30	● Session 59	HM SIS - A 100 years development of Hard Materials II	Pavilion 5 - Room 5.2
11:00 - 12:30	● Session 60	P&S SIS - Improving Sustainability and Cost in Pressing and Sintering II	Pavilion 5 - Room 5.3
11:00 - 12:30	● Session 61	High Temperature Materials - Ni and Co based Superalloys	Pavilion 1 - Room 1.09
11:00 - 12:30	● Session 62	Ferrous Materials - Nitrogen Alloyed Steels KNP	Pavilion 3 - Room 3.2
12:30 - 14:00		Buffet Delegate Lunch, Exhibition & Poster Time	Pavilion 1
14:00 - 15:30	● Session 63	Functional Materials	Pavilion 3 - Room 3.1
14:00 - 15:30	● Session 64	Powder Production - Atomization of Al Alloys	Pavilion 3 - Room 3.2
14:00 - 15:30	● Session 65	Applications - Biomedical I	Pavilion 3 - Room 3.3
14:00 - 15:30	● Session 66	AM Sinter Based Technologies - FFF of Aluminium	Pavilion 5 - Room 5.1
14:00 - 15:30	● Session 67	AM Beam Based Technologies - Non Weldable AM Materials KNP	Pavilion 5 - Room 5.2
14:00 - 15:30	● Session 68	HM Sectoral Group Meeting	Pavilion 5 - Room 5.3
14:00 - 15:30	● Session 69	P&S Sectoral Group Meeting	Pavilion 1 - Room 0.01
14:00 - 15:30	● Session 70	Ferrous Materials - Stainless Steels	Pavilion 1 - Room 1.09
15:30 - 16:30		Break, Exhibition & Poster Time	
16:30 - 18:00	● Session 71	Hard Materials - Corrosion	Pavilion 3 - Room 3.1
16:30 - 18:00	● Session 73	Applications - Biomedical II	Pavilion 3 - Room 3.3
16:30 - 18:00	● Session 74	AM Sinter Based Technologies - Binder Jetting & Sustainability	Pavilion 5 - Room 5.1

16:30 - 18:00	●	Session 75	Tools for Improving PM - Fatigue and Gear Durability	Pavilion 5 - Room 5.2
16:30 - 18:00	●	Session 76	Press and Sinter - Live Topics	Pavilion 5 - Room 5.3
16:30 - 18:00	●	Session 78	Ferrous Materials - Low Alloyed Steels	Pavilion 3 - Room 3.2

** All timings, meetings, technical sessions, social events and tour included in this publication were correct at the time of print. Any late or unavoidable changes made onsite will be updated in the Euro PM2023 mobile app. In case of disparity of information, the content in the mobile app should always be treated as the final authority.*



EPMA Sectoral and Working Groups focus on issues best handled at industry rather than company level. More information about the below groups can be found at www.epma.com/groups and by joining the sectoral group mailing lists at www.epma.com/maillinglist

Each group identifies and promotes the interests of EPMA Members in its area by providing the forum for the discussion of key issues, providing the industry voice to the wider world, and initiating collaborative projects.

Meetings will take place as follows:

Sectoral Groups Open Meetings

Time

- European Hot Isostatic Pressing Group (EuroHIP)** 

Monday 02 October 16:30-18:00
- European Metal Injection Moulding Group (EuroMIM)** 

Tuesday 03 October 08:30-10:00
- European Functional Materials Group (EuroFM)** 

Tuesday 03 October 11:00-12:30
- European Additive Manufacturing Group (EuroAM)** 

Tuesday 03 October 16:30-18:00
- European Press & Sinter Group (EuroPress&Sinter)** 

Wednesday 04 October 14:00-15:30
- European Hard Materials Group (EuroHM)** 

Wednesday 04 October 14:00-15:30



POSTER RECEPTION

Date Monday 02 October
Venue Exhibition Hall
Time 17:30 - 19:00

EURO PM2023
 CONGRESS & EXHIBITION

Taking place on Monday 02 October 17.30-19.00, Poster Authors will be presenting their posters in and around the exhibition area. Please stop by with a drink to find out more about their work.

This event is open to all participants.



Applications

Monday

- 14:00 - 15:30 SESSION 4: APPLICATIONS - TOOLING
16:30 - 18:00 SESSION 11: APPLICATIONS - ENERGY

Tuesday

- 11:00 - 12:30 SESSION 30: APPLICATIONS - TRANSPORT

Wednesday

- 14:00 - 15:30 SESSION 65: APPLICATIONS - BIOMEDICAL I
16:30 - 18:00 SESSION 73: APPLICATIONS - BIOMEDICAL II

Consolidation technologies

Monday

- 14:00 - 15:30 SESSION 2: AM BEAM BASED TECHNOLOGIES - REUSABILITY OF AM POWDERS
14:00 - 15:30 SESSION 3: AM SINTER BASED TECHNOLOGIES - AM SINTER BASED I
16:30 - 18:00 SESSION 10: AM SINTER BASED TECHNOLOGIES - AM SINTER BASED II

Tuesday

- 08:30 - 10:00 SESSION 16: AM BEAM BASED TECHNOLOGIES - AM HIGH ENTROPY ALLOYS **KNP**
08:30 - 10:00 SESSION 17: AM SINTER BASED TECHNOLOGIES - SPECIAL TECHNIQUES
11:00 - 12:30 SESSION 24: AM BEAM BASED TECHNOLOGIES - MULTI AM MATERIALS
11:00 - 12:30 SESSION 25: AM SINTER BASED TECHNOLOGIES - BINDER JETTING
11:00 - 12:30 SESSION 27: MIM
14:00 - 15:30 SESSION 37: HIP
14:00 - 15:30 SESSION 38: FAST - MATERIALS
16:30 - 18:00 SESSION 39: AM BEAM BASED TECHNOLOGIES - AM POWDERS AND PROCESS
16:30 - 18:00 SESSION 46: FAST - PROCESSING

Wednesday

- 08:30 - 10:00 SESSION 49: AM BEAM BASED TECHNOLOGIES - LIGHT AM MATERIALS
11:00 - 12:30 SESSION 57: AM BEAM BASED TECHNOLOGIES - EFFECT OF HARD PARTICLES IN AM
11:00 - 12:30 SESSION 58: AM BEAM BASED TECHNOLOGIES - FFF MATERIAL EXTRUSION
14:00 - 15:30 SESSION 66: AM SINTER BASED TECHNOLOGIES - FFF OF ALUMINIUM
14:00 - 15:30 SESSION 67: AM BEAM BASED TECHNOLOGIES - NON WELDABLE AM MATERIALS **KNP**
16:30 - 18:00 SESSION 74: AM SINTER BASED TECHNOLOGIES - BINDER JETTING & SUSTAINABILITY
16:30 - 18:00 SESSION 76: PRESS AND SINTER - LIVE TOPICS

Materials

Monday

- 14:00 - 15:30 SESSION 1: HARD METALS - WC-BASED HARD METALS **KNP**
16:30 - 18:00 SESSION 8: NON FERROUS MATERIALS - CU-BASED ALLOYS

Tuesday

- 08:30 - 10:00 SESSION 15: ALTERNATIVE HARD MATERIALS - HARD PHASES
08:30 - 10:00 SESSION 19: NOVEL PM MATERIALS AND POWDERS
11:00 - 12:30 SESSION 23: ALTERNATIVE HARD MATERIALS - BINDER PHASES
14:00 - 15:30 SESSION 31: ADDITIVE MANUFACTURING OF HARD MATERIALS
16:30 - 18:00 SESSION 41: LIGHT MATERIALS - TITANIUM ALLOYS

Wednesday

- 08:30 - 10:00 SESSION 47: HARD MAGNETIC MATERIALS **KNP**
08:30 - 10:00 SESSION 53: HIGH TEMPERATURE MATERIALS - SINTERED HIGH ENTROPY ALLOYS
11:00 - 12:30 SESSION 55: FUNCTIONAL MATERIALS - SOFT MAGNETIC MATERIALS
11:00 - 12:30 SESSION 61: HIGH TEMPERATURE MATERIALS - NI AND CO BASED SUPERALLOYS
11:00 - 12:30 SESSION 62: FERROUS MATERIALS - NITROGEN ALLOYED STEELS **KNP**
14:00 - 15:30 SESSION 63: FUNCTIONAL MATERIALS
14:00 - 15:30 SESSION 70: FERROUS MATERIALS - STAINLESS STEELS
16:30 - 18:00 SESSION 71: HARD MATERIALS - CORROSION
16:30 - 18:00 SESSION 78: FERROUS MATERIALS - LOW ALLOYED STEELS

Powder Production

Tuesday

- 14:00 - 15:30 SESSION 32: POWDER PRODUCTION - FUNDAMENTALS OF GAS ATOMIZATION **KNP**
16:30 - 18:00 SESSION 40: SUSTAINABILITY IN POWDER PRODUCTION

Wednesday

- 08:30 - 10:00 SESSION 48: POWDER PRODUCTION - ATOMIZATION FOR AM
14:00 - 15:30 SESSION 64: POWDER PRODUCTION - ATOMIZATION OF AL ALLOYS

Tools for improving PM

Tuesday

08:30 - 10:00	SESSION 18: DESIGN & MODELLING - L-PBF SIMULATION
08:30 - 10:00	SESSION 21: TOOLS FOR IMPROVING PM - SECONDARY OPERATIONS
11:00 - 12:30	SESSION 26: DESIGN & MODELLING - PROCESS MODELLING
14:00 - 15:30	SESSION 34: DESIGN & MODELLING - COMPACTION
16:30 - 18:00	SESSION 42: DESIGN & MODELLING - SINTERING SIMULATIONS

Wednesday

08:30 - 10:00	SESSION 50: TOOLS FOR IMPROVING PM - TEST AND EVALUATION
16:30 - 18:00	SESSION 75: TOOLS FOR IMPROVING PM - FATIGUE AND GEAR DURABILITY

Social Events

Sunday

17:30 - 19:00	WELCOME RECEPTION
---------------	-------------------

Monday

17:30 - 19:00	POSTERS RECEPTION
---------------	-------------------

Tuesday

19:30 - 00:00	CONGRESS DINNER
---------------	-----------------

Special Interest Seminars

Monday

14:00 - 15:30	SESSION 5: MIM SIS - QUALITY AND RELIABILITY OF MIM
14:00 - 15:30	SESSION 7: EHQS SIS - CHEMICALS MANAGEMENT AND STANDARDIZATION IN PM
16:30 - 18:00	SESSION 12: MIM SIS - SUSTAINABILITY OF MIM

Tuesday

08:30 - 10:00	SESSION 20: HIP SIS - INDUSTRIAL APPLICATIONS OF HIP
11:00 - 12:30	SESSION 28: AM & HIP SIS - BENEFITS OF COMBINING AM & HIP
14:00 - 15:30	SESSION 35: AM SIS - OVERVIEW OF THE EVOLUTION OF AM TECHNOLOGIES
14:00 - 15:30	SESSION 36: FM SIS - AMORPHOUS METALS BY POWDER METALLURGY
16:30 - 18:00	SESSION 44: FM SIS - SUSTAINABILITY OF CRITICAL RAW MATERIALS BY PM

Wednesday

08:30 - 10:00	SESSION 51: HM SIS - A 100 YEARS DEVELOPMENT OF HARD MATERIALS I
08:30 - 10:00	SESSION 52: P&S SIS - IMPROVING SUSTAINABILITY AND COST IN PRESSING AND SINTERING I
11:00 - 12:30	SESSION 59: HM SIS - A 100 YEARS DEVELOPMENT OF HARD MATERIALS II
11:00 - 12:30	SESSION 60: P&S SIS - IMPROVING SUSTAINABILITY AND COST IN PRESSING AND SINTERING II

Sectoral Group Meetings

Monday

16:30 - 18:00	SESSION 14: HIP SECTORAL GROUP MEETING
---------------	--

Tuesday

08:30 - 10:00	SESSION 22: MIM SECTORAL GROUP MEETING
11:00 - 12:30	SESSION 29: FM SECTORAL GROUP MEETING
16:30 - 18:00	SESSION 43: AM SECTORAL GROUP MEETING

Wednesday

14:00 - 15:30	SESSION 68: HM SECTORAL GROUP MEETING
14:00 - 15:30	SESSION 69: P&S SECTORAL GROUP MEETING

Want to learn more about Functional Materials?

Available to download at

www.epma.com/fm



START: SUSTAINABLE ENERGY HARVESTING SYSTEMS BASED ON INNOVATIVE MINE WASTE RECYCLING

PRIMARY OBJECTIVE

To build an innovation ecosystem in the European Union (EU) related to the development of sustainable and economically viable tellurium-free thermoelectric (TE) waste heat harvesting systems, to be applied in heavy industry, maritime industry and also as primary power source for off-grid sensors and IoT devices.

HOW WILL IT BE ACHIEVED?

By incorporating sulphides (mainly tetrahedrite mineral series), at present an environment hazard in mine tailings, collected in five European countries, in the production of advanced sulphide p-type TE thermoelements. In contrast, current commercial TE devices incorporate p-type and n-type TE thermoelements that are produced from expensive and rare elements, namely tellurium, which is predominantly sourced in China.

EXPECTED IMPACT

The impact of START project's approach on endorsing a more sustainable and resilient EU comes from three inputs.

First, by reducing EU's dependence on primary critical raw materials.

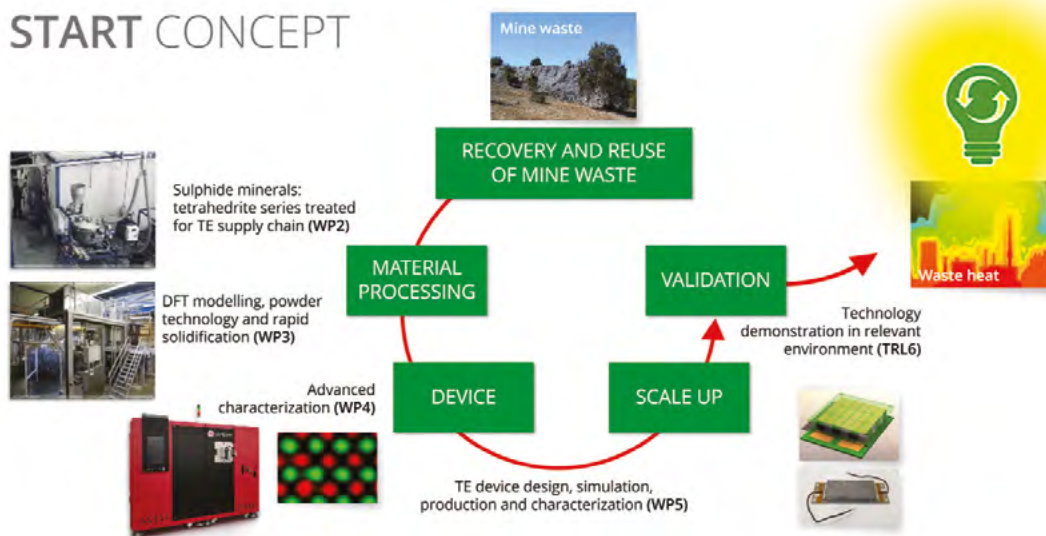
Secondly, through the promotion of circular economy processes that will create value in EU by building a strategic ecosystem based on a high-abundant mineral.

Thirdly, by the production of TE energy harvesting systems offering a contribution to the reduction of fossil fuels consumption with a great impact on the increase of the overall efficiency of energy production and consumption systems, as well as on the reduction of the greenhouse gas emissions.

DURATION 01 June 2022 – 31 May 2026

BUDGET 9.2 M€

START CONCEPT



Monday 02 October 2023

Opening plenary session : 09:00 – 11:00



Welcome from EPMA Executive director
Dr Lionel Aboussouan



Welcome from the Congress Chairs:
Prof Teresa Vieira (Department of Mechanical Engineering, University of Coimbra, Portugal)
Mr Antonio Homem (Head of Engineering - Durit - Metalurgia Portuguesa de Tungsténio)



Overview of the status and trends in the European PM Industry
Mr Ralf Carlström (EPMA President)

Plenary Speaker



“After the hype: Status and Outlook of the Metal Additive Manufacturing Market”
Mr Matthias Schmidt-Lehr (AMPOWER)

Abstract: The Additive Manufacturing industry had a prosperous year in 2022, with record revenue despite escalating tensions globally. The industry seems to have moved past the negative impact of the COVID-19 pandemic and is projected to continuously grow at a double-digit rate in the coming years. Yet not every use case or technology is destined to become part of the next manufacturing revolution. While some industries put all their focus on large scale manufacturing, others shifted towards tools and manufacturing aids. This speech will summarize the status and outlook of the Additive Manufacturing market in its technology diversity, industrial relevance and regional characteristics.

Presentation of the 2023 EPMA Awards:

PM Thesis Competition Sponsored by



Keynote Paper Award Sponsored by



Distinguished Service Award 2023



Fellowship Award 2023



Plenary Session



Promoting Powder Metallurgy Technology

European powder metallurgy association



Spotlight on PM

Showcasing the World of Powder Metallurgy

Spotlight on PM is a database containing a wide range of PM products, materials and applications that are in current production. Each and every day a new PM part helps a company to open up new market opportunities.

Search our extensive database online for free at:
www.epma.com/spotlightonpm



© Andrew McLeish 2017

www.epma.com/spotlightonpm

**Monday 02 October 2023****Dr Raquel de Oro Calderon**
(TU Wien, Austria)**Insights On The Microstructural Characteristics Of WC-Co-Ru Cemented Carbides**

Time: 14:00 - 15:30

Session: Hard Metals/WC-Based Hardmetals

Room: 3.1

Abstract: WC-Co cemented carbides alloyed with Ru are relevant for the hardmetal industry in spite of their high cost. These alloys are used in applications requiring very demanding thermal properties and good performance in aggressive and abrasive media, and for some applications, it is difficult to find an alternative material that could offer a similar performance. This paper will provide important insights on phase formation, solubilities and microstructural characteristics of WC-Co-Ru alloys with different carbon contents that can shed some light on the mechanisms that affect the mechanical performance of these materials.

Tuesday 03 October 2023**Mr S Venkatesh Kumar**
(IMDEA Materials, Spain)**Effect Of Process Parameters And Heat Treatments On Non-equiatomic CoCrFeNiMoxAl HEAs Manufactured By PBF-LB/M Via In-situ Alloying**

Time: 08:30 - 10:00

Session: AM Beam Based Technologies - AM High Entropy Alloys

Room: 3.2

Abstract: Manufacturing high entropy alloys (HEAs) using powder bed fusion-laser beam/Metal (PBF-LB/M) enables their production with minimal elemental segregation due to its inherently fast cooling rates resulting in excellent properties. So far, HEAs have been fabricated with fully pre-alloyed gas-atomized powders which makes it expensive and slower to explore new alloy compositions. In this work, for the first time, instead of pre-alloying, blended powders of CoCrFeNiMoxAl HEAs were used as feedstock to develop a CoCrFeNiMoxAl HEA which consists of FCC phase in the metastable state. The process was successfully optimized, achieving relative densities greater than 99.8%. Moreover, annealing at various temperatures and times is performed to study its effect on precipitating new phases such as BCC, sigma, and mu. This method of mixing powders for PBF-LB/M enables rapid exploration of new HEAs and this work is expected to contribute to its successful application in the future.

**Dipl-Ing Dirk Aderhold**
(Atomising Systems Ltd, United Kingdom)**The Reporting Of Research On Gas Atomisation**

Time: 14:00 - 15:30

Session: Powder Production - Fundamentals of Gas Atomization

Room: 3.2

Abstract: The ever-increasing interest in additive manufacturing (both binder jetting and LPBF) has led to a renewed interest in gas atomising research across the globe. As this is being done by workers with different atomising equipment, the opportunity arises to test both theoretical and empirical correlations on a variety of designs. This paper reviews some relevant literature and sets out some basic equations and the relevant parameters that should ideally figure in all reports on gas atomisation tests. A methodology is proposed to standardise reporting of data, e.g. mass-median, standard deviation, graphical methods and operating parameters to allow some benchmarking by gas atomiser operators and allow improvements to be clearly identified.

Remaining unanswered questions on gas atomisation will be discussed, which would surely benefit from more comprehensive publication, in particular the question of the importance of gas pressure in determining "efficiency" of atomisation, and how "efficiency" might be assessed and compared.

Wednesday 04 October 2023**Prof Dr Martin Bram**
(Forschungszentrum Jülich, Germany)**Flash Spark Plasma Sintering Of Nd-Fe-B Magnets With Tailored Anisotropic Magnetic Properties**

Time: 08:30 - 10:00

Session: Hard Magnetic Materials

Room: 3.1

Abstract: Flash spark plasma sintering (Flash SPS) is an attractive alternative method for the processing of Nd-Fe-B magnets with anisotropic magnetic properties. Therefore, a load is applied on a pre-compacted sample. Then, a well-defined power pulse is applied followed by deformation and densification of the sample in seconds. Compared to established processing of anisotropic magnets via hot pressing with subsequent die-upsetting, Flash SPS introduces the possibility of electroplasticity as an additional deformation mechanism. This mechanism has the potential to improve the magnetic properties through the fine-tuning of the microstructure. Our results reveal that suitable pre-heating of the sample before applying the power pulse plays a crucial role for tailoring grain size and grain aspect ratio, both being the key for well-pronounced anisotropic magnetic properties. For better understanding of the relationship between Flash SPS parameters, microstructure and resulting magnetic properties, in the present work a systematic parameter study has been done.





Mr Atte Antikainen
(VTT, Finland)

Nitrogen Alloyed Austenitic Ni-free Stainless Steel For Additive Manufacturing

Time: 11:00 - 12:30

Session: Ferrous Materials - Nitrogen Alloyed Steels

Room: 3.2

Abstract: Nitrogen alloyed Austenitic Nickel-free Stainless Steel (ANFSS) is one of the most promising group of materials for consumer and health care products. They can be used to substitute not only conventional AISI 316L, but also Titanium and Co-Cr alloys. Previously the utilization of Nitrogen alloyed materials has been limited due to high work hardening rate. Recent developments in powder metallurgy, e.g. Additive Manufacturing (AM), are offering economically feasible net shape manufacturing routes to go around machining related problems. In the present study a viable processing route for ANFSS powder is introduced. It includes gas atomization and AM of test specimens by laser- and sinter-based methods. Special attention is paid on controlling the nitrogen content in different processing steps. The results show that by proper selection of processing parameters, the nitrogen content can be kept in desired level, thereby controlling the mechanical properties of ANFSS alloys.



Dr Ane Miren Mancisidor
(LORTEK, Spain)

Cracking Susceptibility Assessment Of L-PBF CM247LC Alloy Based On Composition And Process Parameter Modifications

Time: 14:00 - 15:30

Session: AM Beam Based Technologies - Non Weldable AM Materials

Room: 5.2

Abstract: CM247LC alloy is a precipitation strengthened nickel-based superalloy commonly used in aeronautic sector due to its outstanding mechanical, oxidation, creep and wear properties at room and at high temperatures. However, there is a big challenge in obtaining a crack free material during PBF-LB/M processing. High contents of Al and Ti induce cracking. Four batches of CM247LC powders with different compositions were analysed and processed by PBF-LB/M. In this study, different approaches were employed to mitigate crack susceptibility of the alloy, namely, alloy modification, process modification and post-processing by HIP. The influence of the elements on cracking was assessed as well as the process parameters modification, including modification of the laser scanning strategies. Microstructure before and after post-processing, namely heat treatments and HIPping, was evaluated and cracking mechanism was studied in the light of microstructural observations.



WELCOME RECEPTION

Sponsored by **Höganäs** 

**EURO
PM2023**
CONGRESS & EXHIBITION

Date Sunday 01 October 2023

Venue Congress restaurant with stunning river views

Time 17.30 - 19.00

Höganäs - The Welcome Reception (ticket holders only) is taking place on Sunday 01 October, from 17:30-19:00.

Light snacks and drinks will be served while attendees mingle and network with live background music.

Additional tickets can be purchased onsite subject to availability.

Dress Code: Business smart/smart casual.

Proceedings from PM2003 – PM2016 are free to download from the EPMA website.

Proceedings from PM2017 – PM2023 are available to purchase as:

- Individual papers (PDF download)
- Complete proceedings available by downloading

Proceedings for Euro PM2023 are included in the 'full delegate' registration package. For all other participants, proceedings can be pre-ordered on the registration form or purchased on EPMA website.



Technical Sessions

- Scan the QR code or click on the link below to access to the technical sessions programme: schedule, abstracts, speakers' information, etc...
- This online programme will be complete and updated until the congress

[Click here to see the technical session programme](#)



EURO
PM2024
CONGRESS & EXHIBITION

FIRST
ANNOUNCEMENT



EURO POWDER
METALLURGY
Congress & Exhibition
29 SEP - 2 OCT 2024
Malmö, Sweden



europm2024.com

EPMA Publications

Other publications available from EPMA



For further information visit: www.epma.com/publications



Explore EPMA's entire range of online **Powder Metallurgy** case studies, representing the following sectors – Automotive, Aerospace, Energy and Medical at:

www.epma.com/spotlight-on-pm

Special Interest Seminar: Consolidation technologies/Metal Injection Moulding

Session 5 - Monday 02 October - Time: 14:00 – 15:30

MIM SIS: Quality and Reliability of MIM

Chairs: Dipl. Ing. ETH, MBA Georg Breitenmoser (Parmaco Metal Injection Molding AG, Switzerland) & Ingenieurbüro Dr. Petzoldt (Germany)

Presentations:

Evaluation of Effect of Particle Size Distribution and Shape Factors of MIM SS-174PH Powders on Dimensional Capability and Metallurgical Properties,
Mr Sachin Malgave (INDO-MIM PRIVATE LIMITED, India)

Virtual assessment of MIM/CIM Processes - Model based Simulation in the Context of AI Applications in Production,
Dr-Ing Götz Hartmann (MAGMA, Germany)

Discussion on Quality and Reliability in MIM,
Ingenieurbüro Dr. Petzoldt (Germany)

Special Interest Seminar: Tools for improving PM/EHQS

Session 7 - Monday 02 October - Time: 14:00 – 15:30

EHQS SIS: Chemical Management, Standards and Sustainability for PM

Chairs: Bruno Vicenzi & Kenan Boz

Presentations:

The Chemicals Strategy for Sustainability and the metals sectors,
Dr Simon Cook (EuroMetaux, Belgium)

TBA

Sustainability in PM technologies,
Mr Kenan Boz (EPMA, France)

Special Interest Seminar: Consolidation technologies/Metal Injection Moulding

Session 12 - Monday 02 October - Time: 16:30 – 18:00

MIM SIS: Sustainability of MIM

Chairs: Dipl. Ing. ETH, MBA Georg Breitenmoser (Parmaco Metal Injection Molding AG, Switzerland) & Prof. Ingenieurbüro Dr. Petzoldt (Germany)

Presentations:

Sustainable Metal Powders for Metal Injection Moulding and Sinter Based Additive Manufacturing,
Dr Paul Davies (Sandvik Additive Manufacturing, United Kingdom)

Investigation of the Product Carbon Footprint in a typical batch type MIM process,
Dr Timm Ohnweiler (Carbolite Gero GmbH, Germany)

Towards a more sustainable metal injection moulding process,





Special Interest Seminar: Consolidation technologies/Hot Isostatic Pressing

Dr Sebastian Hein (Fraunhofer IFAM, Germany)
 Session 20 – Tuesday 03 October – Time: 08:30 – 10:00
HIP SIS: Industrial Applications of HIP

Chairs: Mr Jim Shipley (Quintus Technologies AB, Sweden) & Dr Ing Anke Kaletsch (RWTH Aachen University, Germany)

Presentations:

The pathology of PM HIP Duplex Stainless Steels in industrial manufacturing,
 Tomas Berglund (MTC Powder Solutions, Sweden)

TBA

TBA

Special Interest Seminar: Consolidation technologies/AM & HIP

Session 28 - Tuesday 03 October - Time: 11:00 – 12:30
AM & HIP SIS: Benefits of combining AM & HIP

Chairs: Dr Ing Anke Kaletsch (RWTH Aachen University, Germany) & Dipl-Ing Claus Aumund-Kopp (Fraunhofer – IFAM, Germany)

Presentations:

HIP (Hot Isostatic Pressing) without risk for surface oxidation, potential user benefits,
 Anders Magnusson (Quintus, Sweden)

Improving the Properties of Titanium Alloy AM Parts through the use of Hot Isostatic Pressing,
 Tom Bell (Bodycote, UK)

TBA

Special Interest Seminar: Consolidation technologies/AM

Session 35 – Tuesday 03 October – Time: 14:00 – 15:30
AM SIS: Overview of the Evolution of AM Technologies

Chairs: Mrs Adeline Riou (Aubert&Duval, France) & Dipl-Ing Claus Aumund-Kopp (Fraunhofer – IFAM, Germany)

Presentations:

The short and mid-term future for industrial AM technology,
 Prof. Ian Gibson (University of Twente, Netherlands)

Understanding the opportunities and challenges building large parts in PBF LB,
 Alex Hardaker (MTC, UK)

Industrial Additive Manufacturing Using Water Atomized Steel Powder For Low To Medium Series Production,
 Amin Molavi Kakhki (Rio Tinto, Canada)

Special Interest Seminar: Materials/Functional Materials

Session 36 - Tuesday 03 October - Time: 14:00 – 15:30

FM SIS: Amorphous Metals by Powder Metallurgy

Chairs: Dr Sebastian Hein (Fraunhofer IFAM, Germany) & Mr Peter Kjeldsteen (Sintex a/s, Denmark) & Dr Moritz Stolpe (Consultant, Germany)

Presentations:**Additive Manufacturing of amorphous metals,**

Prof. Ralf Busch (Saarland University, Germany)

Accelerated Discovery of New Nanocrystalline and Amorphous Soft-Magnetic Alloys through Machine Learning and First-Principles Modelling,

Mr. Fazal Mahmood (Phaseshift Technologies Inc., Canada)

Laser Powder Bed Fusion of soft magnetic amorphous metals,

Ing Marcos Rodríguez Sánchez (IMDEA Materials, Spain)

Special Interest Seminar: Materials/Functional Materials

Session 44 - Tuesday 03 October - Time: 16:30 – 18:00

FM SIS: Sustainability of Critical Raw Materials by PM

Chairs: Dr Sebastian Hein (Fraunhofer IFAM, Germany) & Mr Peter Kjeldsteen (Sintex a/s, Denmark) & Dr Martin Bram (Forschungszentrum Juelich GmbH Inst Of Energy & Climate Research, Germany)

Presentations:**Add Up-cycling of steel swarf in powder metallurgical processes - Effective utilization of grinding sludge**

Dr.-Ing. Sebastian Jäger (University of Wuppertal, Germany)

Replacement of Tellurium in thermoelectric materials,

Dr. Hao Yin (TEGnology, Denmark)

Replacement of Co in diamond based tools,

Dr. Iñigo Agote (TECNALIA Research & Innovation, Spain)

Special Interest Seminar: Materials/Hard Metals, cermets and diamond tools

Session 51 - Wednesday 04 October - Time: 08:30 – 10:00

HM SIS: A 100 years development of Hard Materials - I

Chairs: Raquel de Oro Calderon & Dr Jose Garcia

Presentations:**Discovery of a fundamentally new material: To keep secret, patent or publish? History of inventions of hard and superhard materials,**

Dr Igor Konyashin, Bernd Ries (Element Six, Germany)

TBA

TBA





Special Interest Seminar: Consolidation technologies/Compaction and sintering

Session 52 - Wednesday 04 October - Time: 08:30 – 10:00

P&S SIS: Improving Sustainability and Cost in Pressing and Sintering - Part I

Chairs: Dr Caroline Larsson (Höganäs AB, Sweden) & Dr Cèsar Molins (AMES SA, Spain)

Presentations:

Sustainability – threat or opportunity?

Mr. Fredrik Vinnerborg (Höganäs AB, Sweden)

Production of high-density sintered metal steel components through the innovative die wall lubrication process: reduction of environmental impact and increased performance,

Mr Enrico Pasini (SACMI Imola S.C., Italy)

Role of Life Cycle Assessment in the context of Climate Change and Sustainable Development,

Dr-Ing Johannes Gediga (Sphera Solutions GmbH, Germany)

Special Interest Seminar: Materials/Hard Metals, cermets and diamond tools

Session 59 - Wednesday 04 October - Time: 11:00 – 12:30

HM SIS:A 100 years development of Hard Materials - II

Chairs: Dr Alexandra Kusoffsky & Prof Walter Lengauer

Presentations:

Why have Cemented Carbides become so technically and commercially important in the last 100 years?

Bernard North (North Technical Management, LLC, USA)

TBA

Cemented Carbides and Coatings – a scientific and sustainable approach,

Uwe Schleinkofer (Ceratizit, Luxemburg)

Special Interest Seminar: Consolidation technologies/Compaction and sintering

Session 60 – Wednesday 04 October – Time: 11:00 – 12:30

P&S SIS: Improving Sustainability and Cost in Pressing and Sintering - Part 2

Chairs: Dr Caroline Larsson (Höganäs AB, Sweden) & Dr Cèsar Molins (AMES SA, Spain)

Presentations:

On the potential of a digital twin of the PM process chain to improve efficiency and sustainability,

Mr Oliver Schenk (RWTH Aachen University, Germany)

Solutions for improving sustainability and competitiveness of PM structural parts: new powders, tailored processes and adapted equipment,

Dr Volker Arnhold (PM Solutions, Germany)

Discussion on Improving Sustainability and Cost in Pressing and Sintering,

Dr Caroline Larsson (Höganäs AB, Sweden)

Exhibition Information





Fraunhofer IFAM
108 SEMENS INDUSTRY SOFTWARE
B10c 19
**EURO
PM2023**

CONGRESS & EXHIBITION

**Reserve Your
Exhibition Stand**



**EURO POWDER
METALLURGY
Congress & Exhibition
1 - 4 October 2023
Lisbon, Portugal**



europm2023.com



The Meeting Place for the PM Industry in 2023

The Euro PM2023 Congress & Exhibition will take place in the Lisbon Congress Centre (CCL), Lisbon, Portugal.

Alongside the Euro PM2023 Industry Exhibition will be the Euro PM2023 Congress, which will showcase technical presentations and content that will attract a European audience of key industry professionals, some of whom may be your current customers and many more who could be your next!

Located within the conference centre, and with easy access to the Technical Sessions, delegate dining and refreshment facilities, the Euro PM2023 Exhibition will be the ideal location for positive and profitable delegate and exhibitor integration.

The Euro PM2023 Congress & Exhibition will be the only event in Europe in 2023 to cover all aspects of Powder Metallurgy and related sectors such as Additive Manufacturing, Hard Materials and Diamond Tools, Hot Isostatic Pressing, Metal Injection Moulding, New Materials, Processes and Applications and Press and Sinter and represent the entire PM related supply chain, making it an event not to be missed!

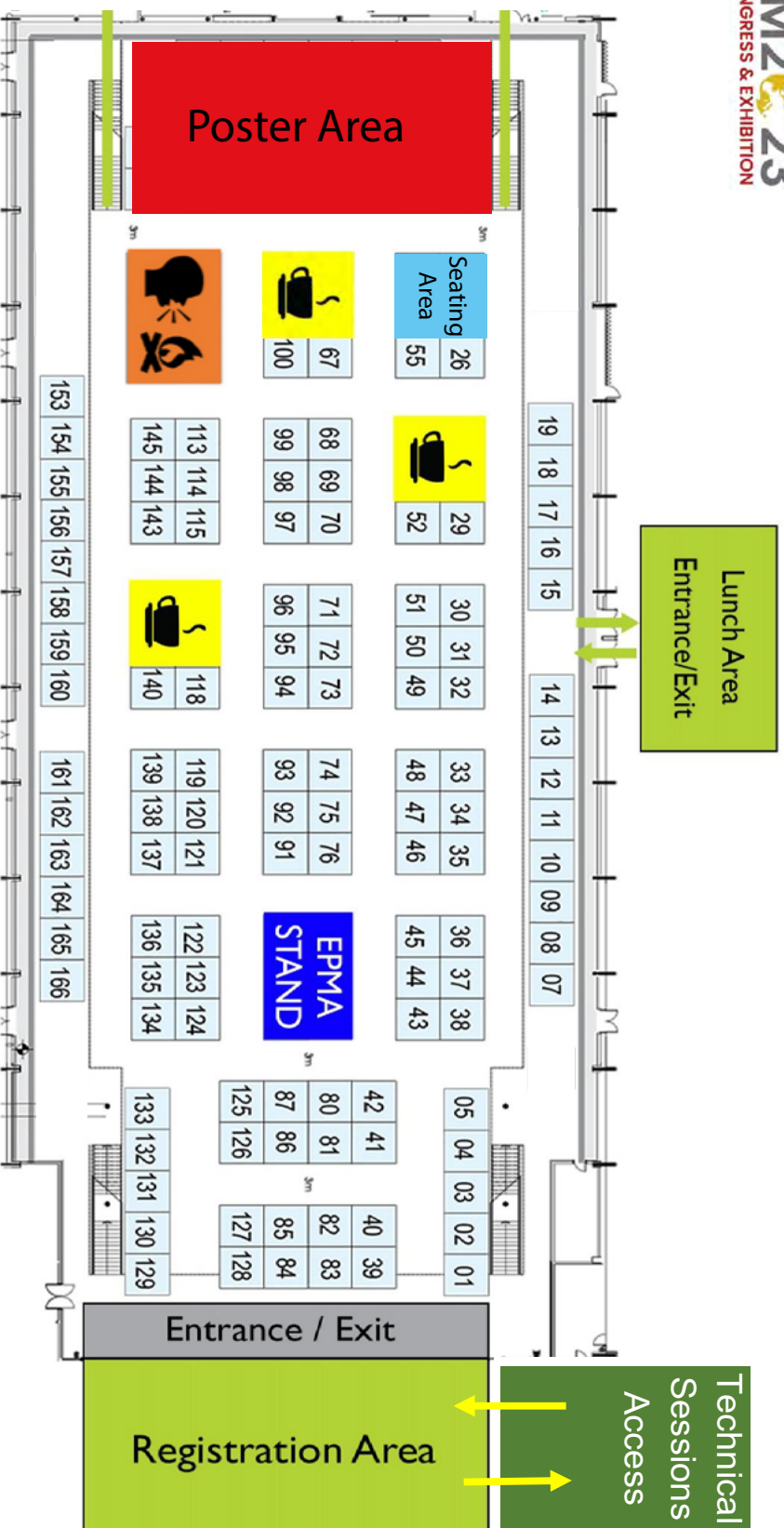
Reserve your Exhibition Stand Today

[Click here](#)

EURO PM2 23

CONGRESS & EXHIBITION

EURO
PM2
23
CONGRESS & EXHIBITION





3d Adept

3d Adept is a Communication Company dedicated to the 3D printing industry. 3D Adept Media provides the latest trends and analysis in the 3D printing industry in English & French. Our media include an online media and a bimonthly magazine, 3D Adept Mag. All issues of 3D Adept Mag are available to download free of charge. Our mission is to help any company develop its services and activities in the 3D printing industry.

<https://3dadept.com/en/>



Ceramic Applications

Ceramic Applications is the platform for advances in the development of ceramic components and systems for sustainable, economic applications in their wide range of industrial sectors. Design engineers need regular updates on innovative applications of ceramic materials as they can provide extraordinary combinations of mechanical, electrical, thermal and chemical properties for enhanced system engineering. Ceramic Applications aims to bridge the knowledge of ceramic manufacturers and the design engineers in the various industrial user sectors.

www.ceramic-applications.com



Ceramic Forum International

CFI Ceramic Forum International is the technical-scientific journal for the ceramic industry and provides a global overview of state-of-the-art technology and processes for all market sectors with a focus on tiles, tableware, sanitary ware, heavy clay and advanced ceramics, raw materials, refractories and powder metallurgy. CFI is the official main media partner of ceramitec 2018.

www.cfi.de



Diamante A&T Magazine

Diamante A&T is a quarterly international magazine featuring articles on diamond tools technology and industrial diamond applications in stone, building and mechanical sectors. First published in 1995 by G&M Associated, Diamante A&T

is the leading magazine for tools manufacturers, distributors and end users thanks to the quality of its articles always a step ahead in reporting new research and latest technologies.

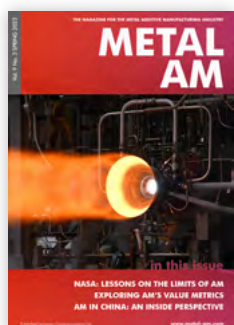
www.gmassdiamante.com



Fabricación Aditiva

FA FABRICACION ADITIVA is the additive magazine in Spanish and English, with a special edition in Chinese (10 editions a year)

metalspain.com/additive-manufacturing.htm



Metal AM

Metal AM magazine is the leading global media resource that is focused on the industrialisation of metal AM technologies from design and manufacturing to end-use applications. Published quarterly in both digital and print formats, supported by a content rich website, e-newsletter and rapidly-expanding social media presence. Metal AM reaches an expanding global audience that reflects the fastest growing metal component manufacturing process.

www.metal-am.com



Powder Injection Moulding International

PIM International is the leading global media resource for commercial and technical developments in metal (MIM) and ceramic (CIM) injection moulding, as well as the closely related sinter-based AM process. It is focused on the industrial application of these technologies, from design and manufacturing to end-use applications. Published quarterly and available in both print and digital formats.

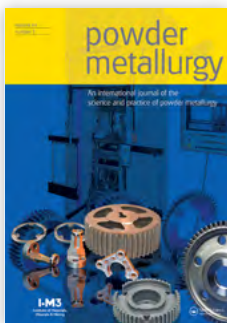
www.pim-international.com



Powder Metallurgy Review

PM Review is the leading global media resource for the design, production and application of press and sintered Powder Metallurgy components, as well as HIP/CIP and powder forging. This includes ferrous and non-ferrous components, hard materials, PM high alloy steels, superalloys, diamond tools and sintered magnets. PM Review also focuses on metal powder production for all end-use areas, including Additive Manufacturing. Published quarterly in both digital and print formats it supported by a content rich website, weekly e-newsletter and regular social media campaigns that promote PM as a progressive and dynamic metal forming technology.

www.pm-review.com



Taylor & Francis

Taylor & Francis is one of the leading research publishers in the world. Its key components include Taylor & Francis, Routledge, CRC Press, F1000 Research and Dovepress. We have published over 145,000 book titles and actively publish 2,700+ journals. Taylor & Francis is one of the world's leading publishers of high-quality, cross-disciplinary knowledge and specialty research which leads to modern advances in humanities and social sciences, science and technology, engineering, medicine and healthcare. Our journals program began in 1798 with the publication of Philosophical Magazine, and since then the knowledge that we have published has been helping to shape human understanding and drive policy, discoveries and change.

www.tandfonline.com



Tecnica Ceramica

Published since 1971, a professional magazine on equipment, techniques, raw materials, systems and production methods for the tile, roof tile, brick and ceramic, artistic and sanitary industries. Distributed to manufacturers of tiles, roof tiles, bricks, sanitary ware, ceramic craftsmen, associations, technical schools and universities in the main producing countries: Spain, Italy, France, Germany, Poland, Turkey, Brazil, USA, Mexico, China, India

www.publica.es



ANNOUNCING THE

EPMA POWDER METALLURGY COMPONENT AWARDS 2024

ENTRY DEADLINE 31 March 2024

THE BENEFITS

- Join an exclusive cohort of companies who have won the accolade previously
- Industry wide recognition
- Promotion of your win by video, press, brochure and on the EPMA websites
- All entries will be displayed in the EPMA Awards Showcase in Malmo
- All entries will be used in future for PM promotional activities
- Free to enter



ENTRY REQUIREMENTS

- Open to all companies, both EPMA Members and Non Members
- Companies can manufacture any type of component made by the following PM processes:
 - Additive Manufacturing
 - Hot Isostatic Pressing
 - Metal Injection Moulding
 - PM Structural (including Hard Materials and Diamond Tools parts)
- Winners must be willing to attend the Euro PM2024 Congress & Exhibition on 30 September 2024 in Malmö, Sweden to receive the Award

Previous Winners:



To find out more or to submit an entry, please visit:

@europmassoc #epmaAwards

<http://componentawards.epma.com/>



A WORLD RENOWNED TRAINING COURSE FOR YOUNG ENGINEERS AND SCIENTISTS

Learn of PM's advantages and limitations by some
of the leading academic and industrial personnel in Europe!



Politecnico di Torino, Alessandria



15-19 JULY 2024

APPLICATION DEADLINE: 1 MAY 2024

Visit us: summerschool.epma.com



SCAN ME

Grand Opening!

New Munich Office

1st October 2023

EPSON ATMIX CORPORATION Munich Office

Address : Riesstrasse 15, 80992 München, Germany **Contact :** Kei Takenuma

Email : Takenuma.Kei@exc.epson.co.jp **Web :** <https://www.atmix.co.jp/en/index.html>



The Fine Metal Powder Company
EPSON ATMIX CORPORATION
www.atmix.co.jp

