

CALL FOR PAPERS

Deadline for submissions: **February 15th 2023**



1ST FOUNDRY YOUNG RESEARCHERS AND EARLY CAREER PROFESSIONALS CONFERENCE

CONFERENCE APRIL 18th 2023

Online streaming

Americas, EMEA (Europe, the Middle East and Africa), Asia-Pacific sessions

ONLINE CONFERENCE OVERVIEW

The WFO is proud to announce the first **Foundry Young Researchers and Early Career Professionals Conference** taking place in April 2023.

The conference is an outstanding opportunity to connect with young researchers and professionals in the **early stages of developing their careers in our industry**, and offers an agenda of **advanced technical research** in topics like **Casting Solutions, Digital Foundry or Circular Economy and Sustainability** presented by some leading young industry professionals.

The authors of the **3 Best Papers** from the conference, as selected by the **Scientific Board**, will be **awarded with an invitation to GIFA 2023 in Düsseldorf, Germany**, where they will make a **live presentation of their work to the industry at the event**, strengthening their contacts and **networking with the global foundry industry**.

ONLINE CONFERENCE OVERVIEW

The conference will be held on a **digital platform on the World Wide Web** at **18th of April 2023**.

The **selected 20 lectures will be streamed in the form of recorded videos**. The conference is offered **three times during this day**. Starting in the time zone of Asia-Pacific (**APAC**), following by Europe, the Middle East and Africa (**EMEA**), and ending in **Americas**.

We invite young researchers and early career professionals to submit proposals of scientific work and /or examples of best practice on the topics detailed on the following slides

3 BEST PAPER AWARDS

Invitation to GIFA 2023 from 13th to 16th of June in Dusseldorf, Germany.
(Accommodation and travel will be paid by sponsors).

Live presentation of the 3 best papers in the Conference Area of the GIFA meeting point (*booth of German Foundry Association*) and at the EcoMetals forum.

Handover of the Awards
(first edition special awards)

- ▶ **Gold Award: 8.000 Euro**
- ▶ **Silver Award: 4.000 Euro**
- ▶ **Bronze Award: 2.000 Euro**

GIFA is the most important trade fair for foundry technology in the world

www.gifa.com

www.newcast.com/

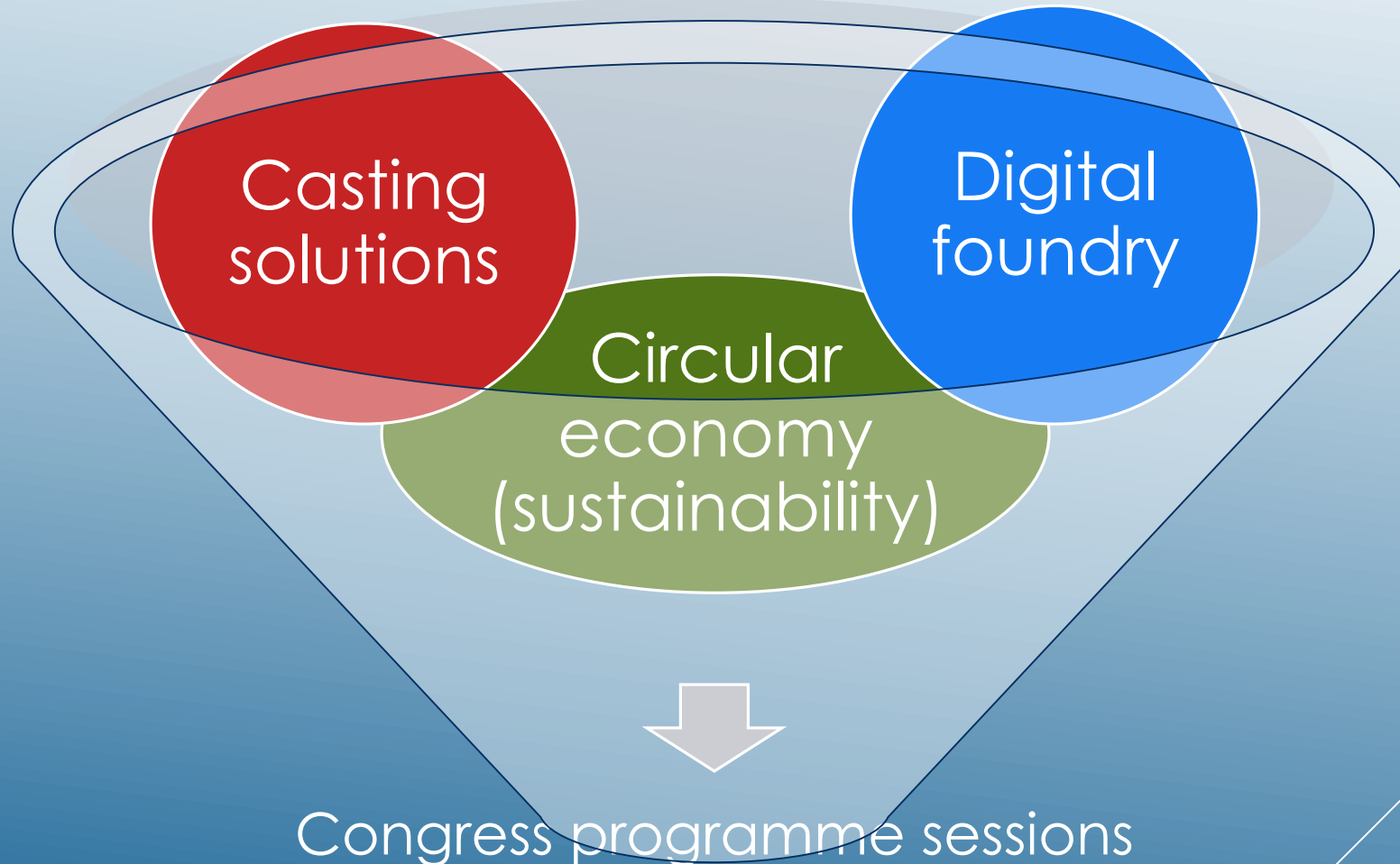


PROFILE OF AUTHORS TO APPLY TO THE CALL FOR PAPERS



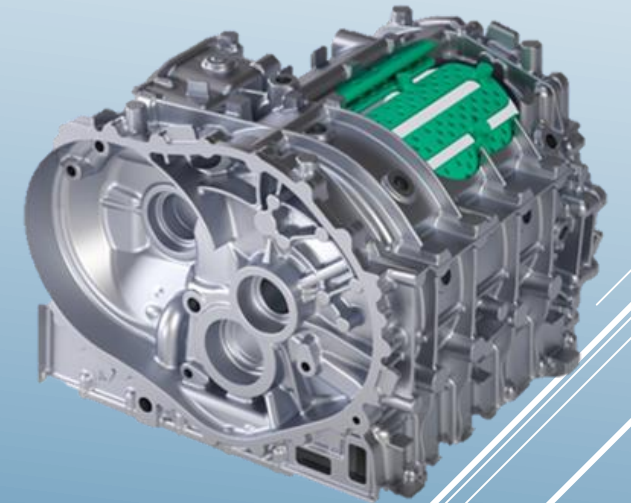
- ▶ Graduate Students who are enrolled on Masters courses directly related to the metal casting and metal-mechanical industry at the time of the abstract submission deadline.
- ▶ PhD students who are enrolled on their first PhD course at the time of the abstract submission deadline.
- ▶ Early Career Professionals and Researchers who work at companies, universities, research centers or knowledge centers.
- ▶ All candidates must be less than 35 years old.

TOPICS FOR THE CALL FOR PAPERS



TOPIC – CASTING SOLUTIONS

- ▶ High-quality components are characterized by high reliability, long service life, multifunctionality and complete recyclability. In addition, they should be able to be produced in an energy and resource-efficient manner and guarantee customers short delivery times. Cast components meet these requirements and have proven themselves in all sectors. Nevertheless, good solutions for high-quality casting materials, highly efficient casting processes and intelligent designs for combining different functions are constantly in demand.
- ▶ Market trends and changing boundary conditions are requiring specific developments in cast components for areas like E-mobility eg structural castings for automotive applications, or castings for green energy generation, and at the same time produced with lower energy consumption and a reduced CO₂ footprint, and with less waste.



Source: Nemak Europe

TOPIC – DIGITAL METHODS AND ENGINEERING FOR FOUNDRY

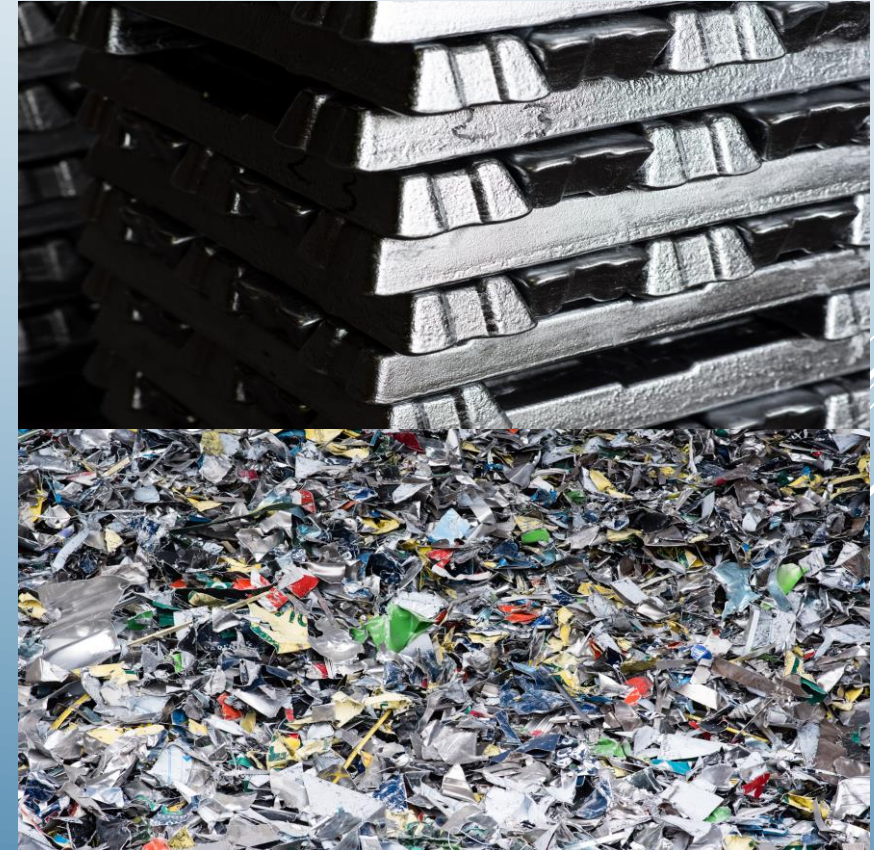
- ▶ The progress of digital methods and solution strategies is a main topic of research and development in manufacturing. Therefore, there is a need to improve the application of digital methods in many areas of the casting process.
- ▶ Examples include data driven analysis and quality assurance, data-based models to optimize the control of casting machines, use of artificial intelligence for design and process optimisation, and many more.
- ▶ The challenges for the casting industry are the robustness of sensors to generate and gather data, as well as reliability of systems, as well as the large variety and complexity of the factors that influence quality and process optimisation.



Source: ecoMetals, Düsseldorf Fair

TOPIC – CIRCULAR ECONOMY AND SUSTAINABLE FOUNDRY

- ▶ The casting process is one of the most effective ways to get from the primary material to a final end product with the lowest possible energy input, enabling the recycling and re-use of metal alloys.
- ▶ An increase in high-quality recycling of mixed scrap from material composites and components at 'end of life' also poses new challenges for the entire process chain. Foundries face challenging tasks in the industry's transformation towards climate neutrality. It is not clear from which sources the required CO₂-neutral energy demand will be met.
- ▶ Castings users also demand measures to meet the increasing requirements for life cycle assessments. There are no ready-made solutions for the diversity and complexity of these assessments



Source: Institute of Cast Metals Engineers

DOCUMENTATION TO BE PROVIDED

Call For Papers: to apply please visit the abstract submission website indicated below and provide up to 15th of February:

- ▶ **2 minutes video presentation** explaining the main ideas in your work;
- ▶ **Abstract** (max. 500 words, 1 or 2 pictures).

[CLICK HERE TO ACCESS THE WEBSITE TO SUBMIT THESE DOCUMENTS](#)

If the Scientific Board accepts your work for a presentation in the event, you will receive in the beginning of March a request by mail for a **15 minutes video presentation**.

This second video has to be sent up to 31st March 2023.

T I M E L I N E

15th of February

- Upload of a 2 minutes video and Abstract for Call for Papers

End of February

- Selection of the 20 best papers by the Scientific Board

End of March

- Upload of a 15 minutes video of the final presentation

April 18th

- Virtual conference in one day

Mid of May

- Decision of the Scientific Board about 3 Best Papers

June (12-16th)

- GIFA live presentation of 3 Best papers
- Handover of the Awards

Lifetime Legacy Sponsors



Supporting sponsors



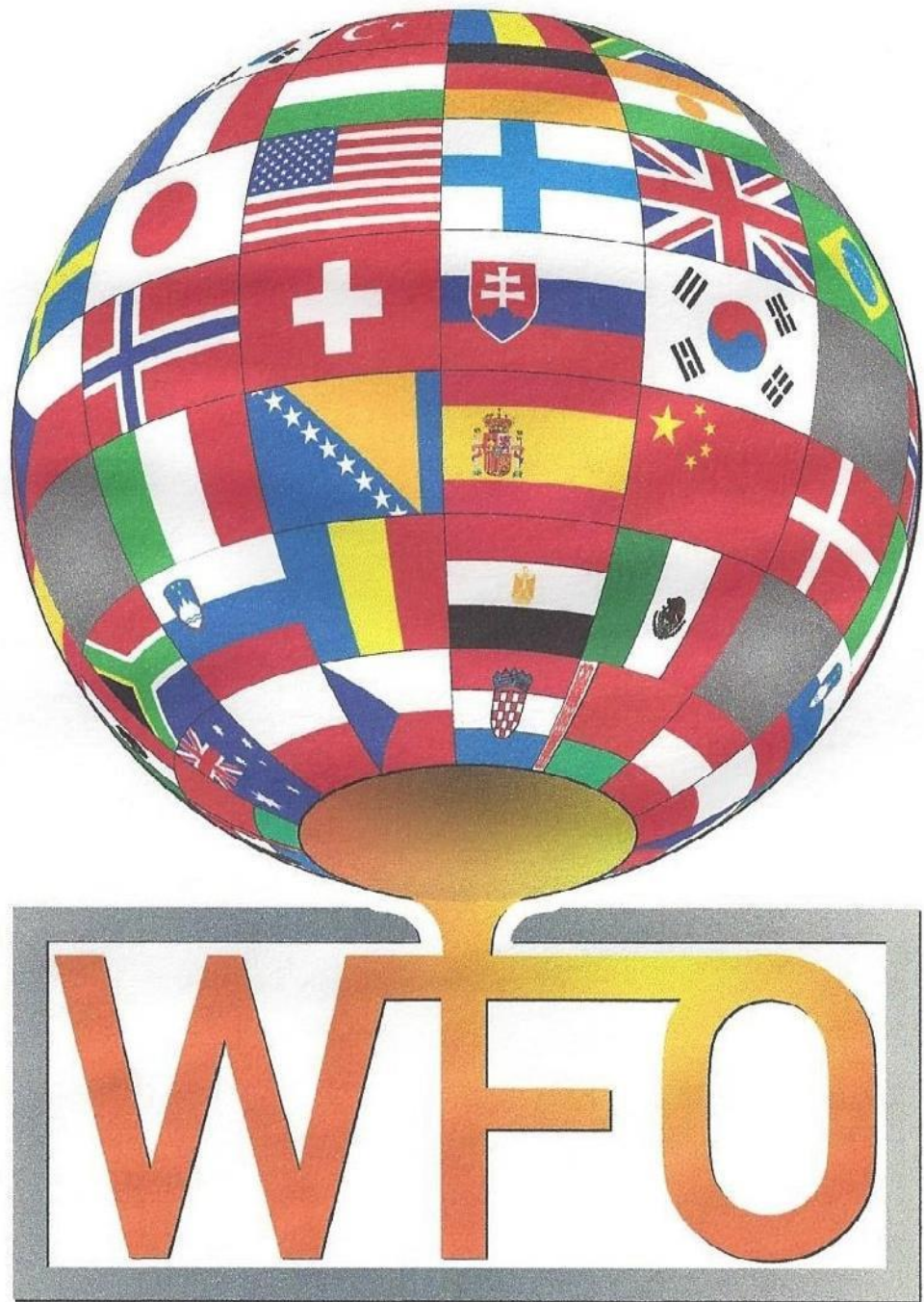
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The WFO is proud to count on the support of some leading companies for the organization of this virtual conference, along with the continuous support of its Lifetime Legacy Sponsors.



The World Foundry Organization

*The reference point for the
global metal casting industry*

Thank you

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