



# MULTIPHYSICS Conference 2023

14 - 15 November | Munich, Germany



NAFEMS

## A Key Technology for Simulation-Driven Engineering

Simulation-driven engineering defines a big step towards virtualization of the development of real-world designs, devices, and processes. As our real-world is multiphysical in nature, it is natural to see multiphysics CAE-based simulations as a key enabler for simulation-driven engineering.

Products are getting increasingly complex, and hence industry is constantly faced with new challenges to efficiently develop successful products. Success is not only limited to meeting functional requirements, but also to meet tighter regulations and faster time-to-market expectations, while keeping costs low and meet customer expectations for better products. Realistic multiphysics simulations to predict accurate product properties before a physical prototype is built are key to fulfill these requirements.

As a result, more and more physical disciplines are covered within the context of multiphysics simulations and utilization is widespread nowadays. While this series of conferences aims to cover the full bandwidth of multiphysics, we would like to highlight some application classes treated as emerging and future trends that will be discussed within this conference.

- In collaboration with the NAFEMS Multibody Dynamics Working Group we will organize a paper session focusing on multiphysics simulations coupling with multibody dynamics.
- With the NAFEMS Engineering Data Science Working Group we will jointly discuss the potential of Artificial Intelligence and Machine Learning being part of multiphysics simulations. This will also be supported by a specific paper session on this topic.
- Especially we would like to invite presenters from the field of multiphysics simulation in the context of Cloud Computing and Digital Twins.
- Another special topic will deal with maturity, quality assurance, and benchmarking of multiphysics simulations.

The conference brings together researchers, developers, teachers, and users of multiphysics simulation methods to present new results, exchange ideas and discuss potential challenges. It is an excellent opportunity to connect to other practitioners in the field of multiphysics and coupled simulations. It is jointly organized by NAFEMS Multiphysics Working Group, The International Society of Multiphysics, and the Fraunhofer Institute for Algorithms and Scientific Computing SCAI.

The NAFEMS Multiphysics Working Group (MPWG) has been set up to promote and support the use of Multiphysics simulations in industry. Please contact the chairman, Alfred Svobodnik, at [mpwg@nafems.org](mailto:mpwg@nafems.org) if you are interested joining the working group.

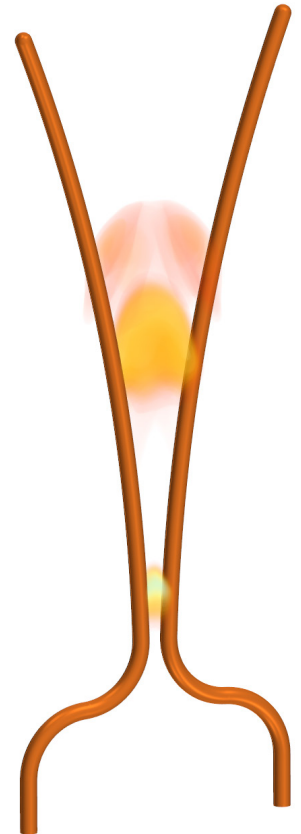
## Call for Presentations

In the first instance, abstracts of 300-600 words should be submitted for consideration by **30 June 2023** to [roger.oswald@nafems.org](mailto:roger.oswald@nafems.org). Abstracts must be clearly marked with presentation title, author's name, organization, address, phone numbers and email address. Authors whose abstracts are accepted will be asked to prepare an extended abstract (typically 2-4 pages) and a Power Point presentation - full written papers are not required. NAFEMS prides itself on its independence and neutrality so we kindly request that submissions avoid any overt commercialism.

We are looking forward to your abstract submission.

Your NAFEMS team

The conference will be organized by the NAFEMS Multiphysics Working Group  
in cooperation with Fraunhofer SCAI and Multiphysics.



## Dates

14 November 2023	planned	13:00 - 18:00
15 November 2023	planned	08:00- 17:00

## Venue

Industrieanlagen- Betriebsgesellschaft mbH  
Lilienthalstr. 12  
85521 Taufkirchen / Munich, Germany  
www.iabg.de

## Exhibition / Sponsoring

Please find further information on the conference website.

## Conference language

English

## Conference Fee

- Non NAFEMS members: 850 Euro/person\*
- NAFEMS member: Free towards using four NAFEMS seminar credits or 550 Euro/person\* if no NAFEMS seminar credits are available

Includes proceedings, lunches, coffee breaks and a certificate.

## Organisation

NAFEMS Deutschland, Österreich, Schweiz GmbH  
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85567 Grafing, Germany  
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Fax +49 3 22 11 08 99 13 41  
e-mail: info@nafems.de

## About NAFEMS

NAFEMS is the International Association of the Engineering Modelling, Analysis and Simulation Community. Our principal aims are to:

- Improve the professional status of all persons engaged in the use of engineering simulation
- Establish best practice in engineering simulation
- Provide a focal point for the dissemination and exchange of information and knowledge relating to engineering simulation
- Promote collaboration and communication
- Act as an advocate for the deployment of simulation
- Continuously improve the education and training in the use of simulation techniques
- Be recognised as a valued independent authority that operates with neutrality and integrity

We focus on the practical application of numerical engineering simulation techniques such the Finite Element Method for Structural Analysis, Computational Fluid Dynamics, and Multibody Simulation. In addition to end users from all industry sectors, our stakeholders include technology providers, researchers and academics.

## Conference website

[www.nafems.org/mp23](http://www.nafems.org/mp23)

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Please complete and return by fax to + 49 3 22 11 08 99 13 41 or e-mail to [roger.oswald@nafems.org](mailto:roger.oswald@nafems.org)

- I herewith register for the NAFEMS International Multiphysics Simulation Conference, 14 - 15 November 2023, Taufkirchen/Munich, Germany
- I am NAFEMS member – free attendance using 4 seminar credits
- I am NAFEMS member – no more seminar credits available: 550 Euro/person\*
- I am not NAFEMS member: 850 Euro/person\*
- I will submit an abstract which I will send by latest 30 June 2023 to [roger.oswald@nafems.org](mailto:roger.oswald@nafems.org).

Please send an agenda when published.

Please send exhibitor information.

Please send information about sponsoring opportunities.

\* plus 19% German VAT

## Sender

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By registering, you allow us to use and process your information in accordance with our privacy policy: [www.nafems.org/about/privacy/](http://www.nafems.org/about/privacy/)

Online registration: [www.nafems.org/mp23](http://www.nafems.org/mp23)