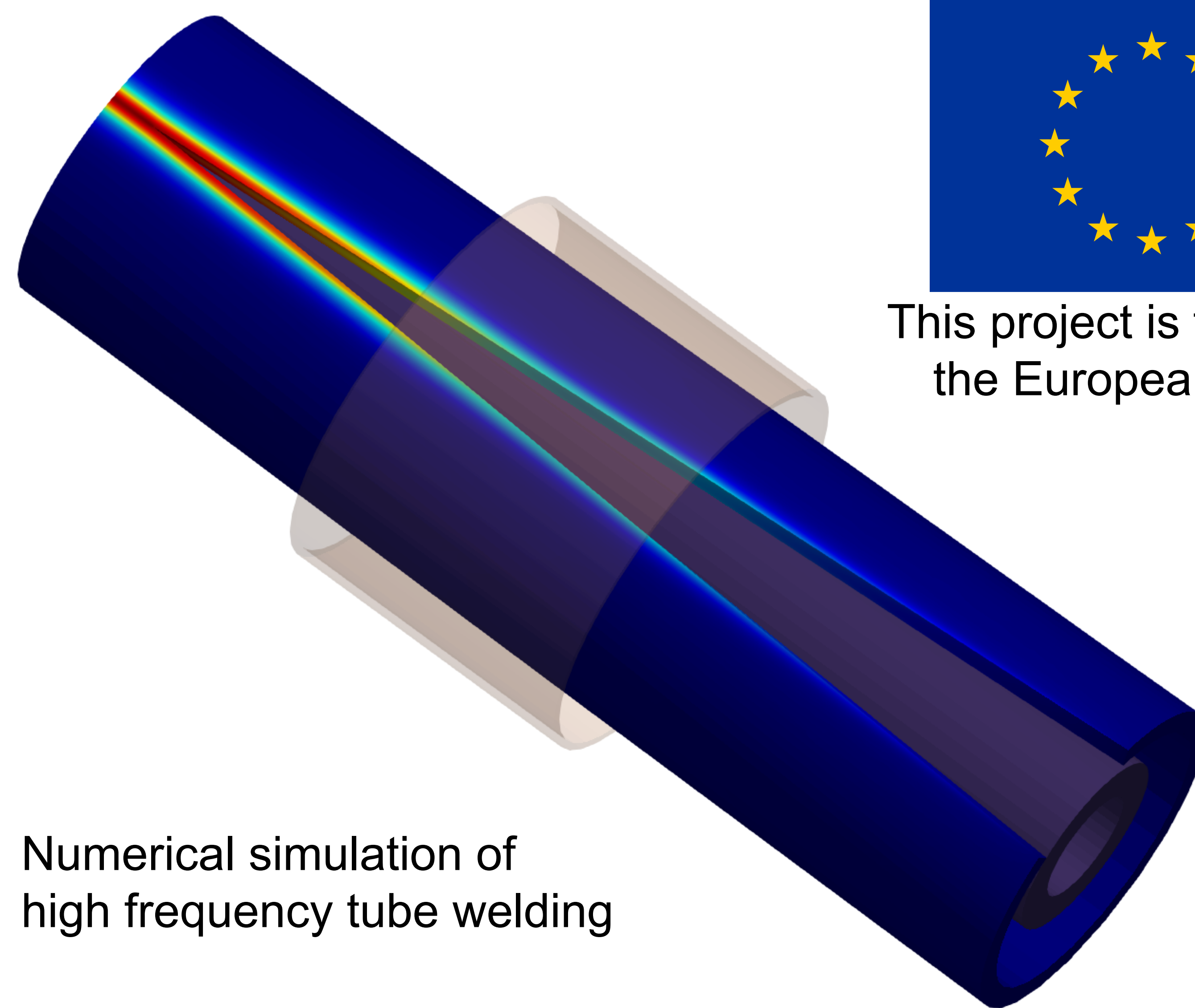


# Workshop on Mathematics and Materials Science for Steel Production and Manufacturing

June 4–5, 2019, Skien/Norway



This project is funded by the European Union



Numerical simulation of high frequency tube welding

## OBJECTIVES

The last fifteen years have seen the development of ever more refined high-strength and multiphase steels with purpose-designed chemical compositions allowing for significant weight reduction, e.g., in automotive industry. The production of these modern steel grades needs a precise process control, since there is only a narrow process window available in which the desired physical properties are defined.

In combination with component walls getting thinner and thinner these new steels make also new demands on a more precise process control in metal manufacturing processes, such as welding and hardening. Improved and optimized process control requires quantitative mathematical modelling, simulation and optimization of the complex thermal cycles and thermal gradients experienced by the processed material. Such models require an understanding of the behavior of the materials from a materials science and phase transformations perspective.

The goal of the workshop is to bring together scientists from academia and industry working on the interface between modeling, simulation and materials science with applications in steel production and manufacturing.

## INVITED SPEAKERS

Jonas Edberg (Luleå University of Technology)

Dolores Gómez Pedreira (University of Santiago de Compostela)

Tim Haas (RWTH Aachen)

Martin Hunkel (IWT Bremen)

Åke Jansson (Thermo-Calc Software AB)

Jari Larkiola (University of Oulu)

Seppo Louhenkilpi (Aalto University)

Alfred Schmidt (University of Bremen)

## CONTRIBUTED TALKS OR POSTERS

Please submit your abstract using the registration form before *April 30, 2019*. The final decision on acceptance will be notified by *May 12, 2019*.

## REGISTRATION

You can register online using the link of the conference web page (see below) before *April 30, 2019*. The registration is free of charge. The maximal number of participants for the workshop is restricted. Hence, we may not be able to accept all registrations. The final decision for participation will be notified by *May 12, 2019*.

## ORGANIZERS

John Inge Asperheim (EFD Induction Skien)

Bjørnar Grande (EFD Induction Skien)

Dietmar Hömberg (WIAS Berlin)

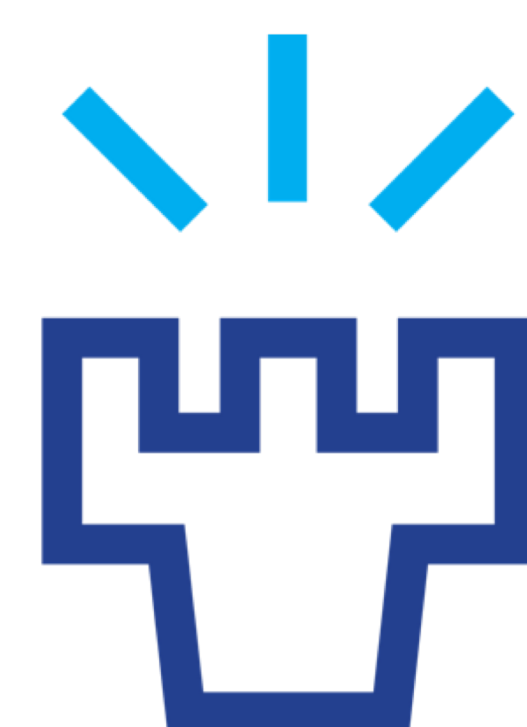
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## MIMESIS CONSORTIUM



Weierstrass Institute for Applied Analysis and Stochastics



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Further information: <http://www.wias-berlin.de/workshops/MIMESIS19>