

NUMAP-FOAM Summer School 2025

Numerical Modelling of Coupled Problems in Applied Physics with OpenFOAM (NUMAP-FOAM) Summer School 2025 at the University of Zagreb, Croatia

The Faculty of Mechanical Engineering announces the 18th edition of the Summer School on Modelling of Coupled Problems in Applied Physics with OpenFOAM (NUMAP-FOAM) for graduate students and young researchers in Zagreb in September 2025. The Program Chairs are Professor Hrvoje Jasak (University of Cambridge, UK) and Asst. Prof. Tessa Uroić (University of Zagreb, Croatia).

Description

The School aims to provide tuition at expert level for a small and selected group of students and researchers in academia and industry. The idea of the NUMAP-FOAM School is to expand the physical modelling knowledge, numerics and programming skills of attendees using OpenFOAM in their research through direct supervision and one-to-one project work. Lectures on chosen topics of mathematical and numerical modelling pertinent to coupled problems in engineering and applied physics will be delivered in addition. For further references, please contact the organisers or one of more than 200 alumni of previous editions of the School.

To ensure quality of work and supervision, the number of places is strictly limited.

Place and Time

The Summer 2025 edition NUMAP-FOAM shall **take place between Monday, 1 September 2025 and Friday, 12 September 2025, inclusive (10 working days) in Zagreb**. The School shall be held at The Faculty of Mechanical Engineering and Naval Architecture, University of Zagreb, Croatia.

Topic Areas

Students are invited to propose their own topics for the School. Preference shall be given to project which required complex programming tasks in OpenFOAM, advanced C++ and

software engineering and implementation of complex and coupled physical models in OpenFOAM.

The programme of the School this year will include:

- introductory presentations of topics of all attendees (Monday 1st September),
- lectures on: FVM discretisation, numerical linear algebra and linear solvers, equation coupling, turbulence, two-phase flows, object-oriented programming in OpenFOAM (data types, containers, basic classes in OpenFOAM, programming tips and tricks),
- closing NUMAP-FOAM Mini Conference (Friday 12th September), open to public.

How to Apply: NUMAP-FOAM Summer School 2025

To apply, please write a one-page description of the project you wish to work on, with current problems and goals to be achieved at the School. Application is open to all students on graduate University courses, as well as young researchers in companies and government organisations with sufficient prior OpenFOAM knowledge. Please note *this is NOT an introductory OpenFOAM course*: significant understanding of the project and software is a pre-requisite for application.

The **deadline for application is 2nd June 2025**. Successful candidates will be informed within two weeks of closing.

Accommodation and Costs

Attendees to the School should plan to cover their travel and accommodation expenses, bringing a laptop computer with them. There is a number of accommodation options available in Zagreb, please contact the organisers for details.

A registration fee for the School is EUR 2000 (+ VAT) per attendee.

Contact Details

For further details and submission of project proposals, please **contact Asst. Prof. Tessa Uroić** (tessa.uroic@fsb.hr).

Tradition

This is the 18th edition of NUMAP-FOAM, starting with a group of 10 attendees in 2008.