

# MESHFREE – Advanced

Virtual course

<https://www.meshfree.eu/en/events.html>



## Course content

Using water management of vehicles as an example, participants will learn selected advanced features.

Lectures and practical exercises will alternate. The following topics will be elaborated.

- Movement of geometrical parts (driving movement of a car, fluid-structure-interaction)
- Anisotropic porosity (e.g., for engine compartment components)
- Generation of droplets
- Options for performance enhancement (adaptive refinement of flow domain, feeder-cutter-principle)
- Postprocessing options (e.g., flux measurement, mapping of quantities onto geometries)

## Prerequisites

Successful completion of the “Introduction to MESHFREE” course or the [“Getting Started > Basics”](#) in the MESHFREE documentation is a mandatory prerequisite for this course.

Technical aspects:

- Participants need a PC or laptop with (integrated) webcam as well as microphone and loudspeakers (a headset would be optimal).
- MESHFREE as well as ParaView must be installed on the participants’ PC or laptop in a Linux-based system (real or virtual machine).  
*MESHFREE is currently compiled on Red Hat Enterprise Linux 7 and OracleLinux 8.*

## Video conference tool

We will use Microsoft Teams for communication. For this, we will create a team solely for this course that participants will be added to by email address. Specific topics and questions can be discussed on separate channels if needed.

### Course language

English

### Course instructor

MESHFREE team (Fraunhofer ITWM)

### Course duration

Two half days of training, each from 9:00 to 13:00.

*All times in UTC+2:00 from last Sunday in March to last Sunday in October, UTC+1:00 from last Sunday in October to last Sunday in March.*

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### Registration

Please register bindingly via mail to [support@meshfree.eu](mailto:support@meshfree.eu) up to two weeks before the course date.

**The course will only take place if there are at least four binding registrations.**

*Please note that export control must be carried out for non-German participants/organizations.*

### Course fees

None

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*Keep up to date on the planning of future courses without obligation via the following mailing list.*

*To subscribe, send an email to [meshfree-training-interest-subscribe@itwm.fraunhofer.de](mailto:meshfree-training-interest-subscribe@itwm.fraunhofer.de)*