



Experiences and Results from the Summer School at BOKU

Daniel Wildt

Workshop on the sustainability of the SWARM results
Aristotle University of Thessaloniki
20 – 21 December 2021

21st December 2021

Outline I



University of Natural Resources
and Life Sciences, Vienna
Department of Water, Atmosphere
and Environment

Course summary

Date and
participants

Contents week 1

Contents week 2

Evaluation and experiences

A screenshot of a web browser showing the course page for 'SWARM Summer School: Computational Methods in Hydrodynamics for Water Resources Management'. The page has a green header with the course title and a 'Turn editing on' button. On the left is a navigation menu with options like 'Participate', 'Contact', 'Dates', 'Credits', 'Download center', 'Sections', 'General', 'Numerical solution of problems in hydrodynamics', 'CFD with OpenFOAM', 'Course summary and evaluation', 'Topic 4', 'Topic 5', 'Dashboard', 'Calendar', 'Private files', and 'Content bank'. The main content area includes an 'Announcements' section with a link to the summer school, a 'Booklet', 'Welcome presentation', and 'Program' section. Below that is a section titled 'Numerical solution of problems in hydrodynamics' with sub-sections for 'Introduction to unsteady problems in hydrodynamics', 'Presentation topics, mass transport', and 'Conclusions'.

Course summary: Date and participants



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Venue

- ▶ Summer School in winter due to COVID-19 restrictions
- ▶ 15th – 26th November 2021
- ▶ held entirely online via Zoom



Participants

- ▶ University of Nis
- ▶ University of Sarajevo
- ▶ University of Montenegro
- ▶ Academy of Applied Sciences of Kosovo and Metohija
- ▶ University of Natural Resources and Life Sciences, Vienna (guest)

Course summary:

Contents week 1



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- ▶ Introduction to unsteady problems in hydro- dynamics
- ▶ Ordinary differential equations
- ▶ Partial differential equations – Development of a flood wave
- ▶ Theory on computer-based river modelling
- ▶ 1D models, error estimation
- ▶ Unsteady pipe flow (hydraulic surge)

Course summary: Contents week 2

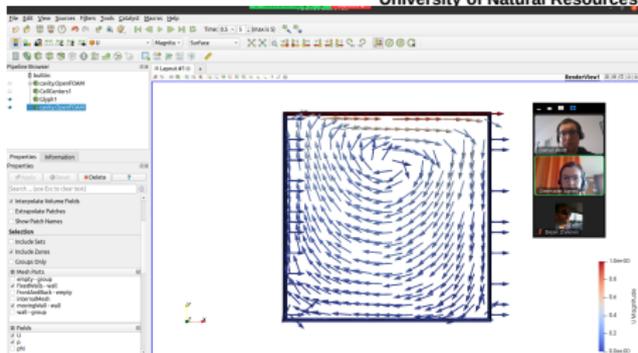


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- ▶ Introduction to OpenFOAM
- ▶ Workshop @Ghent Universtiy by Prof. Hrvoje Jasak and Kenneth Hoste in May 2016:



Introduction
OpenFOAM: Multi-
phase and Free-
Surface Flows

t



- ▶ 2:45 volume fraction
- ▶ 8:50 Eulerian multi phase model
- ▶ 17:00 free-surface flow
- ▶ 31:40 Lagrangian particle tracking
- ▶ 41:15 liquid film model
- ▶ 48:25 free surface tracking
- ▶ 55:10 summary, examples VOF-solver

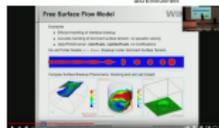


Fig.: Introduction to OpenFOAM: Multiphase and Free-Surface Flows <https://www.youtube.com/watch?v=oP1DnB8Tbc8> (1.04.22)

Evaluation and experiences



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- ▶ interaction extremely difficult
- ▶ hands-on and practical work difficult
- ▶ good experience with joint session with BOKU students



School at BOKU - Evaluation form

Thank you for taking the time to complete this questionnaire. Your comments are important to us and provide us with valuable feedback on the quality of the organized school.

[In Google anmelden](#), um den Fortschritt zu speichern. [Weitere Informationen](#)

* **Erforderlich**

E-Mail-Adresse *

Ihre E-Mail-Adresse

Co-funded by the
Erasmus+ Programme
of the European Union



Evaluation and experiences



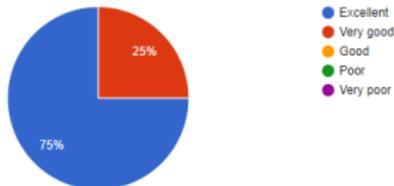
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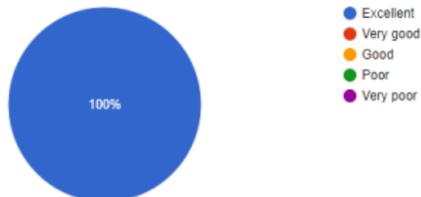
Logistic preparation (visa, invitations, enrolment) and organization of school

4 responses



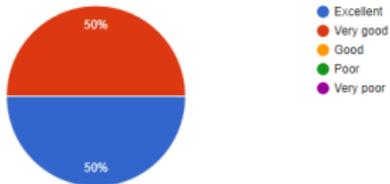
Arrangements of the event (venue, equipment, etc.)

4 responses



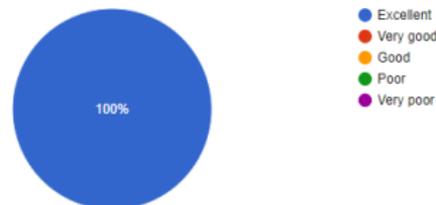
Content of the agenda

4 responses



Quality of delivered documentation

4 responses



Evaluation and experiences



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How do you rate the attention given to you?

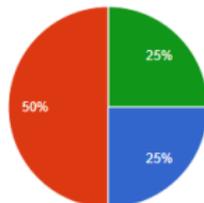
4 responses



● Excellent
● Very good
● Good
● Poor
● Very poor

How do you rate social activities and possibilities to interact with others?

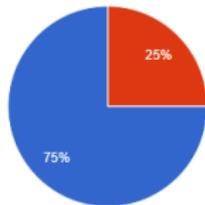
4 responses



● Excellent
● Very good
● Good
● Poor
● Very poor

Are you satisfied with the content of the lectures?

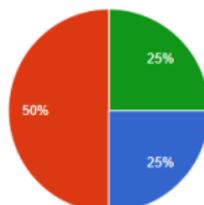
4 responses



● Excellent
● Very good
● Good
● Poor
● Very poor

Engagement of the participants in the activities and discussions

4 responses



● Excellent
● Very good
● Good
● Poor
● Very poor

Evaluation and experiences



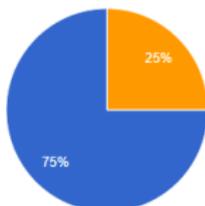
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How do you rate opportunities to be adventurous?

4 responses



● Excellent
● Very good
● Good
● Poor
● Very poor

Usefulness of what you learned for your current studies and future profession?

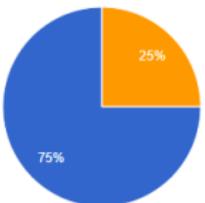
4 responses



● Excellent
● Very good
● Good
● Poor
● Very poor

In a general, how do you rate the classroom?

4 responses



● Excellent
● Very good
● Good
● Poor
● Very poor

How would you rate the school you have been given?

4 responses



● Excellent
● Very good
● Good
● Poor
● Very poor



- ▶ “poor evaluation for corona // very good evaluation for the university”
- ▶ “Everything was great, thank you!”
- ▶ “Congratulations on the excellent organization, efficiency in communication and the quality of the lessons. Although due to the obligations I had, I could not attend all the lectures, the material that was available to all of us was of great use, and the lectures of Daniel Wildt were very interesting! Special praise for the way the topic is approached. Thank you for the opportunity to be a part of this project!”



**University of Natural Resources and Life Science,
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