

Literature and Tools



EuroCC workshop

Aleksander GRM

13-15, June 2022



There are two main web pages with links to literature:

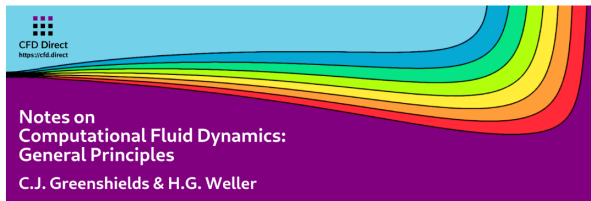
- ▶ openfoam.org (on PC workstations)
- ▶ cfd.direct (on HPC systems)

User guides:

- ▶ User Guide #1
- ▶ User Guide #2
- ▶ Programming Guide – Learn c++ code!



[link to the book](#)



About the Book

Notes on Computational Fluid Dynamics (CFD) was written for people who use CFD in their work, research or study, providing essential *knowledge* to perform CFD analysis with confidence. It offers a modern perspective on CFD with the finite volume method, as implemented in OpenFOAM and other popular general-purpose CFD software. Fluid dynamics, turbulence modelling and boundary conditions are presented alongside the numerical methods and algorithms in a series of short, digestible topics, or *notes*, that contain complete, concise and relevant information. The book benefits from the experience of the authors: Henry Weller, core developer of OpenFOAM since writing its first lines in 1989; and, Chris Greenshields, who has delivered over 650 days of CFD training with OpenFOAM.

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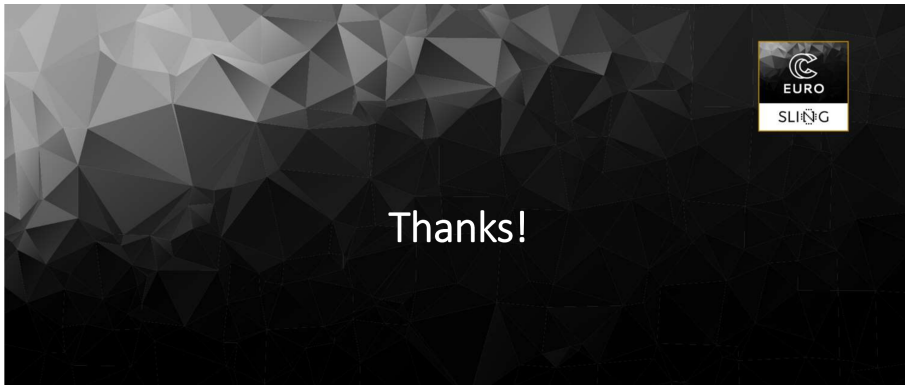
- Preface
- Symbols
- 1 Introduction
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- 4 Boundary Conditions
- 5 Algorithms and Solvers
- 6 Introduction to Turbulence
- 7 Reynolds-Averaged Turbulence Modelling
- 8 Sample Problems
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ISBN 978-1-3999-2078-0, 291 pages.

[link to the book](#)



- ▶ Small introduction into PDEs
- ▶ Solution methods
- ▶ Mesh description



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