

Computational Fluid Dynamics (CFD) is now a cornerstone technology in the design, analysis, and optimization of systems across a wide range of industries — from energy and aerospace to biomedical and environmental engineering. It also serves as a powerful research tool in an ever-growing number of scientific domains.

While traditional CFD methods such as Finite Volume and Finite Element remain fundamental, the rapid evolution of computing capabilities and numerical modeling has brought forth a new wave of approaches — from machine learning-assisted solvers and Reduced-Order Models, to meshless techniques and even the first quantum-inspired methods.

CFD-FORWARD 2026, a one-week intensive Summer School, aims to equip PhD students and young researchers with a broad and up-to-date perspective on both classical and emerging CFD methodologies. The program will feature a mix of lectures and hands-on sessions, covering not only established methods but also cutting-edge developments.

Taught by leading academics and experts, the School also offers practical insights into open-source CFD platforms, model reduction strategies, and the integration of data-driven techniques in simulation workflows.

CONTRIBUTORS

Prof. **Pietro Asinari**, Politecnico di Torino
 Dr. **Simone Bnà**, CINECA
 Prof. **Marco Cavazzuti**, Univ. di Modena e Reggio Emilia
 Prof. **Antonio Ghidoni**, Università di Brescia
 Prof.ssa **Beatrice Pulvirenti**, Università di Bologna
 Prof.ssa **Maria Vittoria Salvetti**, Università di Pisa
 Prof. **Giovanni Stabile**, Scuola Superiore Sant'Anna Pisa
 Prof. **Alfonso William Mauro**, Univ. Federico II Napoli
 Dr. **Riccardo Zamolo**, Università di Trieste
 Prof. **Fabio Inzoli**, Politecnico di Milano
 Prof. **Enrico Nobile**, Università di Trieste

ADDITIONAL INFORMATIONS

Additional info about the Summer Schools can be found on the website: www.uitonline.eu.

For any further questions and requests, please contact Prof. Fabio Inzoli (fabio.inzoli@polimi.it) or Prof. Enrico Nobile (nobile@units.it), Directors of the 21st UIT Summer School.

CREDITS FOR PHD STUDENTS

PhD Students can gain credits according to the regulation of their own PhD School. In addition to the Attendance Certificate, a Proficiency Certificate can be obtained upon submission of a report on one of the topics addressed in the program.

APPLICATION AND FEES

The registration fee is € 850,00 and includes attendance to the Summer School, coffee breaks during the lessons, and full board treatment in a double room from the dinner of Sunday, August 30 to the breakfast of Saturday, September 5. For single room accommodation a € 150 supplement will be required.

The 50% of registration fee (€ 425,00) must be paid before 17 July 2026, following the instructions given within the registration form. The remaining 50% (€ 425,00) plus the single room supplement (€ 150,00), if requested, must be paid directly during the check-in at Certosa di Pontignano.

Please, to apply download ([here](#)) and complete (in PDF or RTF format) the registration form, and kindly send it by e-mail, before 17 July 2026, to:

info@lacertosadipontignano.com and adriano.lezzi@unibs.it

LOCATION

The 21st Summer School will be held in the prestigious Ancient Certosa di Pontignano, a unique place where nature, history and hospitality blend together in a memorable harmony, at a few kilometers from Siena, in the heart of Chianti, on a hill dominating the town.

Further information: www.lacertosadipontignano.com.



21st UIT Summer School
31 August – 4 September 2026

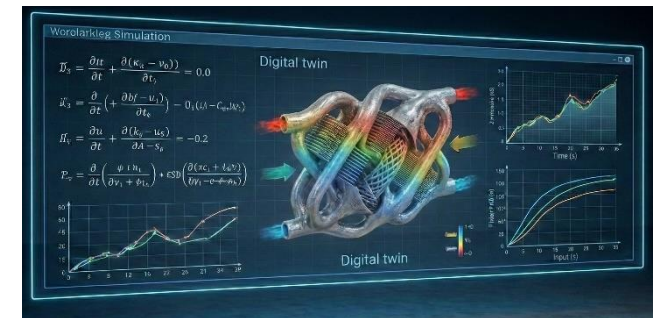


Image generated by Chat-GPT 4.0

CFD-FORWARD 2026

PUSHING THE FRONTIERS OF THERMAL-FLUID SIMULATIONS

Directors:

Professor Fabio Inzoli
Politecnico di Milano

Professor Enrico Nobile
Università degli Studi di Trieste

Programme

	Monday 31 August	Tuesday 1 September	Wednesday 2 September	Thursday 3 September	Friday 4 September
8.30	Fabio Inzoli, Enrico Nobile <i>Welcome, school topics and objectives</i>	Riccardo Zamolo <i>Meshless methods in CFD and Heat Transfer</i>	Maria Vittoria Salvetti <i>Uncertainty quantification and stochastic sensitivity analysis in numerical simulation of complex flows</i>	Giovanni Stabile <i>Reduced-Order Models (ROM) in CFD and Heat transfer</i>	Alfonso William Mauro <i>AI and machine learning in CFD and Heat Transfer</i>
9.20	Beatrice Pulvirenti <i>OpenFOAM in CFD and Heat Transfer</i>	Riccardo Zamolo <i>Meshless methods in CFD and Heat Transfer</i>	Maria Vittoria Salvetti <i>Uncertainty quantification and stochastic sensitivity analysis in numerical simulation of complex flows</i>	Giovanni Stabile <i>Reduced-Order Models (ROM) in CFD and Heat transfer</i>	Alfonso William Mauro <i>AI and machine learning in CFD and Heat Transfer</i>
10.15	Coffee break	Coffee break	Coffee break	Coffee break	Coffee break
10.45	Beatrice Pulvirenti <i>OpenFOAM in CFD and Heat Transfer</i>	Riccardo Zamolo <i>Meshless methods in CFD and Heat Transfer</i>	Maria Vittoria Salvetti <i>Uncertainty quantification and stochastic sensitivity analysis in numerical simulation of complex flows</i>	Giovanni Stabile <i>Reduced-Order Models (ROM) in CFD and Heat transfer</i>	Alfonso William Mauro <i>AI and machine learning in CFD and Heat Transfer</i>
11.40 12.30	Beatrice Pulvirenti <i>OpenFOAM in CFD and Heat Transfer</i>	Antonio Ghidoni <i>High Order methods in CFD and Heat Transfer</i>	Marco Cavazzuti <i>Optimization in CFD and Heat Transfer</i>	Pietro Asinari <i>Quantum Computing in CFD and Heat Transfer</i>	Simone Bnà <i>Accelerating Fluid Dynamics: Leveraging GPU Architectures for Exascale CFD Simulations</i>
13.00	Lunch	Lunch	Lunch	Lunch	Lunch
14.15	Beatrice Pulvirenti Hands on	Antonio Ghidoni <i>High Order methods in CFD and Heat Transfer</i>	Marco Cavazzuti <i>Optimization in CFD and Heat Transfer</i>	Pietro Asinari <i>Quantum Computing in CFD and Heat Transfer</i>	Simone Bnà <i>Accelerating Fluid Dynamics: Leveraging GPU Architectures for Exascale CFD Simulations</i>
15.10	Beatrice Pulvirenti Hands on	Antonio Ghidoni <i>High Order methods in CFD and Heat Transfer</i>	Marco Cavazzuti <i>Optimization in CFD and Heat Transfer</i>	Pietro Asinari <i>Quantum Computing in CFD and Heat Transfer</i>	Simone Bnà <i>Accelerating Fluid Dynamics: Leveraging GPU Architectures for Exascale CFD Simulations</i>
16.00	Coffee break	Coffee break	Coffee break	Coffee break	Coffee break
16.30	<i>Opportunity for the attendees to present and discuss their own research activity with school speakers and colleagues</i>	Riccardo Zamolo Hands on	Marco Cavazzuti Hands on	Pietro Asinari Hands on	<i>Closing meeting & Departures</i>
17.20 18.15	<i>Opportunity for the attendees to present and discuss their own research activity with school speakers and colleagues</i>	Riccardo Zamolo Hands-on	Marco Cavazzuti Hands on	Pietro Asinari Hands on	
20.00	Dinner	Dinner	Dinner	Dinner	Dinner
		Social Event: Vin santo e cantucci			