

2024 KRATOS MULTIPHYSICS WORKSHOP @ UNIPD

ANTONIA LARESE *University of Padova (Italy)*
RUBÉN ZORRILLA MARTÍNEZ *UPC/CIMNE (Spain)*
CARLOS ROIG *CIMNE (Spain)*
SUNETH WARNAKULASURIYA *Technische Universität München (Germany)*
NICOLÒ CRESCENZIO *University of Padova (Italy)*

NOVEMBER 6-8, 2024

KRATOS WORKSHOP DAY 1 – NOVEMBER 6TH, 2024

14:00 - 14:30	Welcome
	Introduction to Kratos
14:30 - 15:15	Kratos. Why? What? How? An Historical Perspective (<i>Pooyan Dadvand & Riccardo Rossi</i>)
15:15 - 16:00	Kratos: an Overview (<i>Pooyan Dadvand & Riccardo Rossi</i>)
16:00 - 16:30	Coffee Break
	Kratos 4 Industry
16:30 - 17:00	Collaboration with Industry in Germany (<i>Suneth Warnakulasuriya</i>)
17:00 - 18:00	Deltares (<i>Jonathan Nuttall</i>)
18:00 - 18:30	Altair (<i>Pooyan Dadvand</i>)

KRATOS WORKSHOP DAY 2 – NOVEMBER 7TH, 2024

	What's New in Kratos? Application Session (1)
09:00 - 09:30	Computational Fluid Dynamics (<i>Rubén Zorrilla Martínez</i>)
09:30 - 10:00	Computational Solid Mechanics (<i>Suneth Warnakulasuriya</i>)
10:00 - 10:30	Reduced Order Models (<i>Riccardo Rossi</i>)
10:30 - 11:00	Coffee Break
	What's New in Kratos? Application Session (2)
11:00 - 11:30	Optimization and System Identification (<i>Ihar Antonau</i>)
11:30 - 12:00	Coupling: the CoSimulationApplication (<i>Rubén Zorrilla Martínez</i>)
12:00 - 12:30	Particle Methods: the MPMApplication (<i>Antonia Larese</i>)
12:30 - 14:00	Lunch Break
	What's New in Kratos? Application Session (3)
14:00 - 15:00	The GeoMechanicsApplication (<i>Jonathan Nuttall</i>)
	What's New in Kratos? Core Session
15:00 - 16:00	GUI and FlowGraph, Multistage and Register (<i>Carlos Roig</i>)
16:00 - 18:00	Round Table & Coffee

KRATOS COURSE – NOVEMBER 8TH, 2024

Kratos Course (Session 1)	
09:00 - 09:15	Introduction: What is Kratos? (<i>Carlos Roig</i>)
09:15 - 09:45	Environment Setup and Kratos Installation (<i>Carlos Roig</i>)
09:45 - 10:00	Installation Troubleshooting (<i>Carlos Roig</i>)
10:00 - 10:30	Basic I/O (<i>Riccardo Rossi</i>)
10:30 - 11:00	Coffee Break
Kratos Course (Session 2)	
11:00 - 11:45	Geometry Management (<i>Suneth Warnakulasuriya</i>)
11:45 - 12:30	Data Management (<i>Rubén Zorrilla Martínez</i>)
12:30 - 14:00	Lunch Break
Kratos Course (Session 3)	
14:00 - 14:45	Simulation Loop (<i>Rubén Zorrilla Martínez</i>)
14:45 - 16:00	Multiphysics & Multistage (<i>Pooyan Dadvand & Rubén Zorrilla Martínez</i>)
16:00 - 16:30	Coffee Break
16:30 - 17:00	Q&A and Technical Discussions

WORKSHOP VENUE

The workshop will be held at the *Department of Mathematics “Tullio Levi-Civita”* of the University of Padova.

BUILDING ADDRESS: “Torre Archimede”, University of Padova, Via Trieste 63, 35121, Padova (Italy).

ROOM: the building has four entrances, marked by letters A, B, C and D. The workshop will be held in a room located on floor –1 and accessible only by using the stairs (or the elevator) at entrance B.

