

Agenda of the day

code_saturne & neptune_cfd user meeting

6 November 2025

09h00–09h30		Welcome / Breakfast
09h30	Introduction.	<i>P. Charles (EDF R&D)</i>
09h40	New features overview in code_saturne v9.0.	<i>Dev. Team (EDF R&D)</i>
10h10	Presentation of Simvia, an EDF subsidiary.	<i>F. Leray (Simvia)</i>
Presentations – morning session (part 1)		
10h15	An assessment of algebraic and differential Reynolds-Stress Models for a highly-bent serpentine aircraft intake.	<i>S. Hanrahan (Melbourne University)</i>
10h35	Modelling and simulation of a three-phase stirred tank. Modeling of sodium spray combustion with neptune_cfd.	<i>R. Ansart (IMFT)</i> <i>N. Kirov, O. Simonin (IMFT)</i>
11h05–11h30		Break
Presentations – morning session (part 2)		
11h30	Study of vortex intrusion phenomena in dead legs.	<i>J.F. Wald, J. Uribe (EDF R&D)</i>
11h50	Simulation of solar receivers for direct steam generation using neptune_cfd coupling.	<i>I. Aguilera (CNRS PROMES)</i>
12h10	Advancing code_saturne for hydraulics: validation and application to industrial problems.	<i>P. Asproulis, Y. Eude (RENUDA)</i>
12h30–14h00		Lunch / Poster session
Presentations – afternoon session		
14h00	A review of code_saturne developments in STFC UKRI.	<i>S. Rolfo (STFC UKRI)</i>
14h20	Overview of neptune_cfd simulations for reduced-scale filling experiments.	<i>A. Doradoux (SIREHNA)</i>
14h40	Simulation of breaking wave loads on a wind turbine foundation in the coastal zone with code_saturne.	<i>M. Benoît (EDF R&D)</i>
15h00–15h25		Break
Flash session		
15h25	Implementation of a log-normal modeling in neptune_cfd for polydispersed flows.	<i>N. Cailler (EDF R&D)</i>
	Presentation of high-fidelity (WR-LES) simulation with code_saturne of turbulent flow under mixed convection regime within a heated rod bundle.	<i>V. Duffal (EDF R&D)</i>
	Go Viking – Development and use of EDF CFD tools for vibration prediction in axial and crossflow conditions.	<i>W. Benguigui (EDF R&D)</i>
	On-the-fly construction of a ROM during code_saturne simulations: an urban boundary layer example.	<i>K. Kuznetov (GRASP)</i>
	System monitoring of flow-accelerated corrosion through upscaling of CFD models coupling thermohydraulics and chemistry.	<i>B. Cellé (EDF R&D)</i>
	Grand Challenges SELENA: Determination of inter-assembly flow redistributions with explicit modeling of mixing grids at large scale.	<i>R. Ceyrolle (EDF DT)</i>
16h10	An overview of CEREAs activities with code_saturne. Atmospheric flow modelling of floating offshore wind turbines: coupling between code_saturne and the aero-hydro-servo-elastic model DIEGO.	<i>M. Ferrand, A. Mathieu (CEREA, EDF R&D)</i>
16h45	Prospects in code_saturne & neptune_cfd.	<i>Dev. Team (EDF R&D)</i>
17h00		Closure