



SOFA Symposium Program

Day: 25th November 2025

Location: Hybrid - CRISTAL laboratory (Lille, France)

NB: the program schedule is following the Central European Time (CET)

9) LIVE DEMONSTRATIONS

- Compliance Robotics EMIO – Meet EMIO the robot that learns simulation
- Compliance Robotics EMIO – Effort control with an EMIO, as an effector on a rigid robot
- InfinyTech3D SurgiViz4D – Echographic Probing for Liver Surgery
- InfinyTech3D Specular – Percutaneous Needle Insertion for Tumor Ablation
- InSimo IRE – Digital twin of an intelligent robotic endoscopes
- Kitware Trame Slicer3D: a Python framework for web applications
- Inria Active prostate phantom
- Inria Closed-Loop Control for Deformable Robot Dynamics
- Inria An Additively Manufactured Foam Soft Robot Manipulator

	9:00 am	<i>Welcoming at CRISTAL</i>	
	9:15 am	Introduction of the SOFA Symposium 2025	
Numerical simulation	9:40 am	Fast But Accurate: the Next-Generation Physics Engine for Soft Body Simulations?	Zeng Ziqiu
	10:00 am	PhiFEM: a simple yet optimal immersed boundary finite element method	Bulle Raphaël
	10:20 am	Towards Real-Time Simulation of Soft Robots with Contacts using a Method of Hybrid Hyper-Reduction	Goury Olivier
	10:40 am	<i>Break - meet the speakers & test the demos</i>	
Industrial session	11:10 am	SurgiViz4D: Enhancing Surgical Training with VR Technology	InfinyTech3D
	11:25 am	EMIO – Meet EMIO the robot that learns simulation	Compliance Robotics
	11:40 am	IRE – Digital twin of an intelligent robotic endoscopes	InSimo

	11:55 pm	<i>Break - meet the speakers & test the demos</i>	
	12:15 pm	<i>Lunch, Live demos & Networking</i>	
	1:30 pm	SOFA Awards contributions & Update from the SOFA community	Talbot Hugo
Inverse problem solving	1:50 pm	A Differentiable Digital Twin of the Eye for Patient-Specific Strabismus Surgery Planning	Harsigny Even
	2:10 pm	Differentiable simulation with SOFA	Bois Léo
	2:30 pm	<i>Break - meet the speakers & test the demos</i>	
New frameworks related to simulation	3:00 pm	A Python framework for generating V&V documentation	Quentin Peyron
	3:20 pm	Trame Slicer a python framework for web applications	Finet Julien
Digital Twin	3:40 pm	Embodied neuroscience with Drosophila larva and SOFA	Barbier Chebbah Alex
	4:00 pm	<i>Break - meet the speakers & test the demos</i>	
	4:30 pm	Digital Twin for Arthroscopic Surgery in SOFA	Bjelland Øystein
Enhancing realism	4:50 pm	GaussianSplatting rendering in SOFA	Marchal Damien
	5:10 pm	Towards the online detection of plasticity phenomena in soft robots	Dileep Agneyan
	5:30 pm	<i>Break - meet the speakers & test the demos</i>	
	5:45 pm	Award Ceremony 2025	
	6:00 pm	Futures developments in SOFA: introduction of the STC#20	
	6:30 pm	<i>Closing Cocktail</i>	