

Geomechanics meets Biorobotics: a new approach towards sustainable technology



March 1-2, 2022

Auditorium Leonardo, Center for Convergent Technologies (CCT@Morego)
Istituto Italiano di Tecnologia

A two-day workshop bringing together experts in geomechanics, biorobotics, biology, smart materials and archaeology. A unique and novel multidisciplinary framework to present and discuss research activities, methodologies and challenges towards the advancement of sustainable technologies design and application for environmental monitoring and protection.

Workshop Agenda

March 1, 2022

Time	Title/topic (tentative)	Speaker
9:30 – 9:40 (10')	Introduction to the two-day workshop	<i>Barbara Mazzolai, IIT Cino Viggiani, Univ. Grenoble Alpes</i>
9:40 – 10:10 (20' + 10' Q&As)	Plant-inspired robotics	<i>Barbara Mazzolai, IIT</i>
10:10 – 10:40 (20' + 10' Q&As)	X-ray imaging for geomechanics: a few recent applications	<i>Cino Viggiani, Univ. Grenoble Alpes</i>
10:40 – 11:10 (20' + 10' Q&As)	Biology and Biotechnology of Plant-Microorganism Interactions	<i>Luisa Lanfranco, Univ. of Torino</i>
11:10 – 11:30	<i>Coffee break</i>	
11:30 – 12:00 (20' + 10' Q&As)	Plant developmental plasticity	<i>Sabrina Sabatini, Univ. La Sapienza</i>
12:00 – 12:30 (20' + 10' Q&As)	Numerical tools for cell mechanics	<i>Robert Peyroux, Univ. Grenoble Alpes</i>
12:30 – 13:00 (20' + 10' Q&As)	Making discrete numerical experiments to investigate soil behaviour	<i>Luc Sibille, Univ. Grenoble Alpes</i>
13:00 – 14:00	<i>Lunch break</i>	

Time	<i>Guided tour at CCT laboratories and facilities (selected)</i>	
14:00 – 14:30	<i>Smart Materials</i>	<i>Athanassia Athanassiou/ Despina Fragouli</i>
14:30 – 15:00	<i>Materials Characterization</i>	<i>Mirko Prato</i>
15:00 – 15:30	<i>Rehab Technology</i>	<i>Lorenzo De Michieli</i>
15:30 – 16:00	<i>Industrial Facility</i>	<i>Carlo Canali</i>
16:00 – 16:30	<i>Soft BioRobotics Perception</i>	<i>Lucia Beccai</i>
16:30 – 17:00	<i>Bioinspired Soft Robotics</i>	<i>Barbara Mazzolai</i>
<i>Closing day 1</i>		

March 2, 2022

Time (CET)	Title/topic (tentative)	Speaker
9:00 – 9:10 (10')	1 st day wrap-up and introduction to the 2 nd day	<i>Barbara Mazzolai, IIT Cino Viggiani, Univ. Grenoble Alpes</i>
9:10 – 9:40 (20' + 10' Q&As)	Plant development, regulation, differentiation	<i>Riccardo di Mambro, Univ. of Pisa</i>
9:40 – 10:10 (20' + 10' Q&As)	Tomography potential for plant research	<i>Nicolas Lenoir, Univ. Grenoble Alpes</i>
10:10 – 10:40 (20' + 10' Q&As)	Computing applications to archaeology	<i>Arianna Traviglia, IIT</i>
10:40 – 11:00	<i>Coffee break</i>	
11:00 – 11:30 (20' + 10' Q&As)	SPAM: Software for Practical Analysis of Materials	<i>Olga Stamati, Univ. Grenoble Alpes</i>
11:30 – 12:00 (20' + 10' Q&As)	Soft BioRobotics perception	<i>Lucia Beccai, IIT</i>
12:00 – 12:30 (20' + 10' Q&As)	Sustainable materials	<i>Despina Fragouli, IIT</i>
12:30 – 14:00	<i>Lunch break</i>	
14:00 – 18:00	<i>Internal meeting – Bioinspired Soft Robotics & Laboratoire 3SR</i>	
<i>Closing day 2</i>		

