

2025 Engineered Tissue Systems Meeting

Dr. Sofi Bin-Salamon | July 21-22, 2025 | Washington, DC

Johns Hopkins University
 Bloomberg Center
 555 Pennsylvania Avenue NW, Washington, DC 20001

Day 1 - Monday, 21 July 2025

TIME	TOPIC	SPEAKER
0915-0930	Remarks	Dr. Sofi Bin-Salamon Program Manager Air Force Office of Scientific Research
0930-1000	Oxygen controlled hydrogel to uncover cellular responses to rapid hypoxia	Prof. Larry Nagahara Whiting School of Engineering Johns Hopkins University Prof. Sharon Gerecht Department of Biomedical Engineering Duke University
1000-1030	Dynamics, Control and Systems Diagnostics Program	Dr. Alena Talkachova Program Director National Science Foundation
1030-1100	BREAK	
1100-1130	Reconstruction of neuron potentials with convolutional neural networks trained on nanoelectrode recordings	Prof. Zeinab Jahed Department of Nanoengineering University of California, San Diego
1130-1200	Understanding the "Mission Versatility" of Membrane Proteins and Cells by All-Scale Nanoscopic Imaging	Prof. Qian Chen Department of Materials Science University of Illinois Urbana-Champaign
1200-1230	Pixelated artificial retina models and biomodulation via organic semiconductors and light	Prof. Thomas Brown Department of Electronic Engineering University of Rome, Tor Vergata
1230-1330	LUNCH	
1330-1400	Investigations of Cell Responses to Extreme Environments Created by 3D Printing	Prof. Zhijian Pei Department of Industrial and Systems Engineering Texas A&M University
1400-1430	Biophysical responses of lung cells to extreme environments created by 3D printing	Prof. Hongmin Qin Department of Biology Texas A&M University

1430-1500	Biophysical responses of brain cells to extreme environments created by 3D printing	Dr. Ana Paula Pêgo Institute of Biomedical Engineering i3S/University of Porto
1500-1530	BREAK	
1530-1600	Innovation in Multi-functional Materials via Scalable Additive Manufacturing	Prof. Jochen Mueller Department of Civil and Systems Engineering Johns Hopkins University
1600-1630	Collaborative Opportunities with the Italian Institute of Technology	Mr. Giulio Busulini Scientific Advisor Italian Institute of Technology
1630-1730	DISCUSSION	
1730	MEETING ADJOURNED	

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Day 2 - Tuesday, 22 July 2025

TIME	TOPIC	SPEAKER
0900-0930	Advancing Drug Discovery with Biofabricated 3D Tissue Models	Dr. Marc Ferrer-Alegre National Center for Advancing Translational Sciences National Institutes of Health
0930-1000	Engineered Skin Models for Investigating Disease Therapeutics	Dr. Paige Derr National Center for Advancing Translational Sciences National Institutes of Health
1000-1030	Modulation of astrocytes as new paths to dialogue with the brain - ASTROTALK	Dr. Valentina Benfenati Institute of Synthesis and Photoreactivity National Research Council of Italy
1030-1100	BREAK	
1100-1130	Sensing extracellular matrix analogues to modulate astrocytes response	Prof. Luigi Ambrosio Institute of Polymers, Composites and Biomaterials National Research Council of Italy
1130-1200	From bio-nanomaterials to quantum dots for biosensing and modulating cellular response	Dr. Maria Grazia Raucci Institute of Polymers, Composites and Biomaterials National Research Council of Italy
1200-1230	Biological Control of IQ-NNs	Prof. Kan Cao Dept. of Cell Biology and Molecular Genetics University of Maryland
1230-1330	LUNCH	
1330-1400	Label-free, high-speed quantitative imaging of astrocyte-neuron networks with optical diffraction tomography and machine learning	Prof. Ishan Barman Department of Mechanical Engineering Johns Hopkins University
1400-1430	Investigation on co-cultured astrocyte and neuron populations by recording ultra-low signals with nanostructured electrodes	Dr. Annalisa Convertino Institute for Microelectronics and Microsystems National Research Council of Italy
1430-1500	Creating Biomaterials Tools to Discover the Role of Matrix Biophysical Cues in Regulating Cell Activity and Fate	Prof. Luo Gu Department of Materials Science and Engineering Johns Hopkins University

1500-1530	BREAK	
1530-1730	Investigating Quantum Techniques for Breakthrough Solutions in Aerospace and Defence	Dr. Massimiliano Dispenza Head of Quantum Technology, Optronics and Advanced Materials Labs Leonardo SpA Dr. Abhishek Kumar Leonardo SpA Dr. Massimiliano Proietti Leonardo SpA
1700-1730	DISCUSSION	
1730	MEETING CONCLUSION	