

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

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

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**Day 2 - Tuesday, 22 July 2025**

TIME	TOPIC	SPEAKER
0900-0930	Advancing Drug Discovery with Biofabricated 3D Tissue Models	<b>Dr. Marc Ferrer-Alegre</b> National Center for Advancing Translational Sciences National Institutes of Health
0930-1000	Engineered Skin Models for Investigating Disease Therapeutics	<b>Dr. Paige Derr</b> National Center for Advancing Translational Sciences National Institutes of Health
1000-1030	Modulation of astrocytes as new paths to dialogue with the brain - ASTROTALK	<b>Dr. Valentina Benfenati</b> Institute of Synthesis and Photoreactivity National Research Council of Italy
1030-1100	<b>BREAK</b>	
1100-1130	Sensing extracellular matrix analogues to modulate astrocytes response	<b>Prof. Luigi Ambrosio</b> 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	<b>Dr. Maria Grazia Raucci</b> Institute of Polymers, Composites and Biomaterials National Research Council of Italy
1200-1230	Biological Control of IQ-NNs	<b>Prof. Kan Cao</b> Dept. of Cell Biology and Molecular Genetics University of Maryland
1230-1330	<b>LUNCH</b>	
1330-1400	Label-free, high-speed quantitative imaging of astrocyte-neuron networks with optical diffraction tomography and machine learning	<b>Prof. Ishan Barman</b> 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	<b>Dr. Annalisa Convertino</b> 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	<b>Prof. Luo Gu</b> Department of Materials Science and Engineering Johns Hopkins University

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