



Pre-Recorded Presentations for the NSF Site Visit, June 1-4, 2021

Director's Overview – David Bishop

https://youtu.be/XWTgMz7_xHE

Thrust Area 1: 3D Cell Patterning – Steve Forrest

<https://youtu.be/QOp90ZHu7t0>

Thrust Area 2: Cell Scaffolds – Alice White

<https://youtu.be/qtw7fBUQ6eM>

Thrust Area 3: Tissue Engineering – Chris Chen

https://youtu.be/-S1JdY_DDSA

Thrust Area 4: Imaging – Tom Bifano

<https://youtu.be/yX7wWQn-H9U>

Testbeds – Chris Chen

<https://youtu.be/EGCrVShtjRo>



Poster Session
Thursday, June 3, 2021 at 12:05 - 1:15pm (EDT)
Gatherly: <https://cell-met.event.gatherly.io>



Board #	Presenter Name	Poster Title + Links to Video Presentation with Captions
Thrust 1: 3D Cell Printing		
A	Jeffrey Horowitz	Patterning Cells with Organic Electronic Materials
C	Samuel DePalma	Matrix Mechanics and Anisotropy Regulate Cardiac Microtissue Organization and Contractile Function
E	Josh Javor	Triggered Feedback Mechanical Actuation of Cardiac Microtissues
Thrust 2: Cell Scaffolds		
A	Lihua Lou	The Effect of Electrical Pacing on Cardiomyocyte Tissue's Mechanics Visualized Using Digital Image Correlation
B	Lia Paolino	Nanomechanical Differences of Cardiomyocytes with and without Electrical Stimulation
C	Katherine Cook	Delivering Healthy Cardiomyocytes through Hydrogels Post Myocardial Infarction
D	Hiba Kobeissi	Sara-Graph: Automated Segmentation, Tracking, and Analysis of Sarcomeres in hiPSC-CMs
E	Ariadna Herrera	Tensile Properties of a Silicone Scaffold Relative to the Native Myocardium
F	Yih-Mei Lin	Histological Characterization of Porcine Left Ventricle Microstructure as a Positive Control in Engineered Cardiac Tissue Studies
G	Mustafa Cagatay Karan	A Microfluidic Testbed for Mechanical Stimulation and Monitoring of Cardiac Microtissues
H	Paria Mir Hashemian	Miniature Honeycomb-Like Scaffolds for Cardiac Tissue Engineering
Thrust 3: Tissue Engineering		
A	Jourdan Ewoldt	Hypertrophic Cardiomyopathy (HCM)-Induced Paracrine Signaling and Stromal Activation
B	Christos Michas	Two-photon Direct Laser Writing Enables the In Vitro Replication of the Ventricular Pressure-Volume Loop
E	Sebastien Uzel & John Ahrens	Expanding Toolbox for Engineering Myocardium
F	Palash Dutta	Spatial Distribution of Sarcomeric Forces in Cardiomyocytes
Thrust 4: Imaging		
A	Alberto S. Rubfaro	Understanding the Long-Term Effect of Cyclic Electrical and Mechanical Stimulation on the Engineered Cardiac Tissue
B	Jonathan Tabares	Nanoscale Surface Potential and Topographic Mapping of the Extracellular Matrix
E	Jenny Sun	Optical Mapping and Contraction Tracking in Engineered Human Cardiac Tissue
F	Marshall Ma	High Throughput Screening System for Engineered Cardiac Tissue
Broader Impacts		
A	Sarah Schaible	Visualizing CELL-MET's Impact Using Social Network Analysis: CELL-MET Year 1 -3 Results
B	Courtney Wade	Validating the CELL-MET Culture of Inclusion Scale: Taking an Ecological Systems Perspective
E	Claudia Paredes	Engineering EEK!: Science Communication as an EEK Undergraduate Trainee
F	Abeer Al Barghouthi	EEK! and the Engineering Expo: Adapting to Virtual Engagement Environments during a Global Pandemic