

2021 CCMR Symposium

2:45 PM- 3:45 PM - Poster List:

*is the Principal Investigator

1) Zoom room name: “**Mechanics of Soft Materials**”

Poster 1- “Metamodeling of Constitutive Model Using Gaussian Process”. Authors: **Jikun Wang**, Tianjiao Li, Fan Cui, Chung-Yuen Hui*, Jingjie Yeo* and Alan Zehnder*

*is the Principal Investigator

Poster 2- “Metamodeling of Constitutive Model Using Gaussian Process”. Authors: Jikun Wang, **Tianjiao Li**, Fan Cui, Chung-Yuen Hui*, Jingjie Yeo* and Alan Zehnder*

Poster 3- “Molecular mechanisms of thermo-responsive silk-elastin-like proteins”.

Authors: **Haoyuan Shi**, Jingjie Yeo*.

Labs of Prof. Alan Zehnder, Sibley School of Mechanical and Aerospace Engineering and Prof. Jingjie Yeo, Sibley School of Mechanical and Aerospace Engineering.

2) Zoom Room name: “**Materials-Enabled Soft Embedded Sensors and Actuators**”

- Poster 4: "Reconfigurable Magnetic Haptics". Authors: **Ludovico Cestarollo** and Amal El-Ghazaly*

- Poster 5: "In-Skin Pressure and Curvature Sensors for Soft Robots". Authors: **Tzu-Yun Hsu** and Amal El-Ghazaly*

Lab of Prof. Amal El-Ghazaly, School of Electrical and Computer Engineering.

3) Zoom Room name: "**A Mechanistic understanding of damage and healing in soft materials**"

- Poster 6: “Phase-field fracture formulation for soft materials” Authors: **Ida Ang**, Bin Li, and Nikolaos Bouklas*

- Poster 7: "Affine and non-affine microsphere models for chain scission in polydisperse elastomer networks". Authors: **Jason Mulderrig**, Bin Li, and Nikolaos Bouklas*

- Poster 8: “Mechanosensitive cell migration in ECM-rich microtissues”. Authors: **Jaemin Kim**, Erik Mailand, Mahmut Selman Sakar, and Nikolaos Bouklas*

- Poster 9: “The effect of fiber plasticity in soft biological composites”. Authors: **Fernanda Fontenele**, Michalis Agoras, Nikolaos Bouklas*

Lab of Prof. Nikolaos Bouklas, Sibley School of Mechanical and Aerospace Engineering.

4) Zoom room name: “**3D printing soft, and biomimetic materials**”

- Poster 10: "Simple Synthesis of Soft, Tough, and Cytocompatible Biohybrid Composites". Authors: **Cameron Darkes-Burkey**, Xiao Liu, Leigh Slyker, Jason Mulderrig, Wenyang Pan, Emmanuel P. Giannelis*, Robert F. Shepherd*, Lawrence Bonassar*, Nikolaos Bouklas*

- Poster 11: “Bioinspired 3D printed Sweating Robot”. Authors: **Anand Kumar Mishra**, and Robert Shepherd*

- Poster 12: “Flexible Dielectric Elastomer Architectures for Human Wearables”.

Authors: **Maura R. O’Neill**, Deanna Sessions, Nitesh Arora, Stephan Rudykh, Robert Shepherd*, Phil Buskohl*

- Poster 13: “3D Printing Gyroid Arteries and Actuators”. Authors: **Emilie Baker**, Maura O’Neil, Meredith Silberstein, Robert Shepherd

Lab of Prof. Robert Shepherd, Sibley School of Mechanical and Aerospace Engineering.

5) Zoom room name: "**Complex Soft Tissue Biofabrication**"

- Poster 14: "Bioprinting Embedded Non-Planar Tissues (BENT) For Manufacturing Complex Tissue Engineered Hydrogels". Authors: **Benjamin Albert**, Coral Wang, and Jonathan Butcher*

- Poster 15: "GelMA Elasticity and Viscosity on Adipose and Vascular Biogenesis for Breast Reconstruction". Authors: **Chelsea Stephens**, Yashi Sanghvi, and Jonathan Butcher*

Lab of Prof. Jonathan Butcher, Meinig School of Biomedical Engineering.

6) Zoom room name: "**Metallopolymers**"

- Poster 16: "Tuning Wettability of PDMS via Metal-Ligand Coordination". Authors: **Joy Zhang**, Meredith Silberstein*.

Lab of Prof. Meredith Silberstein, Sibley School of Mechanical and Aerospace Engineering.

7) Zoom Room name: "**Designing Soft Condensed Materials via Self-Assembly Simulations**".

-Poster 17: "Two-Dimensional Colloidal 'Salts': Computational Crystal Structure Discovery in Soft Matter". Authors: **Jasmin J. Kennard**, Caleb D. Biddulph, Ryan C. Prager and Julia Dshemuchadse*

Lab of Prof. Julia Dshemuchadse, Materials Science and Engineering.

8) Zoom Room name: "**Biomaterials for Osteoarthritis Treatment**"

- Poster 18: "Design, Synthesis and Analysis of Microgel Ball Bearings for the Treatment of Severe Osteoarthritis" Authors: **Ruben Trujillo**, David Putnam*.

Lab of Prof. David Putnam, Meinig School of Biomedical Engineering.

9) Zoom Room name: "**Materials for Soft Tissue Engineering**"

- Poster 19: "Architecture-Dependent Compressive Failure in Scaffolds for Articular Cartilage Repair." Authors: **Sean Kim**, and Lawrence Bonassar*

- Poster 20: "Combined Effects of TGF- β 1 and Chondroitinase ABC on Fiber Formation and Alignment in Tissue Engineered Meniscus". Authors: **Serafina Lopez**, and Lawrence Bonassar*

- Poster 21: "Gradients in Media Spatially Pattern Native Collagen Fiber Organization Within Tissue Engineered Enthesis." Authors: Jongkil Kim, Roland R. Babmatee, Alexander J. Boys, Lara A. Estroff, and Lawrence J. Bonassar*

- Poster 22: "Simple Synthesis of Soft, Tough, and Cytocompatible Biohybrid Composites: Structure and Cytocompatibility." Authors: **Leigh Slyker**, and Lawrence Bonassar*

Lab of Prof. Lawrence Bonassar, Meinig School of Biomedical Engineering.