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 11: “Bioinspired 3D printed Sweating Robot”. Authors: Anand Kumar Mishra, and Robert Shepherd*
- Poster 13: “3D Printing Gyroid Arteries and Actuators”. Authors: Emilie Baker, Maura O’Neill, 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-β1 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.