Fabricating Shape-morphing Polymers through Compounding and Processing

Dr. Kevin Cavicchi, University of Akron, Department of Polymer Engineering

The ability to program shape-changes into materials, such as shape memory and actuation, is of significant interest for remotely deployable devices and sensors. This talk will discuss how advanced materials can be fabricated from commodity polymers. In the first example it will be shown that molecular crystals are useful as active fillers that impart stimuli-responsive shape-changes triggered by their phase transition. In the second example, it will be shown that precise thermo-mechanical processing of nanostructured thermoplastic elastomers produces metastable morphologies, which convert the TPE into a shape memory polymer.
Schedule (Tuesday, June 11, 2019)

9:30 – Arrive on campus, meet with Kiril or Jessica TBD

9:45 – Speak with ________ and tour of the physics department

10:30 – Speak with ________

11:00 – Seminar Prep

11:30 – Seminar

12:30 – Lunch with students

1:00 – Speak with ________ and tour of Chemical Engineering department

1:45 – Speak with ________

Must leave by 4:30pm