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Science-Research Center, SR-151  
Tuesday, November 23, 2021  
11:30am-12:20pm

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## **Polymer Science and Polymer Engineering Graduate Programs at the University of Akron**

***Prof. Kevin Cavicchi***  
***Professor of Polymer Engineering***  
***School of Polymer Science and Polymer Engineering***  
***University of Akron***



This talk will give a broad overview of the research done in the polymer programs at the University of Akron across the areas Polymer Chemistry, Polymer Physics, Polymer Processing, and Biomaterials showing examples in both experiment and simulation. This will be followed by a more in-depth discussion of the research to prepare shape-morphing materials in Cavicchi research group. We will present how we use polymer engineering principles to blend polymers and molecular crystals to utilize the phase change properties of these crystals. By tuning either the modulus and volume through the phase transition one-way shape memory and two way actuation is achieved in these materials with potential application in remote deployment and sensing applications.

### ***About Dr. Cavicchi***

*Kevin Cavicchi joined the University of Akron in January 2006 after completing a post-doctoral fellow at the University of Massachusetts- Amherst in the Department of Polymer Science and Engineering. He has been recognized with a number of awards including Polymer Networks Group Young Investigator Award (2014), Top 10 Reviewer for Soft Matter (2016), William C. Zekan Memorial Award, Akron Section of the Society of Plastics Engineers (2017), Distinguished Service Award, Polymer Chemistry Division (POLY) American Chemical Society (ACS) (2019), American Chemical Society Fellow (2019), POLY Fellow (2020), Sparks-Thomas Award, Rubber Division, ACS (2021).*