The College of Polymer Science and Polymer Engineering is proud of the intellectually rich experiential learning environment our faculty provide. Tell us about a faculty member that you want to see in the spotlight by emailing us at cpspe-alumni@uakron.edu.

**Dr. David Simmons** is an assistant professor of Polymer Engineering. Before joining CPSPE, he received his bachelor’s degree in chemical engineering from the University of Florida and his Ph.D. in chemical engineering at the University of Texas at Austin. Read more to learn about Dr. Simmons and his goals within the Department of Polymer Engineering.

**Tell us something about yourself:**
I am an Assistant Professor of Polymer Engineering at The University of Akron, where my work focuses on computationally-driven design of glass formation in polymers and other soft materials. Among other activities, I am the lead-PI on a multi-investigator research grant from the W. M. Keck Foundation focusing on exploration and design of glass-forming materials. Prior to beginning my time at The University of Akron, I engaged in postdoctoral research at the National Institute of Standards and Technology with support from an NRC postdoctoral fellowship. I began my research career with internships in biomedical engineering startup companies and academic labs, where my work included biomedical device design, continuum fluid mechanics simulations, and polymerization reactor design and operation. I received a Ph.D. in Chemical Engineering at the University of Texas at Austin, with theoretical work in the phase and conformational behavior of polymers and polyelectrolytes.

**What were the driving factors in your decision to join the CPSPE faculty?**
CPSPE has probably the densest concentration of polymer expertise at any university in the nation. For someone who specializes in polymer physics, it affords diverse resources and a broad range of collaborators. Some of my first research experience as an undergraduate student, dealt with synthesis of biocompatible polymers at a Miami, Florida biotechnology company. The polymer I worked with was invented by Joseph Kennedy, one of the distinguished scholars here in CPSPE. So it turns out that, years before I decided to be a polymer engineer, I was already being drawn into science and engineering by work done here at The University of Akron. In a way, joining the faculty here was coming full circle for me.

**What’s your teaching philosophy or your outlook on higher education?**
The single most important ability I aim to cultivate in my students is critical problem solving. How can we tell whether an argument is right or wrong? How can we take an amorphous problem and convert it into a concrete path to a solution? How do we apply critical thinking to overcome obstacles along the way and course-correct when we take a wrong turn? I view every course I teach as an opportunity to encourage students to practice these skills in a new subject area. This is even more true in research – my emphasis with my students is on critical thought, ensuring rigor in their conclusions, and on questioning one’s own assumptions and biases. These things go hand-in-hand with the ‘knowledge sets’ that people often associate with expertise in science and engineering, but in truth they are more foundational to our ability to do high-quality science and engineering work. They are also transferable to most of life.

**What are some of your favorite things to do when you’re not teaching?**
My favorite way to spend my time when I’m not at work is with my wife and sons. There is a lot of great food, culture, and scenery in the Akron area, and we try to take advantage of it. I also play piano and golf – both badly.

**What do you love most about your job at The University of Akron, and your work through your particular department?**
The Department of Polymer Engineering has an outstanding group of faculty and student researchers. The best part of my job is the opportunity to interact with world-class colleagues and students on a day-to-day basis.

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What are your goals for CPSPE and your department? How do you plan to achieve those goals?
CPSPE is already a world-acknowledged leader in polymer research and education. My goal is to combine expertise within this college in new ways to do breakthrough research in the rational design of new advanced materials, while contributing to the excellence in education that makes our students sought-after internationally.

What is one thing that you hope each of your students learned from you?
My goal is for each student to develop critical problem solving skills – the ability to reduce an amorphous problem to a concrete strategy to solving it, and ultimately to critically assess their own and others’ work.