

James (Willie) Kemp

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EDUCATION

The University of Tennessee- Knoxville, TN **Completed July 2021**
Ph.D. Engineering Sciences UTK GPA: 3.75/4.00
Chancellors Fellowship

The University of Tennessee- Knoxville, TN **Completed May 2016**
B.S. Material Science and Engineering UTK GPA: 3.67/4.00

RESEARCH EXPERIENCE

Oak Ridge National Laboratory Oak Ridge, TN Summer 2022-Current

Post-Doctoral Research Assistant

- Developing magnetic components with various 3D-printing techniques for use in wind turbines
- Testing what magnet material systems works best for polymer and metal additive manufacturing methods
- Performing mechanical testing to measure the strength of components used in wind turbines

UES, Inc. Dayton, OH Fall 2021-Summer 2022

Research Scientist

- Create new high-temperature ceramic slurries for use in additive manufacturing via direct-ink writing
- Design new compatible materials systems for functionally graded structures

MABE Department Knoxville, TN Fall 2016-Summer 2021

Graduate Research Assistant

- Developed novel ways to form ceramic matrix composites with preceramic polymer resins
- Additively manufactured complex material structures with direct-write methods

LEADERSHIP EXPERIENCE

College of Education, Health, and Human Sciences Knoxville, TN Summer 2018-Summer 2021

Education Leadership and Policy Studies App Development

- Oversaw development of cell phone app for use in the Leaderships Studies minor
- Organized Civil-Rights movement era historical content for use in a cell phone app

Governor's School for the Sciences and Engineering Knoxville, TN Summer 2016 and 2017

Materials Science Teaching Assistant

- Lectured on strengthening mechanisms of metals to high school students
- Led a lab section focused on cold rolling of brass alloys to illustrate materials science concepts

Division of Diversity and Engagement Knoxville, TN Fall 2019-Summer 2021

Division of Diversity and Engagement Advisory Board

- Give graduate student perspective on campus climate issues at UTK
- Report directly to Vice Chancellor for Diversity and Engagement

Division of Diversity and Engagement Sponsorship & Project Review Committee Fall 2020-Summer 2021

- Reviewed and awarded grants for applicants to the Division's funding opportunities
- Report directly to Vice Chancellor for Diversity and Engagement

PUBLICATIONS

- 2 first-author publications: JACerS (2020), Addit. Manuf. (2021)
- 4 co-authored publications: Compos. Sci. Technol. (2018), Mater. Manuf. Process. (2018), Addit. Manuf. (2020), MRS Commun. (2021)

SKILLS AND INTERESTS

- Computer: Proficient in programming with Matlab, Python; using Microsoft Office Suite, Image J, Inkscape
- Interests: Running, sports, equitable education, sustainable energy practices