



**Texas Tech University Edward J. Whitacre College of Engineering**  
**Department of Mechanical Engineering**  
**Post-Doctoral Research Associate Positions**

## **DESCRIPTION**

The Department of Mechanical Engineering in the Edward J. Whitacre College of Engineering at Texas Tech University (TTU) invites applications for a post-doctoral research associate position beginning in summer 2024. The post-doc will work under the supervision of Dr. Song-Charng Kong on computational modeling of multiphase flows and engine combustion. The research is funded by the U.S. Army Research Laboratory and the National Science Foundation. The specific topics and computational methods include, but are not limited to:

- Integrated simulation of spray dynamics, drop-wall interactions, and heat transfer and resulting thermal stress in mechanical components using the Smoothed Particle Hydrodynamics (SPH) method
- Modeling of thermal sprays and additive manufacturing processes using the SPH method
- Advanced spray combustion modeling to explore novel engine concepts for UAV applications using engine CFD codes

## **QUALIFICATIONS**

Applicants must hold a doctoral degree in mechanical engineering, aerospace engineering, or a related field with a strong background in computational research. Successful applicants must demonstrate their scientific programming and coding ability rather than merely running commercial software packages.

For additional information, please contact Professor Song-Charng Kong, Chair of Mechanical Engineering ([sokong@ttu.edu](mailto:sokong@ttu.edu)).

<https://www.depts.ttu.edu/me/research/reactingflowlab/index.php>

<https://www.depts.ttu.edu/ME/>