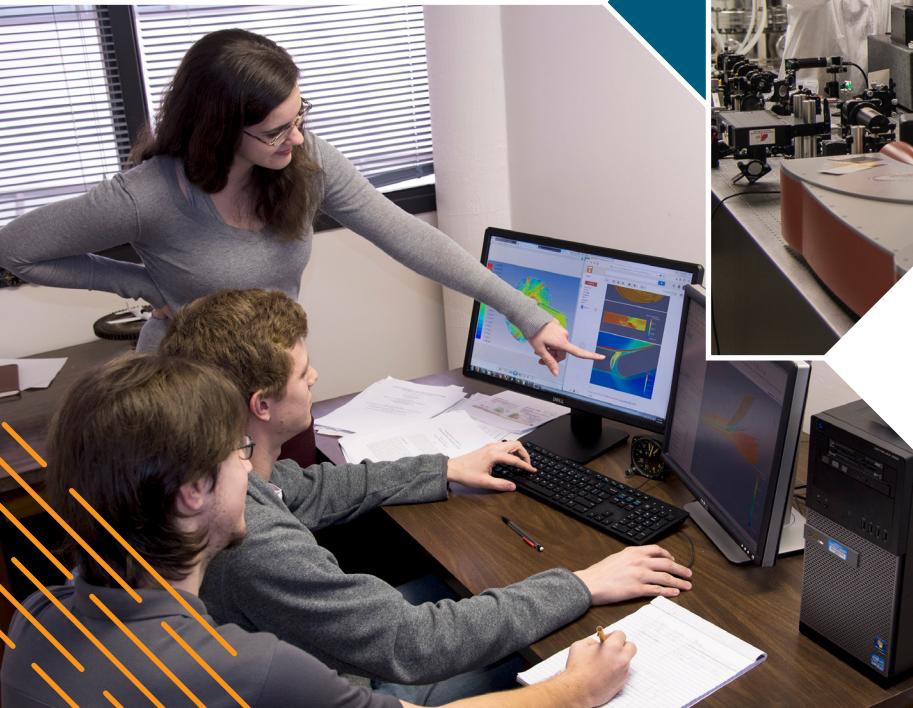


# CEAR

Computational and Experimental Aerospace Research



ENGINEERING



## WHAT IS CEAR?

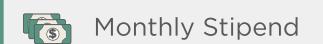
CEAR (Computational and Experimental Aerospace Research) is a research group dedicated to the advancement of scientific knowledge in the study and application of compressible and high-temperature fluid dynamics, plasma dynamics, and diagnostic techniques. The CEAR group does both experimental and computational work that is mostly funded by the US Department of Defense and NASA and routinely collaborates with other universities and industry.

### Benefits

Fully funded graduate research assistantships (GRAs) are immediately available.



Tuition waiver



Monthly Stipend



Student Health Coverage



Opportunities to write papers, present at conferences, & work on sponsored research

### WANT TO JOIN US?

CEAR is seeking highly motivated MS and PhD students who would like to work on the development and characterization of materials micromachined using ultrafast lasers, learn the basic elements of a direct-write laser micromachining facility, benefits of using ultrafast lasers, and most common used techniques.

### Research Areas

- ▶ Computational modeling of plasmas and gases
- ▶ Space environment simulators
- ▶ Cryocontamination of space environment simulators
- ▶ Electric micropropulsion for CubeSats
- ▶ Ultrafast laser machining
- ▶ Advanced manufacturing for aerospace and defense



### INTERESTED?

- 1 Reach out to UTSI's Graduate Recruiting and Admissions Office at [admit@utsi.edu](mailto:admit@utsi.edu).
- 2 Contact one of the CEAR faculty members and schedule a visit. See [cear.utsi.edu](http://cear.utsi.edu).
- 3 Apply for admission to the UT Graduate School at [apply.gradschool.utk.edu/apply/](http://apply.gradschool.utk.edu/apply/) and select the program marked **Space Institute**.

Propulsion Research

2 Vacuum Chambers

Diverse Faculty & Staff

Military & Energy-Related Projects

Experimental & Computational Research

Based at the Propulsion Research Facility

Mach 2.3 and Mach 3.0 Supersonic Tunnels

32-core Rack-Mounted Cluster of Xeon Processors





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KNOXVILLE

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