

Graduate Research Assistantship in Aerospace Engineering (Aviation Human Factors)



The Aviation/Engineering Operations Analysis group in the department of Mechanical and Aerospace Engineering at Oklahoma State University is seeking motivated graduate students (MS or PhD) to join our team in Fall 2023/Spring 2024. Currently available projects are described below.

Candidates should be able to (1) work independently and in a team setting, (2) learn new skills in a fast-paced environment, and (3) think critically about their work and others'. The ideal candidate for these positions has a strong background in aerospace engineering, industrial engineering, computer science, or a related field, as well as experience or interest in aviation, data analysis and programming, virtual reality, physiological measures, and/or flight simulation.

Graduate research assistants (GRAs) will receive a monthly stipend and a tuition waiver. They will have the opportunity to work in a supportive and collaborative research environment where they will receive hands-on mentoring and the chance to develop new skills and gain valuable experience.

If interested, please email Dr. Nicoletta Fala at nfala@okstate.edu with a CV and a brief statement on your research interests and experience.

✎ Project 1: Using virtual reality to promote positive skill transfer in flight training.

Position 1: The GRA will develop algorithms using flight data to measure and compare flight performance in simulated and real flight training events.

Position 2: The GRA will design and conduct human subject experiments in simulated and real flights to collect psychophysiological measures to use in evaluating skill transfer and workload management.

Project 2: Characterizing and altering psychophysiological state and performance in simulated environments.

Position 1: The GRA will develop and evaluate “engagement techniques” to minimize the startle effect in high-stakes scenarios after idle and/or high automation periods, i.e., to help people react with increased precision to a sudden and unexpected stimulus.

Position 2: The GRA will correlate physiological measures to performance-driven metrics to estimate situational awareness. The GRA will then evaluate the impact of fabricated stress on situational awareness performance.