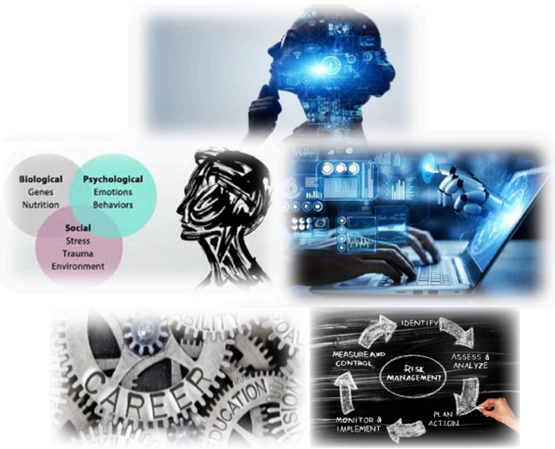
Areas of Research Excellence

- Information Processing and Displays
- Biophysiological Delimiters
- System Design and Automation
- Aviation Workforce Optimization
- Organizational Program Assessment



Collaborations and Outreach

Partnership, teaming, collaboration, and outreach are fundamental to research in aviation safety. We develop relationships to innovate, share information, and build upon existing knowledge. Collaborators include:

- Operators
- Manufacturers
- Labor Organizations
- Academia
- Government Agencies
- STEM

Facilities

Mike Monroney Aeronautical Center is a microcosm of aviation operations and provides a research environment that is able to replicate more than 95% of the National Aerospace System. Our simulation facilities and human assessment tools are uniquely designed for research. They are fully customizable to accommodate emerging technologies, new symbologies, and changes in types of operations. Simulation capabilities include comprehensive representation of flight operations from general aviation to space operations and air traffic environments from towers to En Route.

Contact Us

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Aerospace Human Factors Research Division

Making Aviation Safer and Smarter

Our History

The Aerospace Human Factors Research Division of the Civil Aerospace Medical Institute is known as a global leader in aviation human factors research. It is a full-spectrum research facility that performs research related to every phase of flight from take-off to landing for both air traffic and flight operations. Our research empowers science-based, data-driven decision-making for National Aerospace System expansion, efficiency, and safety.

Thanks to human factors research, FAA is the FIRST civil aviation authority in the world to permit:

- **Synthetic vision guidance systems for low visibility operations**
- **Ultra-long range flight operations**
- **Virtual basic training for ATC Academy**

Humans are critical to the success of aviation operations, they are our greatest protectors of aviation safety but also introduce the greatest level of risk in the aerospace system as they interact with complex technologies and systems. The goal of human factors research is to reduce human error, increase productivity, and enhance safety and comfort with a specific focus on the interaction between humans and technology, processes, and systems.

Human Factors is a combination of numerous disciplines, such as psychology, sociology, engineering, biomechanics, industrial design, physiology, anthropometry, interaction design, visual design, user experience, and user interface design.

Safety

Safety is our passion. Our research informs regulatory and operational decisions to ensure that all air and space travelers arrive safely at their destinations.

Excellence

Research **Excellence** is our promise. We conduct research that embodies professionalism, transparency, and accountability. Our research enables new technologies, more flights, remote operations, reduced delays, and new destinations/city-pairs that historically have not been possible.

People

People are our strength. Our success depends on the respect, diversity, collaboration, and expertise of our workforce. We are a team of researchers with diversity of expertise in biophysiology, psychology, engineering, simulation, and aviation committed to aerospace safety.

Innovation

Innovation is our signature. We foster creativity and vision to provide solutions beyond today's boundaries. We develop and utilize innovative methodologies and technologies to conduct cutting edge research. We partner with others to conduct independent research not possible anywhere else in the world.