Human Factors Engineering

The JSC Human Factors Engineering Lab (HFEL) provides evaluation, testing, and analysis for the design of human system interactions including displays and controls, workstations, and vehicle/habitat environments.

World Renowned Skills and Unique Capabilities

HFEL personnel have diverse backgrounds and experience in human factors engineering, cognitive psychology, neuroscience, biomedical engineering, physiology, and industrial engineering. Using structured methodologies and specialized tools and equipment, human factors SME facilitate human-centered design processes in the design of hardware and software by supporting integration of humans with complex technical systems.

Expertise includes experimental design, task analysis, human-in-the-loop evaluations, human performance measures (workload, situation analysis, usability), human factors engineering design assessments (habitat volume and layout architecture, anthropometry and biomechanics), and statistical analysis.

Facilities and equipment include user testing and control rooms, video recording, editing, and analysis equipment, eye tracking, virtual reality and augmented reality systems, and specialized statistical analysis software, as well as remote site testing capabilities.