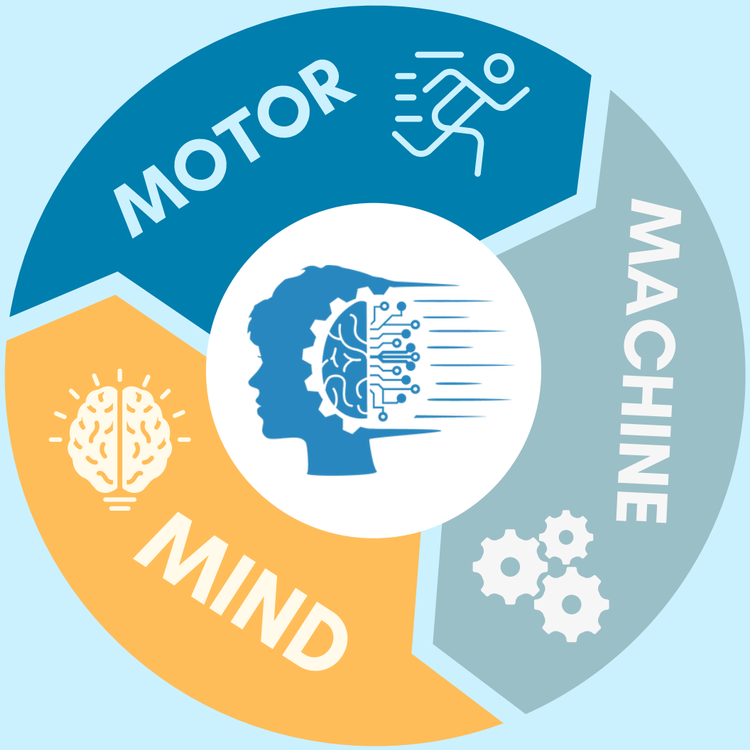
TEXAS A&M UNIVERSITY

NeuroErgonomics Laboratory

Understand. Assess. Augment.
Human-Technology Partnerships in High-risk Environments

Our Goal

The NeuroErgonomics Lab examines the **mind-motor-machine nexus** to understand, quantify, and predict human performance under fatigue/stress when interacting with emerging technologies in safety-critical extreme environments.



We are passionate about building a smarter, safer, technology-enabled, and inclusive workforce that is poised and scaled to transform the future of work across many critical industries.

Predictive Health and Safety

We analyze worker **neurophysiological, movement, and performance-based markers** using wearables, digital tech, and IoT. Across different work contexts and health conditions, we better understand and predict human **states of fatigue** and stress and develop public health and safety engineering solutions to proactively improve human and work conditions.

Human-Autonomy Teaming

Fundamental and applied human technology (HRI, HCI) research includes studies of human-machine interactions with collaborative, teleoperated, and wearable robotics to study the impact of human states of fatigue and stress on **human-machine trust, situation awareness, and overall task performance.**

Neurotechnology

Our applied research and technology development efforts focus on **augmenting and supporting** embodied cognition. In high-stress operational settings, we are able to assess **learning, skill acquisition, and performance augmentation** through equitable multimodal interface designs, wearable brain-computer interfaces, and neurostimulation.

At the NeuroErgonomics Lab...

Conferences and Symposiums

NeuroModulation & NeuroErgonomics NYC

In-field data collection and studies

Cy-Fair Fire Department

Citizen Scholarship

STEM Fest

Technology and Lab Showcases

NTEC 2022

Community and Connections

Lake Bryan

National Institute for Occupational Safety and Health NIOSH
الصندوق القطري لرعاية البحث العلمي
Qatar National Research Fund
DARPA
The National Academies of SCIENCES · ENGINEERING · MEDICINE
NIH
OESI
NSI
SecureAmerica Institute