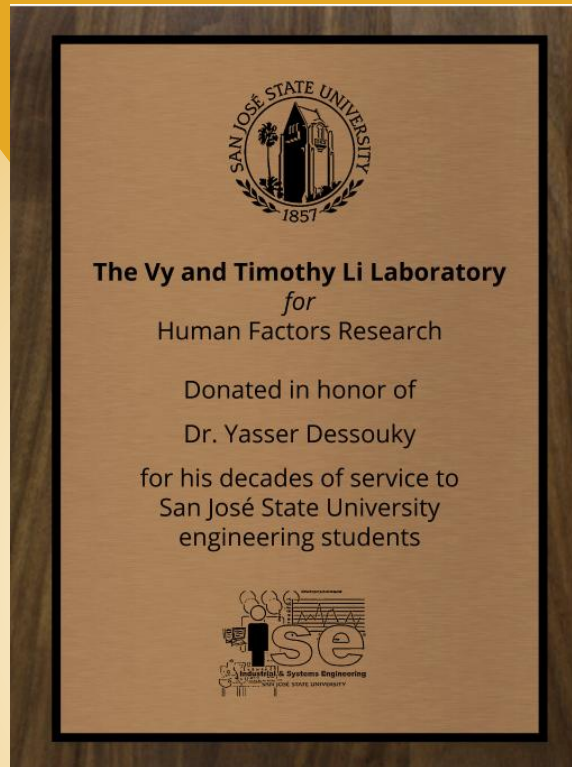# The Vy and Timothy Li Laboratory
for Human Factors Research (Engineering Room 494)

Lab Mission & Research Focus

According to Lab Director Dr. Gaojian Huang, this Li Lab will be advancing the science and engineering of human factors and ergonomics. We focus on how humans interact with systems, equipment, and products in environments ranging from traditional office spaces to more complex settings, such as healthcare facilities, partially automated vehicles, and accessibility-focused applications. Our primary goals include:

- **Enhancing User Experience and System Safety**: Conducting human-centered studies optimizing usability, accessibility, and risk mitigation to create smooth human-machine interactions.
- **Fostering Multidisciplinary Collaboration**: Providing a reconfigurable workspace for faculty, students, and industry partners to collaborate on innovative human factors, advanced ergonomics, and AI-based design research.
- **Supporting Educational Excellence**: Offering hands-on learning opportunities for undergraduate and graduate students, as well as demonstration spaces for industry and community outreach.

The Vy and Timothy Li Laboratory, cont.

Since the lab's initial setup, we have added new capabilities (e.g., medium fidelity driving simulator, human digital modeling) and expanded our research scope (e.g., extended reality (AR/VR), AI-driven analytics, human-robot interaction, transportation, and other emerging areas) to stay at the forefront of human factors and ergonomics research.

The naming gift will support key initiatives, including:

- **Student & Visiting Scholar Support**: Stipends, travel grants, and resources for research assistants.
- **Driving Simulation Upgrades**: Enhancements to the driving simulator and new transportation simulators (e.g., e-scooter).
- **Human Dynamics Measurement Equipment**: Advanced tools like electromyography (EMG) sensors, next-gen eye-tracking headsets, and neuroimaging devices.
- **Physical Environment Enhancements**: Flexible furniture, improved lighting, and VR/AR platforms for real-world simulations.
- **Multimodal Data Collection & Analysis**: Investment in software like iMotions to synchronize data from various human behavior tracking tools.
- **Collaborative & Presentation Tools**: Upgrades to interactive displays, telepresence cameras, and ergonomic workstations.