

**CAREER: Event-based Learning and Neurofeedback for Health Monitoring using  
Wearable Biosensors: Data-Driven Approaches and Fairness**

(WORKING DRAFT)

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**Background and Objectives:**

Event-based learning and neurofeedback is a novel bio-inspired system design framework that relies on event-based data processing (e.g. spiking neural networks) to simultaneously improve performance, robustness to perturbations, and alleviate energy consumption. Traditional cyber-physical systems are typically designed with power and resource hungry approaches which cannot be scaled in applications on the edge.

heterogeneous bio-electrical signals such as electroencephelogram (EEG), functional near-infrared spectroscopy (fNIRS), electrocardiogram (ECG) and galvanic skin responses (GSR) to

**Intellectual Merit:**

**Education Plan:**

**Broader Impacts:**