



## I-SENSE Announces Internal Grant Recipients

Through the Division of Research, we are pleased to announce the recipients of an internal grants program, as part of a new initiative to stimulate external research funding. We sought proposals to support the establishment of expansion of multidisciplinary collaborations that lead to externally funded research programs. Specifically, we sought collaborations that aligned with FAU's activities and ambitions in the Sensing and Smart Systems pillar. The total funding under this program was \$100,000, which we distributed among all of the awardees. We received 16 highly competitive proposals, of which we awarded five. Read more about the awarded projects below:

**Title:** Prototyping a comprehensive line sensing hyperspectral imaging sensor

**PI:** Bing Ouyang

**Co-PI:** Michael Twardowski

**Amount:** \$20,000

**Description:** This project will support the development of a benchtop prototype and the processing algorithm, which will allow the team to explore the proposed design and to show preliminary performance results for the concepts in a planned NASA proposal.

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**Title:** Transportation infrastructure health monitoring and management system using wireless/remote sensors

**PI:** Sudhagar Nagarajan

**Co-PI:** Madasamy Arockiasamy

**Amount:** \$21,450

**Description:** This proposal will pioneer a framework in infrastructure health monitoring using high-resolution wireless sensors to detect and analyze through a spatially distributed sensor to continuously monitor the structure, trigger alarms that identify the onset of global and local damage in the structure. The objective of this proposed study is to develop a framework in real time Structural Health Monitoring (SHM) of bridges that will lead to a robust Asset Management Application (AMA). This will provide readily available and actionable data to a myriad of users, in accordance with their role, as user or maintainers or overseers of the nation's infrastructure to ensure the efficiency and security of our infrastructure systems

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**Title:** Robot symbiosis with neuronal action potential sensing electrodes (ROBO-SYNAPSE): Noninvasive investigation of neural plasticity during tactile reinnervation

**PI:** Erik Engeberg

**Co-PIs:** Sarah Du, Jenny Wei, Emmanuelle Togloni

**Amount:** \$19,995

**Description:** The investigators propose to develop a novel ROBO-SYNAPSE to noninvasively study neural plasticity.

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**Title:** Development of a diagnostic assay for rapid detection of Zika virus

**PI:** Waseem Asghar

**Co-PI:** Massimo Caputi

**Amount:** \$10,000

**Description:** The investigators propose to develop a novel, low-cost and automated tool for rapid detection of Zika virus from clinically relevant samples at POC settings.

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**Title:** Wearable sensor devices to measure dual-task (motor-cognitive) performance as a biomarker for neurocognitive disorders

**PI:** Behnaz Ghoraani

**Co-PI:** James Galvin

**Amount:** \$28,555

**Description:** This project proposes a novel test for simultaneous assessment of motor and cognitive performance by incorporating wearable sensors to identify mild cognitive impairment and Alzheimer's disease in older adults.

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