

# BME DAY

## HEALTHCARE INNOVATION AND ENTREPRENEURSHIP



**FRIDAY, APRIL 30, 2021 FROM 8:30AM - 1PM CST**

**ZOOM LINK:**

<https://uofh.zoom.us/j/91011040036?pwd=V3hUb1dHUXBGTMl4Um5YUjFKT2tPdzo9>

- 8:15** Opening Remarks
- 8:30** Keynote Speakers, Drs. Brennan, Wang, Bonato
- 10:00** Capstone student presentations
- 12:00** BME Day Seminar Speaker, Dr. I. Pavlidis

## KEYNOTE SPEAKERS



**COLIN BRENNAN, PHD**

CEO of the single-cell instrumentation company: 1CellBio Inc. Chair of the UH BME industry advisory board.

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**MAY WANG, PHD**

Professor | Georgia Cancer Coalition Distinguished Cancer Scholar | Director of Biocomputing and Bioinformatics Core, Emory-Georgia Tech Center of Cancer Nanotechnology Excellence

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**PAOLO BONATO, PHD**

Associate Professor in the Department of Physical Medicine and Rehabilitation, Harvard Medical School, and an Adjunct Professor of Biomedical Engineering at the MGH Institute of Health Professions, Harvard Medical School.

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**For more information on UH BME academic programs, contact:**

Dr. Charlotte Waits, Associate Director of Academic Programs, [ckwaits@uh.edu](mailto:ckwaits@uh.edu)

**UH BME Day Seminar**  
**Friday, April 30, 2021 Noon**  
**Via Zoom:**

<https://uofh.zoom.us/j/91011040036?pwd=V3hUb1dHUXBGTml4Um5YUjFKT2tPdzo9>

**Accelarousal – A Lurking Chronic Stressor**



**Ioannis Pavlidis, Ph.D.**

**Abstract**

We conducted a daytime naturalistic driving study that involved the same 19 km town itinerary under similar light traffic and fair-weather conditions. We applied a real-time unobtrusive design that could serve as template in future driving studies. In this design, driving parameters and drivers' arousal levels were captured via a vehicle data acquisition and thermal imaging system, respectively. Analyzing the data, we found that about half of the n=11 healthy participants exhibited significantly larger arousal reactions to acceleration with respect to the rest of the sample. Acceleration events were of the mundane type, such as entering a highway from an entrance ramp or starting from a red light. The results suggest an underlying grouping of normal drivers with respect to the loading induced by commonplace acceleration. The finding carries potential long-term health implications for many people. It is also bound to complicate handover functions in semi-autonomous vehicles.

**Biosketch**

Dr. Pavlidis is the Eckhard-Pfeiffer Professor of Computer Science and Director of the Computational Physiology Laboratory at the University of Houston. His research is funded by multiple agencies including the National Science Foundation, the US Department of Transportation, and medical institutions. He has published largely in the areas of affective computing, computational physiology, and the physiological basis of human behavior. He is well known for his work on the quantification of stress and its effect on critical human responses, which appeared in a series of articles in Nature, Lancet, and Scientific Data. Dr. Pavlidis also published a series of widely discussed articles in science policy that appeared in Science Advances and Nature Physics.