

Lehigh Bioengineering Seminar Series presents:

Dr. WenZhan Song

**Georgia Power Mickey A. Brown Professor of Computer Engineering and
Director of the Center for Cyber-Physical Systems at the University of Georgia**

*“Engagement-free and Continuous Health and Activity Monitoring with
Bodyseismography (BSG)”*



Friday, May 1, 2026
10:45 AM-11:45 AM
HST 101

<https://lehigh.zoom.us/j/99859824464>

Please contact the Bioengineering Department (inbioe@lehigh.edu) with any questions or comments.



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Abstract:

This talk introduces our recent research on Bodyseismography (BSG) for health and activity monitoring based on advanced sensing and AI technologies. In vision of IoT-enabled healthcare revolution, we invented a series of zero-touch sensing technologies for engagement-free and continuous health and activity monitoring, enabling future predictive and preventative healthcare of humans and animals. For example, BSG can be attached underneath a bed/seat/cage to senses seismograms from heartbeats and movements and calculate vital signs (heart and respiration rate, blood pressure, etc) and sleep activities and qualities; BSG can also be placed on a floor to senses seismograms generated by foot steps and other activities to identify the activities of daily living (ADL) and safety events. This talk will give an overview of BSG and some algorithm design details of several use cases (such as sleep apnea and hemodynamics trend monitoring).

Personal Bio:

Dr. WenZhan Song is the Georgia Power Mickey A. Brown Professor of Computer Engineering and Director of the Center for Cyber-Physical Systems (CCPS) at the University of Georgia. His research focuses on sensor data analytics and security, sensor networks, and trustworthy data infrastructures. Dr. Song has an outstanding track record of leading multidisciplinary research teams, securing major funding from NSF, NIH, NASA, USGS, DOE, USDA, DOD, and industry partners. His work has been featured in national media and recognized with numerous prestigious awards, including the UGA Creative Research Award (2025), the IEEE Mark Weiser Best Paper Award (2020), the NSF CAREER Award (2010), the GSU Outstanding Research Contribution Award (2014), and the WSU Chancellor Research Excellence Award (2010). These university awards represent the highest faculty research honors at their respective institutions. He has also received three “Most Promising Technology” awards from industry. Dr. Song has served as General Chair, Technical Program Committee member, and Associate Editor for leading conferences and journals in computer science and engineering, including ACM UbiComp/IMWUT, IEEE PerCom, IEEE INFOCOM, IEEE Internet of Things Journal, and ACM Transactions on Sensor Networks. He is also the Founder of Intelligent Dots.

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