SPECIAL RESEARCH SEMINAR

Presented by the Center for Human Neuroscience Research at the Fralin Biomedical Research Institute at VTC

FRALIN BIOMEDICAL RESEARCH INSTITUTE AT VTC
CENTER FOR HUMAN NEUROSCIENCE RESEARCH
VIRGINIA TECH

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Atomic Physics on the Brain

Optically pumped, warm atomic systems provide the basis of high-performance, miniature magnetometers that demonstrate the potential of quantum sensing in real-world settings. These sensors operate at the quantum limit and are promising for a variety of biomedical applications, including magnetoencephalography (MEG) and magnetocardiography (MCG). Recently, many companies and research initiatives have spun up to make viable alternatives to legacy SQUID-based MEG machines that require cryogenic cooling and magnetically shielded rooms. Herein, Dr. Limes will review the history of using atomic sensors for detection of MEG and MCG, as well as the state-of-the-art for unshielded biomagnetic detection developed under the DARPA AMBIIENT program. Future plans for quantum sensor development at Virginia Tech will also be presented, as well as potential paths of implementation for MEG and MCG.

WEDNESDAY, JULY 24, at 2 p.m.

Room G101 A/B, 4 Riverside Circle
Or watch via Zoom: https://virginiatech.zoom.us/j/82742320621

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