

MATERIALS SCIENCE AND ENGINEERING (MS&E) SEMINAR SERIES
Friday December 3, 2021 at 3:00 pm via Zoom

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Abstract: The future story of wearable and implantable neuroelectronics has yet to be written. The application demands are intense, which is why so few materials and methods have been translated to humans. Materials and methods for manufacturing continue to evolve toward greater reliability, miniaturization, and flexibility. This talk will cover three different approaches to manufacturing wearable and implantable neuroelectronics: (i) photolithography, (ii) inkjet printing, and (iii) aerosol jet printing. We will discuss specific examples of the material and design tradeoffs facing the neurotechnologist and look at the future of this space.

Bio: Dr. Seymour runs the Translational Biomimetic Bioelectronics Lab at UTHealth and Rice University. He was recently awarded the University of Texas STARS award. Prior to joining UTHealth, Dr. Seymour served as research faculty in the Department of Electrical Engineering at the University of Michigan where he developed novel neural interface systems including stretchable bioelectronics and optogenetic mapping tools. His industry experience includes working at NeuroNexus as a Principal Scientist where he led several NIH grants and was part of the leadership team when NeuroNexus was acquired by Greatbatch Medical. He earned his B.S. with Honors in Engineering Physics from the Ohio State University and his M.S. and Ph.D. in Biomedical Engineering from the University of Michigan.

MS&E Seminar Series is sponsored by the Department of Chemical Engineering, Lane Department of Computer Science and Electrical Engineering, and Department of Mechanical & Aerospace Engineering.

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