

Joint Department of

BIOMEDICAL ENGINEERING



UNC
CHAPEL HILL

NC STATE
UNIVERSITY

C o u l t e r S e m i n a r S e r i e s P r e s e n t s

“Developing in silico, in vitro, and in vivo platforms for precision oncology”

Xiling Shen, PhD

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Terasaki Institute for Biomedical Innovation
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Dr. Shen is currently a professor and the chief scientific officer of the Terasaki Institute for Biomedical Innovation and the chief executive officer of Xilis Inc. He was formerly the Hawkins Family Associate Professor in the Department of Biomedical Engineering at Duke University and the director of the Woo Center for Big Data and Precision Health. He received his BS, MS, and PhD degrees from Stanford University and the NSF career award at Cornell University. He was the steering committee chair of the NCI Patient-Derived Model of Cancer Consortium, co-chair of the NCI Tissue Engineering Consortium, and cancer track chair of Biomedical Engineering Society 2019. His lab studies precision medicine from a systems biology perspective. Areas of interests include cancer, stem cells, the gut-brain axis, and microbiome.

ABSTRACT

Bodily cells undergo transformations in space and time during development, disease progression, and therapeutic treatment. A holistic approach that combines engineering tools, patient-derived models, and analytical methods is needed to map cellular reprogramming and expose new therapeutic opportunities for precision oncology. The talk will cover our effort across the entire spectrum from bench to bedside, including miniature organoid technology to guide clinical precision- and immuno-oncology, targeting epigenetic and metabolic reprogramming of cancer metastasis, algorithms to identify cancer microbiome, neuromodulation to treat cancer cachexia, and reprogramming organogenesis to create chimeric humanized models.

**Friday, November 11th
12:00 Noon**

Presented From: 4142 Engineering Building III (NC State)

Videoconferenced to: 321 MacNider Hall (UNC)