

# THE DEPARTMENT OF ELECTRICAL & COMPUTER ENGINEERING SPEAKER SERIES

**PRESENTS**

## **Microfluidic epigenomic technologies and their application to brain neuroscience**



Chang Lu  
Fred W. Bull Professor  
Chemical Engineering  
Virginia Tech.

Monday, 4/11, 9:55 am

Join Zoom Meeting

<https://zoom.us/j/9762699678?pwd=RUp5ZmN3cHUyQ1FvUExVQjVsc1hVUT09>

Meeting ID: 976 269 9678

Passcode: K91Bwy

### **LECTURE ABSTRACT**

Epigenome dictates turning on and off genes, forming another layer of regulation on top of gene sequence. Epigenome is cell-type-specific and highly dynamic over the course of development and disease thus offers a treasure trove of information for deciphering critical biomedical processes. In this seminar, I will discuss the role of microfluidics in conducting low-input and single-cell epigenomic analysis using scarce tissue samples derived from mice and humans. I will emphasize on using these tools to generate insights into brain neuroscience involved in mental disorders such as schizophrenia and depression.

### **SPEAKER BIOSKETCH**

Dr. Chang Lu is the Fred W. Bull professor of chemical engineering at Virginia Tech. Dr. Lu obtained his B.S. in Chemistry with honors from Peking University and PhD in Chemical Engineering from University of Illinois at Urbana-Champaign. He spent two years as a postdoc in Applied Physics at Cornell University. His lab has been developing biotechnologies for profiling cell-type-specific epigenomes. These technologies have proven useful for generating new insights into diseases ranging from cancer to mental disorders. Dr. Lu received Wallace Coulter Foundation Early Career Award, NSF CAREER Award, and Dean's award for research excellence among a number of honors. Dr. Lu is a fellow of American Institute for Medical and Biological Engineering (AIMBE).

Contact Dr. Wei-Chuan Shih (wshih@uh.edu) for additional information