

BIOENGINEERING SEMINAR: MICROFLUIDICS FOR 3D TISSUE ENGINEERING AND PERSONAL HEALTH DIAGNOSTICS

Speaker

Dr. Samuel Sia

Location

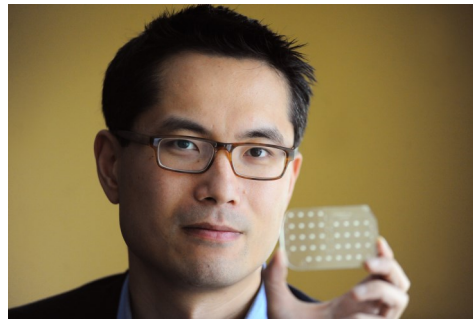
Research Hall 163

Date

11:30am-12:30pm

(lunch will be provided)

Thursday, March 23, 2017



***Biography:** Samuel Sia is a Professor in the Department of Biomedical Engineering at Columbia University. His lab focuses on using microfluidics for global health diagnostics and for 3D tissue biology. He obtained his B.S. in Biochemistry at the University of Alberta, Ph.D. in Biophysics at Harvard University, and postdoctoral fellowship in Chemistry at Harvard University. He is a founder of Claros Diagnostics, a venture capital-backed company developing diagnostics products which was acquired by Opko Health, and Harlem Biospace, New York City's first life-science incubator.*

Talk Overview: The use of microfluidic techniques for two different applications: controlling 3D microenvironments of cells and tissues, and for developing low-cost point-of-care diagnostics for use in U.S. and in developing countries.

- 1) A number of microfluidic techniques have been developed in Dr.Sia's group for controlling the 3D microenvironments of cells and tissues to high resolution. These techniques are useful for studying microvascularization in a number of organ systems, and for engineering implantable devices.
- 2) The development of lab-on-a-chip devices for personal health in the U.S., and for diagnosing diseases for global health. He will discuss his lab's current efforts, in conjunction with partners in industry, public health, and local governments, to develop new rapid diagnostic tests for use in sub-Saharan Africa.