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ICB seminar series 2020/21
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NEW TECHNOLOGIES FOR HIGH-SENSITIVITY AND HIGH-MULTI-PLEX SINGLE-CELL STUDIES

Prof. Dr. Daniel T. Chiu
University of Washington, Seattle

Wednesday, 09/12/2020, 5 pm
Zoom ID: 955 3584 8356/PW:932715

Abstract: This presentation describes microfluidic technologies and fluorescent nanomaterials that we have developed for studying single cells. Using microfluidics and aliquot sorting, we were able to isolate a single target cell of interest (e.g. circulating tumor cells or fetal cells) out of a background of billions of blood cells with over 95% efficiency. And with our fluorescent nanomaterials, we can perform highly multiplexed analysis of single cells at rates of thousands per second.

Bio: Daniel T. Chiu is the A. Bruce Montgomery Professor of Chemistry, Endowed Professor of Analytical Chemistry, Washington Research Foundation Professor, and Professor of Bioengineering at the University of Washington, Seattle. He is also a member of the Cancer Consortium at the Fred Hutchinson Cancer Research Center. His research field of interest is nanomaterials, microfluidics, and new instrumentations for ultra-sensitive bioanalytical measurements.

He obtained a B.A. in Neurobiology and a B.S. in Chemistry from the University of California at Berkeley in 1993, then a Ph.D in Chemistry from Stanford University in 1998. After completing postdoctoral research at Harvard University, he started in the Fall of 2000 as an Assistant Professor of Chemistry at the University of Washington. He moved through the ranks from Assistant Professor, to Associate Professor, then to Professor in 2006. He is the author of more than 200 publications and is the inventor on over 200 issued patents.

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