5th Annual Interdisciplinary Quantitative Biology Winter Boot Camp

Cryo-Electron Tomography

The Boot Camp is designed to augment education for quantitative and biological scientists. Our overarching goal is to introduce students of all ages to the value of integrating biology and medicine with mathematics, physics, chemistry, computer science, statistics and biostatistics, and engineering.

January 8–12, 2018

Institute for Quantitative Biomedicine (IQB)
Center for Integrative Proteomics Research
Rutgers Busch Campus • 174 Frelinghuysen Rd • Piscataway, NJ 08854

INSTRUCTION

Morning lectures will focus on the design and operation of state-of-the-art cryo-electron microscopes, and the theory and practice of cryo-electron tomography.

KEYNOTE SPEAKER:

Peijun Zhang, PhD
University of Oxford; Diamond Electron Bio-Imaging Centre (eBIC)

Afternoon sessions will be devoted to hands-on training in sample preparation/cryo-preservation and *in silico* tutorials that will take participants from raw tomographic images to sub-tomogram averaged 3D structures of biological assemblies.

REGISTRATION

Morning lectures will be open to all. For those who wish to take Boot Camp for 1 credit Pass/Fail, registration instructions may be found at **iqb.rutgers.edu/bootcamp**.

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**Learn more at
iqb.rutgers.edu/bootcamp**

Image: **A tomogram taken at a PC12 cell process.**
Chen, M., Dai, W., Sun, S. Y., Jonasch, D., He, C. Y., Schmid, M. F., Chiu, W., and Ludtke, S. J. (2017), Convolutional Neural Networks for Automated Annotation of Cellular Cryo-electron Tomograms. *Nature Methods.* **14**: 983-985