

# The University of Chicago Computer Science Department

## PRESENTS:

“Exploiting computational scale for richer model-based inference”



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### **Abstract:**

Understanding the deluge of scientific data acquired from next-generation technologies, from astronomy to neuroscience, requires advances in translating our existing knowledge to useful models. Here I show how our recent advances in scalable computing, from “serverless” cloud offerings to deep function approximation, can let us capture and exploit this prior knowledge. Examples include models derived from human intuition (for neural connectomics), carefully-engineered physical systems (for imaging through scattering media), and even direct simulation (for superresolution microscopy). By expanding the space of models we can work with, we can avoid common data science pitfalls while making computing at scale accessible to the entire scientific community.

### **Bio:**

*Eric Jonas is currently a postdoc in computer science at UC Berkeley working with Ben Recht on machine learning for accelerating scientific discovery. He earned his PhD in Computational Neuroscience, M. Eng in Electrical Engineering, BS in Electrical Engineering and Computer Science, and BS in Neurobiology, all from MIT. Prior to his return to academia, he was founder and CEO of Prior Knowledge, a predictive database company which was acquired in 2012 by [Salesforce.com](https://www.salesforce.com), where he was Chief Predictive Scientist until 2014. In 2015 he was named one of the top rising stars in bioengineering by the Defense Department's Advanced Research Projects Agency (DARPA).*

**Monday, February 4, 2019**

**3:00 pm**

**JCL 390**

**Host: Sanjay Krishnan**