

ITS @ The Graduate Center

Initiative for the Theoretical Sciences

Searching for simpler models

As we learn more and more about increasingly complex systems, there is a tendency for our models to correspondingly grow in complexity. Is it possible to tame this complexity and develop methods for simplifying complex models into their essential ingredients? In this symposium, we study when model simplification is possible in systems ranging from biochemical networks to artificial neural networks.

Lectures will be held in the Skylight Room (Room 9100)
The Graduate Center, 365 Fifth Ave, in Manhattan.

Friday 15 November 2019

9:30 AM Coffee and bagels

10:00 AM **Using simple models to understand complex processes**
Mark Transtrum, Brigham Young University

11:30 AM Coffee

12:00 PM **Neural network pruning and the lottery ticket hypothesis**
Jonathan Frankle, Massachusetts Institute of Technology

1:30 PM Lunch

2:30 PM **Finding and explaining structural hierarchies in complex systems**
Katherine Quinn, The Graduate Center

4:00 PM Coffee

4:30 PM **No equations, no variables, no parameters**
Yannis Kevrekidis, Johns Hopkins University

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For more information please visit <https://itsatcuny.org> and <https://biophysics.princeton.edu>.