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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