COMPUTATIONAL KNOWLEDGE SYNTHESIS

JANUARY 24	**KEVIN BRETONNEL COHEN** UNIVERSITY OF COLORADO PHARMACOLOGY
FEBRUARY 7 (1:00-2:30PM)	**BING LIU** UNIVERSITY OF ILLINOIS AT CHICAGO COMPUTER SCIENCE
MARCH 7†	**HOD LIPSON** CORNELL UNIVERSITY ENGINEERING
APRIL 4	**MARK NEWMAN** UNIVERSITY OF MICHIGAN CENTER FOR COMPLEX SYSTEMS
MAY 9	**GARY KING** HARVARD UNIVERSITY GOVERNMENT AND INSTITUTE FOR QUANTITATIVE SOCIAL SCIENCE
JUNE 2	**DAVID BLEI** PRINCETON UNIVERSITY COMPUTER SCIENCE
OCTOBER 3	**WALTER FONTANA** HARVARD UNIVERSITY SYSTEMS BIOLOGY
FALL 2011 DATE TBD	**ALBERT-LÁSZLO BARABASI** NORTHEASTERN UNIVERSITY

*SEMINARS AT 3:00-4:20PM IN SEARLE 240A UNLESS OTHERWISE STATED.

A 2010/2011 COMPUTATION INSTITUTE SPEAKER SERIES THAT HIGHLIGHTS ADVANCES IN THE USE OF COMPUTATION TO REASON OVER HUMAN KNOWLEDGE AND GENERATE PATH BREAKING INSIGHTS, HYPOTHESES AND CONCLUSIONS. / IN THE PAST, SCIENTIFIC COMPUTATION WAS RELEGATED TO THE ANALYSIS OF DATA FROM DISCRETE EXPERIMENTS AND OBSERVATION, AND LATER THE SIMULATION OF NATURAL PHENOMENA AND THE PRODUCTION OF HIGH-THROUGHPUT EXPERIMENTS AND OBSERVATION. / EMERGING COMPUTATIONAL TOOLS ARE NOW BEGINNING TO HELP SCIENTISTS EXCAVATE, EXTRACT AND ORGANIZE LEGACY KNOWLEDGE LOCKED IN LAYERS OF PUBLICATIONS. THIS CONTEXT OF INCREASINGLY COMPUTABLE QUESTIONS AND ANSWERS POSES NOVEL OPPORTUNITIES FOR COMPUTATION TO HELP SCIENCE REASON, GENERATE QUESTIONS AND FORMALIZE REGULARITIES. THIS EXTENDS THE REACH OF COMPUTATION FROM ANALYSIS TO HYPOTHESIS—FROM LOOKING FOR ANTICIPATED PATTERNS IN NATURE TO IDENTIFYING INTELLIGENT ALGORITHMS THAT CAN ANTICIPATE THOSE PATTERNS [1]. THIS SERIES SHOWCASES RESEARCH AT THE FRONTIER OF THESE EXCITING EFFORTS.

1. EVANS JA, RZHETSKY A (2010) MACHINE SCIENCE. SCIENCE 329: 399.