Bringing Computational Modeling to Psychiatry

May 07, 2015

It can be challenging to understand the complex interactions and relationships that result in the development and maintenance of psychiatric problems; however, computational modeling — the integration of mathematics, computers, and simulations to model complex systems — provides a new tool to help describe clinical dysfunction.

A special series in the May issue of *Clinical Psychological Science*, introduced by journal editor Alan Kazdin and special series guest editor Tiago V. Maia, brings together articles illustrating the diverse range of applications of computational modeling to psychiatry.

Editor's Introduction to the Special Series: Computational Psychiatry

Alan E. Kazdin

Introduction to the Series on Computational Psychiatry

Tiago V. Maia

Model-Based Cognitive Neuroscience Approaches to Computational Psychiatry: Clustering and Classification

Thomas V. Wiecki, Jeffrey Poland, and Michael J. Frank

Decision-Theoretic Psychiatry

Quentin J. M. Huys, Marc Guitart-Masip, Raymond J. Dolan, and Peter Dayan

Single-Stimulus Functional MRI Produces a Neural Individual Difference Measure for Autism Spectrum Disorder

James T. Lu, Kenneth T. Kishida, Josepheen De Asis-Cruz, Terry Lohrenz, Diane Treadwell-Deering, Michael Beauchamp, and P. Read Montague

Bridging Levels of Understanding in Schizophrenia Through Computational Modeling Alan Anticevic, John D. Murray, and Deanna M. Barch

The Role of Serotonin in Orbitofrontal Function and Obsessive-Compulsive Disorder Tiago V. Maia and Maria Cano-Colino