

biomedical and health informatics **Biomedical and Health Informatics Lecture Series** 

## Tuesday, October 11, 2011 12:00 - 12:50 p.m., Health Sciences, Room I-132

## Mike Kellen, PhD

Director of Technology and Software Development Sage Bionetworks, Seattle

## "Reproducible and Collaborative Analysis of Clinical Genomic Data with Synapse"

The past two decades have seen an exponential growth in the technical ability to generate genetic and biomolecular data fueled by advances in measurement technologies. However, with a few exceptions, these data have failed to improve prevention or treatment of common human disease. A fundamental reason for this discrepancy between data generation and clinical improvement is the immature development of analytical techniques to meaningfully interpret these new data types. As with any new field, analytical methodologies need to be iteratively developed and refined. The difficulty of accessing, understanding, and reusing data, analysis methods, or models of disease across multiple labs with complimentary fields of expertise is a major barrier to the effective interpretation of genomic data today. Additionally, much of the relevant data to answer a particular research question is spread among multiple public and private repositories. Sage Bionetworks' mission is to catalyze a cultural transition from the traditional single lab, single-company, and single-therapy research paradigm to a model founded on broad precompetitive collaboration on analysis of large-scale biological data. In this talk we will focus on the technology component of Sage Bionetworks' solution strategy, Synapse, an informatics platform for open data-driven collaborative research.

Dr. Kellen is Director of Technology and Software Development at Sage Bionetworks, a non-profit research institute spun out of the Merck / Rosetta company in 2009. At Sage Bionetworks, Dr. Kellen is working to bring support for large scale analysis of biological networks and data into the public domain. Prior to joining Sage, Dr. Kellen held a variety of positions with Teranode corporation and has brought several innovative and award-winning products to market in the life sciences domain covering simulation, data capture and analysis workflow, data integration, and team collaboration. He completed a doctorate in bioengineering at the University of Washington in 2002 where he helped develop scientific modeling and simulation technology subsequently licensed by Teranode.

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