



Channing Microbiome Seminar

April 14 (Friday), 2017, 11am @ 5th floor conference room



Travis Gibson, Ph.D.

Massachusetts Host-Microbiome Center
Brigham and Women's Hospital
Harvard Medical School

Dynamics, Inference (Bayesian), and Experimental Design (for inference) in the Microbiome

Abstract: This talk is comprised of three parts. The first part is concerned with the dynamics and stability of the human gut microbiome. This work is top down and involves the analysis of, large cross sectional, time series, and FMT data. In the second part we talk about regression through the lens of Bayes rule, and the more complicated issue of bayesian analysis as applied to dynamical systems. We try to illustrate what is gained when one approaches inference as a Bayesian versus a non-Bayesian. Then finally we discuss modeling and inference as applied to an engineered consortium of 5 species (collaboration with Pamela Silver Lab). Experimental design as it relates to inference on the consortia under three different scenarios is discussed, batch culture, continuous chemostat, and gnotobiotic mice.

This is joint work with: Georg Gerber, Lynn Bry, Pamela Silver, Jeffrey Way, Marika Ziesach, Elijah Bogart, Vince Carey, Amir Bashan, Elizabeth Hohmann, Scott Weiss, Yang-Yu Liu

Bio: Travis Gibson received his PhD from MIT and is currently a postdoc at BWH/HMS.

Hosted by Yang-Yu Liu