



Harvard School of Public Health
Department of Biostatistics

COLLOQUIUM SERIES SEMINAR



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"Empirical Dynamics for Longitudinal Data"

Derivatives of functions play an important role in assessing dynamics. Estimating derivatives from sparse, irregular and noisy measurements, as typically encountered in longitudinal studies, poses challenges. It is demonstrated how these can be overcome under minimal assumptions if one has a sample of random functions, each of which may be sparsely sampled. An application of derivative estimation is empirical dynamics, represented by an empirical first order ordinary differential equation that is constructed from the data and governs the smooth trajectories that generate the observations. This equation combines time-varying coefficients with a smooth drift process. The interpretation of these components is of interest and is illustrated with longitudinal data. The talk is based on work with Bitao Liu and Fang Yao.

DATE:

Thursday, October 8th

LOCATION:

FXB G12

TIME:

4:00 - 5:00 PM

Light refreshments will be served

