# BI-CO MATHEMATICS COLLOQUIUM


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# *"A Time-Changed Q-Wiener Process"*

## Monday, November 21, 2016

Talk at 4:00 – Park 338
Tea at 3:30 – Park 355, Math Lounge


**Abstract:**

The goal of this talk is to construct, as the title suggests, a time-changed Q-Wiener process and highlight some of its most distinctive properties. We will begin by discussing Brownian motion, a canonical stochastic process, and specifying our notion of time change. Finally we extend the time-changed Brownian motion to a Hilbert space-valued object. Interestingly, our resulting process retains the martingale property and is a sub-diffusion. These characteristics allow us to consider our process in the context of stochastic differential equations.


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