**Energetic Variational Approaches: Onsager's Maximum Dissipation Principle,
General Diffusion, Optimal Transport and Stochastic Integrals**

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In the talk, I will explore the underlying mechanism governing various diffusion processes. We will employ a general framework of energetic variational approaches, consisting of in particular, Onsager's Maximum Dissipation Principles, and their specific applications in application is biology and physiology. We will discuss the roles of different stochastic integrals, self-consistent mean field theories, and the procedure of optimal transport in the context of general framework of theories of linear responses.