This course discusses the principles and methods of non-equilibrium statistical mechanics. Basic topics covered are stochastic processes, regression and response theory, molecular hydrodynamics, and complex liquids. Selected applications, including fluctuation theorems, condensed phase reaction rate theory, electron transfer dynamics, enzymatic networks, photon counting statistics, single molecule kinetics, reaction-controlled diffusion, may also be discussed.
3: Hydrodynamics and Light Scattering

4: Time Correlation Functions

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