Physics

PHYS 554  **Nonequilibrium Stat Mechanics**  credit: 4 hours.
Mathematical description of classical and quantum stochastic systems, thoroughly addressing the tools and the mode of thinking of non-equilibrium statistical mechanics. Equilibrium statistical mechanics (review); Einstein and Smoluchowski diffusion equation; generalized moment expansion of correlation functions; noise-induced limit cycles; time series analysis; diffusion-controlled reactions; classical dynamics under the influence of stochastic forces; observables connected with Brownian transport, echoes, and hysteresis; spin-boson model. Examples from biological physics and theoretical condensed matter physics. Prerequisite: PHYS 504.

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<th>CRN</th>
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<th>Time</th>
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<tr>
<td>56972</td>
<td>Lecture</td>
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<td>11:00 AM - 12:20 PM</td>
<td>TR</td>
<td>136 - Loomis Laboratory</td>
<td>Schulten, K</td>
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Credit Hours: 4 hours
Restricted to Graduate - Urbana-Champaign.