

## Postdoc Positions in Non-Equilibrium Matter at UIUC

(updated: October 17, 2016)

Motivated and ambitious postdoctoral researchers are invited to join Prof. Yang Zhang's research group in the area of Non-Equilibrium Matter at University of Illinois at Urbana-Champaign.

Our research focuses on the study of **non-equilibrium matter** using integrated *atomistic theory, modeling, and simulation* and *neutron and synchrotron light experimental probes*. The structure and dynamics of these systems are either inherently complex or driven out of equilibrium by extreme conditions. In particular, we are interested in a range of fundamental and technical problems involving **slow phenomena and rare events**, such as the viscous flow of supercooled liquids, nucleation and crystal growth, the folding of polypeptide chains into structured proteins, the self-assembly of micro-units into functional objects, materials aging and degradation, and some mathematical optimizations.

We have a postdoc opening to work on the following projects. Outstanding postdoc candidates will be considered for the Beckman fellowships (<http://beckman.illinois.edu/research/fellows-and-awards/postdoctoral>).

1. *Data-enabled machine learning studies of the extreme phase behavior of liquids and liquid-like matter, unconventional phase transitions and critical phenomena, kinetic theory of liquids.*
2. *Rare-event sampling algorithms applied to understand long timescale phenomena.*
3. *Rigidity control of liquids and granular materials, soft machines and soft robotics.*

The experiments are usually performed at the neutron and synchrotron user facilities at national laboratories around the world. Solid background in physics, mathematics, and programming are essential. Physics, Chemistry, and EECS majors are preferred, but other majors are also welcome.

For more information, please contact (with a CV and contact information of three references):

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