Ph.D.

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Minglei Wang

Education

2011–2017 **Ph.D. in Mechanical Engineering with concentration on computer modeling**, *Yale University*, New Haven, CT.

2007–2011 **B.S. in Physics**, *University of Science and Technology of China (USTC)*, Hefei, China.
GPA: *3.8/4.3*

Experience

2011–2017 **Research Assistant in O'Hern Group**, *Yale University*, New Haven, CT.
Thesis title *"New insights into dynamics and mechanical properties of Bulk Metallic Glasses using computer modeling technique"*

- Computer modeling of Bulk Metallic Glasses (BMGs)
  - Performed computer modeling of Molecular Dynamics (MD) simulations to study asymmetry in critical cooling/heating rate of BMGs.
  - Performed regression data analysis of simulation and experiment results using Matlab, and Mathematica.
  - Programmed codes(3000 lines) independently in C++ Voronoi tessellation, disjoint-set, bond correlation algorithm for structural analysis, and Lubachevsky–Stillinger numerical simulations.
  - Suggested innovative classification (intrinsic *vs.* extrinsic) of critical heating rate.
- Studied ductility of BMGs by Conjugate-Gradient energy minimization (optimization) algorithm.
- Built particle packing finders with added frictions in simulations.

2009–2011 **Research Assistant in Ning Xu Group**, *University of Science and Technology of China*, Hefei, China.

- Calculated the parametric dependence of the equation of state and dynamics on particle size dispersion in colloidal suspensions using computer simulation.

Skills and Certificate

- CFA Level III candidate
- Proficient in: C++/C, Matlab, Mathematica, Shell scripts, VMD
- Experience in: Linux, High Performance Computing(HPC), Parallel Computing(MPI, GPU, OpenMP)
- Relevant Courses: Stochastic Processes (Brownian Motion, Martingale, Markov Chain), Object-Oriented Programming, Computational Physics (MC simulation), Parallel Programming and Techniques
- Language: English, Chinese
- Other Interests: piano, reading, jogging

Selected Publications

- **M. Wang**, K. Zhang, Z. Li, Y. Liu, J. Schroers, M.D. Shattuck, and C.S. O'Hern, "Asymmetric crystallization during cooling and heating in model glass-forming systems", *Phys. Rev. E* **91** (2015) 032309.
- **M. Wang**, K. Zhang, M. Fan, Y. Liu, J. Schroers, M.D. Shattuck, and C.S. O'Hern, "Mechanical response and energy landscape with strain in model BMGs", in preparation.
- K. Zhang, **M. Wang**, S. Papanikolaou, Y. Liu, J. Schroers, M.D. Shattuck, and C.S. O'Hern, "Computational studies of the glass-forming ability of model bulk metallic glasses", *J. Chem. Phys.* **139** (2013) 124503.

Honors and Awards

- Emanuel H. Gratenstein Graduate Fellowships in Engineering — *Yale University*, 2015–2016
- Outstanding Student Scholarship — *USTC*, 2008–2010