

# Yuan Zhuang

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## Résumé

### Summary

A software engineer in the AI & Data Infrastructure team at Microsoft. After more than five years of PhD research in programming, numerical optimization, algorithm design and data analysis, I joined Microsoft as a software engineer in the AIDI team to work on providing the big data infrastructure within the company.

### Experience

- 2016-now **Software Engineer in AI & Data Infrastructure Team**, *Microsoft Cooperation*, Redmond, WA, USA.  
Empowering our customers with modern dev tools, data platforms, and data sets for data movements, data enrichment, ML and AI. Mainly working on providing the big data infrastructure of the business-related data products within Microsoft.
- 2011-2016 **Research Assitant in Dr. Patrick Charbonneau's Lab**, *Duke University*, Durham, NC, USA.  
Applied comprehensive mathematics, physics and computer science skills, including Monte Carlo simulation, statistical mechanics and numerical optimization, to study the theoretical behavior of complex colloidal systems.
- 2009-2011 **Research Assitant in Dr. Zhonghuai Hou's Lab**, *University of Science and Technology of China*, Hefei, Anhui, China.  
Applied and solved partial differential equation to the complex chemical reaction system by using state-of-art computer technology.

### Education

- 2011-2016 **Ph.D. in Chemistry**, *Duke University*, Durham, NC, USA.
- 2007-2011 **B.Sc. in Chemical Physics**, *University of Science and Technology of China*, Hefei, Anhui, China.
- 2004-2007 **High School Diploma**, *Qingdao No. 2 Middle School*, Qingdao, Shandong, China.

### Programming Skills

Languages C, C#, SQL, Java, Python, shell script, FORTRAN, Matlab  
Misc Eclipse, L<sup>A</sup>T<sub>E</sub>X, Visual Studio, Emacs, Monte Carlo

### Conference

- March, 2015 **APS March Meeting 2015**, San Antonio, TX.  
Title: Free Energy-Based Monte Carlo Determination of a Model Microphase Former

### Publication

- **Yuan Zhuang** and Patrick Charbonneau, *Communication: Microphase Equilibrium and Assembly Dynamics*, *J. Chem. Phys.*, **147**, 091102 (2017).
- **Yuan Zhuang** and Patrick Charbonneau, *Recent Advances in the Theory and Simulation of Model Colloidal Microphase Formers*, *J. Phys. Chem. B*, **120**(32), 7775 (2016).
- **Yuan Zhuang** and Patrick Charbonneau, *Equilibrium Phase Behavior of the Square-Well Linear Microphase-Forming Model*, *J. Phys. Chem. B*, **120**(26), 6178 (2016).
- **Yuan Zhuang**, Kai Zhang and Patrick Charbonneau, *Phase Behavior of an Equilibrium Continuous Space Microphase Forming Model*, *Phys. Rev. Lett.*, **116**, 098301 (2016).

### Languages

Native Mandarin Chinese  
Fluent English