Zhengyang Liu | *Curriculum vitae*

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Research Interest

soft matter physics, active matter, rheology, collective behavior, image processing, particle tracking

Education

University of Minnesota — Minnesota, USA
Ph.D. candidate, Chemical Engineering — 09/2015–present
Advisor: Prof. Xiang Cheng

Tsinghua University — Beijing, China
B.E., Polymer Materials and Engineering — 09/2010–07/2014
Advisor: Prof. Li-Tang Yan

Teaching Experience

Teaching assistant

- ☐ Senior chemical engineering lab, University of Minnesota — 09/2019–12/2019
- ☐ Biochemical engineering, University of Minnesota — 09/2018–12/2019
- ☐ Transport phenomena, University of Minnesota — 09/2016–12/2019

Conference Talks & Workshops

- ☐ *Rheology of bacterial suspensions under confinement* — 10/2019
  91st Society of Rheology Meeting, Raleigh, NC — slides
- ☐ *Understanding the effect of confinement on the viscosity of bacterial suspensions* — 03/2019
  APS March Meeting 2019, Bostan, MA
- ☐ *Viscosity of confined bacterial suspensions* — 10/2018
  90th Society of Rheology Meeting, Houston, TX
- ☐ *Georgetown active matter summer school* — 06/2017
  Georgetown University, Washington, DC

Poster Presentations

- ☐ *Rheology of bacterial suspensions under confinement* — 11/2019
  CEMS Connects Alumni at Ecolab, Egan, MN — poster
- ☐ *Rheology of bacterial suspensions under confinement* — 10/2019
  91st Society of Rheology Meeting, Raleigh, NC
- ☐ *Rheology of bacterial suspensions under confinement* — 05/2019
  2019 IPRIME Annual Meeting, Minneapolis, MN

☐ *Diffusion, viscosity and collective motions in bacterial suspensions* 06/2017
Georgetown Active Matter Summer School, Washington, DC

Honors & Awards

☐ *Society of Rheology Meeting Student Travel Grant* 10/2019
91st Society of Rheology Meeting, Raleigh, NC

☐ *Frank & Janis Bates Research Fellowship Fund* 09/2015
University of Minnesota, Minneapolis, MN

Synergistic Activities

☐ Member, *American Physical Society*
☐ Member, *Society of Rheology*

Publications

Submitted

☐ *Imaging the emergence of bacterial turbulence using light-powered Escheriachia coli*
Y. Peng, **Z. Liu** and X. Cheng

Published

☐ *Rheology of bacterial suspensions under confinement* [arXiv] [PDF]
Z. Liu, K. Zhang, X. Cheng, *Rheol. Acta* **58**, 439-541 (2019)

☐ *Dynamics of ellipsoidal tracers in swimming algal suspensions* [arXiv] [PDF]
O. Yang, Y. Peng, **Z. Liu**, C. Tang, X. Xu, and X. Cheng, *Phys. Rev. E* **94**, 042601 (2017)

☐ *Entropy-mediated mechanical response of the interfacial nanoparticle patterning* [link] [PDF]
Z. Liu, R. Guo, G. Xu, Z. Huang, L.-T. Yan, *Nano Lett.* **14**, 6910-6916 (2014)

☐ *Harnessing dynamic covalent bonds in patchy nanoparticles: creating shape-shifting building blocks for rational and responsive self-assembly* [link] [PDF]
R. Guo, **Z. Liu**, X.-M. Xie, L.-T. Yan, *J. Phys. Chem. Lett.* **4**, 1221-1226 (2013)

References

☐ Xiang Cheng, Ph.D. advisor
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☐ Kechun Zhang, Ph.D. advisor
College of Engineering, West Lake University
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☐ Yi Peng
Institute of Physics, Chinese Academy of Science
Email: pengy@iphy.ac.cn