

SHANGJIE XUE

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EDUCATION

Massachusetts Institute of Technology (MIT), Cambridge, MA Sept. 2018 - present

Candidate for *Master of Science* in *Nuclear Eng. and Electrical Eng. & Computer Sci.* (dual degree)

Peking University (PKU), Beijing, China July 2018

Bachelor of Science in *Physics*

EXPERIENCE

Research Assistant Sept. 2019 - Present

Department of NSE, Massachusetts Institute of Technology

Advisor: Lin-Wen Hu, Mingda Li

- Research on machine learning-based approach for inverse problem and adaptive sampling for environmental radiation monitoring.

Research Intern June 2020 - Dec. 2020

Uber ATG, San Francisco

Supervisor: Raquel Urtasun, Shenlong Wang

- Photorealistic image synthesis for self-driving car research.
- Shadow synthesis via image-based rendering and machine learning based illumination estimation.

Undergraduate Researcher 2015 – 2018

School of Physics, Peking University

Advisor: Yuan Li

- Studies on disorder induced phase transition in Charge-Density-Wave system via neutron scattering;
- Studied on topological magnon in antiferromagnetic compounds via inelastic neutron scattering.

Visiting Student Researcher Summer 2017

Department of Physics, Massachusetts Institute of Technology

Supervisor: Riccardo Comin

- Studied on mesoscopic charge order domain dynamics via X-ray photon correlation spectroscopy (XPCS).
- Studied on temperature dependence of the lattice dynamics in Charge-Density-Wave system via Raman spectroscopy .

SELECTED PUBLICATIONS

- L. Yue*, **S. Xue***, J. Li*, C. Mazzol, F. Zheng, L. Wang, J. Feng, S. B. Wilkins, R. Comin[†] and Y. Li[†], "Distinction between pristine and disorder-perturbed charge density waves in ZrTe₃", **Nature Communications** 11, no. 1 (2020): 1-8.
- W. Yao*, C. Li*, L. Wang*, **S. Xue**, Y. Dan, K. Iida, K. Kamazawa, K. Li, C. Fang[†], Y. Li[†], "Topological spin excitations observed in a three-dimensional antiferromagnet", **Nature Physics** 14, no. 10 (2018): 1011-1015.
(* : Equal contribution, † : Corresponding author)

SKILLS

- Programming: Python, C/C++, Matlab
- Tools/Software: PyTorch, Tensorflow, Keras, PyQt, Blender, L^AT_EX, etc.

SELECTED AWARDS AND HONORS

- “**Manson Benedict**” Fellowship at MIT 2018 - 2019
- “**Merit Student Award**” at Peking University 2015 & 2016
- “**Wei Lin**” Scholarship at Peking University 2016
- “**Tung OOCL**” Scholarship at Peking University 2015
- “**Meritorious Winner**” in Mathematical Contest in Modeling (MCM) 2015