XU HAN

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Room 4117A(P), Hong Kong University of Science and Technology

Clear Water Bay, Kowloon, Hong Kong

EDUCATION

Hong Kong University of Science and Technology, Hong Kong   *Sep. 2017 - 2021(expected)*
Ph.D. in Physics with Scientific Computation Concentration
Advisor: Prof. Ding Pan

Research interest: Computational Materials Science and Machine Learning

Courses: Parallel Programming, Data Reduction & Visualization, Numerical Modeling in Physics and Computational Energy Materials & Simulation

Renmin University of China, Beijing   *Sep. 2013 - June 2017*
B.S. in Physics

RESEARCH EXPERIENCE

Order the Faces via Unsupervised Learning   *Apr. 2018 - May. 2018*
CSIC 5011, Data Reduction & Visualization, with Di Liu and Meilan Wang

- Reordered 33 images of the same person with different face directions by several manifold learning techniques such as t-SNE et al.

- Proved that locally linear embedding in which number of components and neighbors are 2 and 5, respectively has the best performance.

- Win Best Writing Award and Best Presentation Award.

Department of Physics, University of Southern California, LA   *Sep. 2016 - Nov. 2016*
Visiting student, Advisor: Prof. Stephan Haas

Department of Physics, Renmin University of China, Beijing   *Nov. 2015 - July 2016*
Research assistant, Advisor: Prof. Rong Yu

SELECTED AWARDS

Postgraduate Scholarship   *2017 - 2021*

Research Travel Grant   *Oct. 2019*

PUBLICATIONS

- Tianyi Han*, **Xu Han*** *et al.* Observation of monolayer-like quantum transport in few-layer MoS_2. *Under review.* (*Co-first authorship)

- Xiangbin Cai, Zefei Wu, **Xu Han** *et al.* Atomically-precise edge-contact engineering for valley selection in few-layered MoS_2. *Under review.*

- **Xu Han**, Jiangxiazi Lin, Junwei Liu, Ning Wang and Ding Pan. J. Phys. Chem. C 2019, 123, 14797-14802

- Hui Li, **Xu Han** *et al.* Crystal Growth & Design, 18(5), 2899-2904.

- Jing Liu, ..., **Xu Han** *et al.* Journal of Materials Chemistry A, 6(35), 16874-16881.

COMPUTATIONAL SKILLS

Python, C++, FORTRAN, MATLAB, SQL

TEACHING EXPERIENCE

Department of Physics, HKUST, Hong Kong   *Feb. 2018 - present*

Teaching assistant

PHYS 1115, PHYS 6810G, PHYS 4191

INVITED PRESENTATIONS

- July 26-29, 2019, "Effects of hexagonal boron nitride on the electronic structure of few-layer MoS_2" 2019 Joint Annual Conference of Physical Societies in Guangdong-Hong Kong-Macao Greater Bay Area, Guangzhou, China