PERSONAL INFORMATION

Name: Dejun Qi
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EDUCATION

DePaul University - Chicago, IL   **Class of 2016**
Master of Science in Computer Science
- GPA: 3.54 / 4.00
- Key Coursers: Object Oriented Software development, Database, Algorithms, Machine Learning

University of Arkansas -Fayetteville, IL   **May 2014**
Doctor of Philosophy in Physics
- GPA: 3.74 / 4.00
- Dissertation: From Graphite to Graphene via Scanning Tunneling Microscopy

Harbin University of Science and Technology   **July 2008**
Bachelor of Science in Physics
- GPA: 3.01/4.00
- Specialized area: material physics

EXPERIENCE

Research Assistant, Graphene-STM research Laboratory, 2010 Aug -2014 May
- Performed ultra-high vacuum scanning tunneling microscopy on graphene, semiconductor, and superconducting materials et al.
- Developed method of using scanning tunneling microscopy to control vibration and geometry of suspended graphene. This work resulted in the first published report of high quality atomic resolution image of suspended graphene via STM
- Designed and implemented fabrication processes for stable and high resolution STM tip
- Managed an electronic and atomic characterization laboratory

Physics Lecturer, University of Arkansas, 2008 Aug - 2014 May
- Taught introductory physics courses at the undergraduate level;
- Developed a team player perspective while working with students in classes;
- Developed and demonstrated strong verbal communication skills by explaining highly technical concepts to a novice audience;

ACCOMPLISHMENT

Investigation on fundamental electronic and mechanical properties of graphene via atomic-scale imaging and manipulation
- Tracked ripples in freestanding Graphene for 1st time by discovering the vibration of graphene membranes in 35 nanometers under particular circumstance
- Characterized graphene's bonding effect on platinum nanoparticle of 2 to 5 nanometer size
- Integrated molecular beam epitaxy chamber with scanning tunnel microscope system

Software Development

Commercial Website Development *Significant Course Project (https://github.com/dejunqi2008/restaurantWeb)*
- A front-end development that incorporate most popular front-end and back-end web technologies.
- AngularJS Single-page application (SPA) is used to render different routes with HTML templates and accomplish form validation, avoiding reloading page at any point in the process; Bootstrap framework

Content Management System *(https://github.com/dejunqi2008/content-management-system)*
- A full stack content management system website that was developed using PHP, in combination with Bootstrap framework.
- Implemented a control panel that allows administrator to add, view, edit, and delete posts, comments, and category.

Online shopping bookstore app *The first real course project (https://github.com/dejunqi2008/ECT410-final)*
- A fully functional online store that well imitates the current popular shopping websites.

- Bootstrap and standard CSS were used for front-end design; C# .NET framework were used for server side programming.

PUBLICATIONS

2014   Multilayer graphene, Moiré patterns, grain boundaries and defects identified by scanning tunneling microscopy on the m-plane, non-polar surface of SiC P. Xu, **D. Qi**, J.K. Schoelz, J. Thompson, P.M. Thibado, V.D. Wheeler, L.O. Nyakiti, R.L. Myers-Ward, C.R. Eddy Jr., D.K. Gaskill, M. Neek-Amal, F.M. Peeters Carbon 50, 75-81 (2014).

     Peng Xu, Lifeng Dong, Mehdi Neek-Amal, Matt L. Ackerman, Jianhua Yu, Steven D. Barber, J. Kevin Schoelz, **Dejun Qi**, Fangfang Xu, Paul M. Thibado, and Francois M. Peeters, Self-Organized Platinum Nanoparticles on Freestanding Graphene (accepted by ASC Nano)

     Membrane amplitude and triaxial stress in twisted bilayer graphene deciphered using first-principles directed elasticity theory and scanning tunneling microscopy M. Neek Amal, P. Xu, **D. Qi**, P.M. Thibado, L.O. Nyakiti, V.D. Wheeler, R.L. Myers-Ward, C.R. Eddy, Jr., D.K. Gaskill, and F.M. Peeters Physical Review B 90, 064101 (2014).

     Unusual ultralow frequency fluctuations in freestanding graphene P. Xu, M. Neek-Amal, S. D. Barber, J. K. Schoelz, M.L. Ackerman, P. M. Thibado, A. Sadeghi, and F.M. Peeters Nature Communications 5, 3720 (2014). Click here for more information about this study.

2013   Atomic-scale movement induced in nanoridges by scanning tunneling microscopy on epitaxial graphene grown on 4H-SiC(0001) P. Xu, S. D. Barber, J. K. Schoelz, M. L. Ackerman, **D. Qi**, P. M. Thibado, V. D. Wheeler, L. O. Nyakiti,   R. L. Myers-Ward, C. R. Eddy, Jr., and D. K. Gaskill, " Journal of Vacuum Science and Technology B 31(4), 04D101

     Graphene Manipulation on 4H-Sic(0001) using Scanning Tunneling Microscopy P. Xu, M. L. Ackerman, S. D. Barber, J. K. Schoelz, **D. Qi**, P. M. Thibado, V. D. Wheeler, L. O. Nyakiti, R. L. Myers-Ward, C. R. Eddy, Jr., and D. K. Gaskill, Japanese Journal of Applied Physics 52, 035104,

2012   Electronic Transition from Graphite to Graphene via Controlled Movement of The top Layer with Scanning Tunneling Microscopy" P. Xu, Y. Yang, **D. Qi**, S. D. Barber, J. K. Schoelz, M. L. Ackerman, L. Bellaiche, and P. M. Thibado, Physical Review B 86, 085428

     Electromechanical properties of freestanding graphene functionalized with tin oxide (SnO2) nanoparticles L. Dong, J. Hansen, P. Xu, M. L. Ackerman, S. D. Barber, J. K. Schoelz, D. Qi, and P. M. Thibado, Applied Physics Letters 101, 061601

     New scanning tunneling microscopy technique enables systematic study of the unique electronic transition from graphite to graphene P. Xu, Y. Yang, S. D. Barber, J. K. Schoelz, **D. Qi**, M. L. Ackerman, L. Bellaiche, and P. M. Thibado, Carbon 50, 4633

     A pathway between Bernal and rhombohedral stacked graphene layers with scanning tunneling microscopy P. Xu, Y. Yang, **D. Qi,** S. D. Barber, M. L. Ackerman, J. K. Schoelz, T. B. Bothwell, S. Barraza-Lopez, L. Bellaiche, and P. M. Thibado, Applied Physics Letters 100, 201601

     High-percentage success method for preparing and pre-evaluating tungsten tips for atomic-resolution scanning tunneling microscopy J. K. Schoelz, P. Xu, S. D. Barber, **D. Qi**, M. L. Ackerman, G. Basnet, C. T. Cook, and P. M. Thibado, Journal of Vacuum Science and Technology B 30(3), 033201

     Atomic control of strain in freestanding graphene P. Xu, Y. Yang, S. D. Barber, M. L. Ackerman, J. K. Schoelz, **D. Qi**, I. A. Kornev, L. Dong, L. Bellaiche, S. Barraza-Lopez, and P. M. Thibado, Physical Review B 85, 121406(R)