

Gina M. Quan

Present Address

082 Regents Drive
College Park, MD 20782
(408)823-0123

Education

University of Maryland, College Park
Ph.D. Physics (Expected) (Fall 2012-Present)
University of California, Berkeley
B.A. Physics with High Honors (Spring 2012)
GPA: 3.76

Research Experience

Graduate Research Assistant (Fall 2012 - Present)
University of Maryland, College Park
Supervisors: Professor Andrew Elby, Professor Ayush Gupta, Professor Chandra Turpen

I-RISE Scholar (August 2012)
Seattle Pacific University
Supervisor: Dr. Rachel Scherr

Research Assistant (Fall 2011- Spring 2012)
University of California, Berkeley
Supervisors: Professor Randi A. Engle, Professor Andrea A. diSessa, Dr. Angela Little
Thesis "Model³: Modeling Students' Models of Physics Models"

REU Intern (Summer 2011)
University of Washington
Supervisors: Professor Paula Heron, Professor Peter Shaffer, Professor Lillian McDermott
Project: Investigating Student Understanding of Heat and Temperature

Research Assistant (Summer 2009- Fall 2010)
University of California, Berkeley
Supervisor: Professor Alex Zettl

Teaching Experience

Teaching Assistant (Fall 2012 - Summer 2014)
University of Maryland, College Park

- UNIV100: The Physics Student in the University
- PHYS299B: Developing a Physics Toolbox
- Summer Girls Physics Summer Camp

Student Teacher (Spring 2011- Fall 2011)
Berkeley High School, El Cerrito High School

- Publications**
- Quan, G.,** Elby, A., (2015) *Connecting Self-Efficacy and Nature of Science Shifts in Undergraduate Research Experiences* In 2015 PERC Proceedings. College Park, MD, July 29-30, 2015, edited by A. D. Churukian, D. L. Jones, and Lin Ding. Retrieved from <http://www.compadre.org/per/items/detail.cfm?ID=13888>
- Quan, G.,** Gupta, A., (2015) *Tensions in the Productivity in Design Task Tinkering - Fundamental* In 122th ASEE Annual Conference and Exposition. Seattle: American Society of Engineering Education. Retrieved from <http://www.asee.org/public/conferences/56/papers/12561/view>
- Quan, G.,** Gupta, A., & Elby, A. (2015) *Problematizing Best Practices for Pairing in K-12 Student Design Teams* In 122th ASEE Annual Conference and Exposition. Seattle: American Society of Engineering Education. Retrieved from <http://www.asee.org/public/conferences/56/papers/12565/view>
- Quan, G.,** Gupta, A., (2014) *Finding Productivity in Design Task Tinkering.* In Polman, J. L., Kyza, E. A., O'Neill, D. K., Tabak, I., Penuel, W. R., Jurow, A. S., O'Connor, K., Lee, T., and D'Amico, L. (Eds.). (2014). Learning and becoming in practice: The International Conference of the Learning Sciences (ICLS) 2014, Volume 3 (1607-1608). Boulder, CO: International Society of the Learning Sciences.
- Invited Presentations**
- Bard College Colloquium** (November 2015)
How Undergraduate Student Research Experiences Impact Students' Participation in Physics
- National Society of Black Physicists 2015 Winter Meeting** (February 2015)
How Undergraduate Student Research Experiences Impact Students' Participation in Physics
- PERL @ Michigan State University Seminar** (September 2014)
Unpacking Partnership in an Arduino Environment
- American Physical Society (APS) April 2012 Meeting** (April 2012)
Students as Colleagues: An Examination of Teacher-Student Collaboration in Improving Educational Environments
- Contributed Presentations**
- AAPT 2015 Summer Meeting** (July 2015)
How Undergraduate Research Experiences Support More Central Participation in Physics
- American Society of Engineering Education Annual Conference** (June 2015)
Tensions in the Productivity in Design Task Tinkering - Fundamental (Peer Reviewed)
- American Society of Engineering Education Annual Conference** (June 2015)
Problematizing Best Practices for Pairing in K-12 Student Design Teams - Fundamental (Peer Reviewed)
- AAPT 2015 Winter Meeting** (January 2015)
How Student Research Experiences Shape Perceptions of Scientists
- AAPT 2014 Summer Meeting** (July 2014)
Research on Productive Tinkering in an Arduino Environment
- AAPT 2013 Summer Meeting** (July 2013)
Research on Building Supportive Undergraduate Communities through Physics Seminars
- AAPT 2012 Summer Meeting** (August 2012)
Modeling Consensus: Understanding how Undergraduate Freshmen Define Physics Model
- Contributed Posters**
- American Educational Research Association** (April 2016)
Tracing the Participation of Undergraduate Physics Majors in Research Experiences
- American Educational Research Association** (April 2016)
Unpacking Productivity in the Practice of Design Task Tinkering

Physics Education Research Conference 2015 (July 2015)
Connecting Self-Efficacy and Nature of Science Shifts in Undergraduate Research Experiences

Physics Education Research Conference 2014 (July 2014)
Investigating Access to and Attitudes toward Programming in a Physics Camp

International Conference of the Learning Sciences 2014 (July 2014)
Finding Productivity in Design Task Tinkering

Physics Education Research Conference 2013 (July 2013)
Variation in Student Self-Reports of Study Group Experiences

Physics Education Research Conference 2012 (August 2012)
Characterizing Consensus about the Definition of a Physics Model

AAPT 2012 Winter Meeting (February 2012)
Building Together: An Undergraduate Freshman Class Defines Physics Model

Awards

UMD Outstanding Graduate Assistant Award - Department of Physics
(Spring 2016)

NSF Graduate Research Fellowship Program - Honorable Mention
(Spring 2014)

UC Berkeley Physics Department Service Award- Recipient (May 2012)

UC Berkeley Dean's List - Recipient (Fall 2011)

IBM Thomas J. Watson Scholarship - Recipient (Fall 2008-Spring 2012)

Service

PERLOC Representative (Elected) (Spring 2015 - Present)
Physics Education Research Leadership and Organizing Council
PER Consortium of Graduate Students

Publicist (Elected) (Summer 2013 - Spring 2015)
PER Consortium of Graduate Students

Committee Member (Elected) (Spring 2014 - Fall 2015)
UMD Physics Graduate Committee

Mentor (Spring 2013 - Spring 2016)
UMD Women in Physics

Academic Activities Chair (Summer 2009- Spring 2011)
The Compass Project

President (Summer 2011- Spring 2012)
Society of Physics Students at Berkeley

Undergraduate Internal Evaluator (Fall 2011- Spring 2012)
Berkeley Physics Departmental Review

Swing Dance Instructor (Spring 2009- Fall 2011)
UC Berkeley SwingCal

Memberships

The Access Network- Core Organizer and Founding Member (Summer 2014 - Present)

American Association of Physics Teachers- Member (Fall 2011-Present)

American Physical Society- Member (Fall 2011-Present)

Reviewer

**Physical Review Special Topics - Physics Education Research
American Society of Engineering Education Proceedings
Physics Education Research Conference Proceedings**

Skills

Proficient in Matlab, Java, LabView, L^AT_EX, Adobe Photoshop.