

Stephanie Moyerman

PHYSICIST · DATA SCIENTIST · SOFTWARE ENGINEER

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Education

Harvey Mudd College

DUAL B.S. - MATHEMATICS AND PHYSICS

- Graduated with Distinction and Departmental Honors
- Harvey Mudd College Mindlin Prize for Innovative Ideas in the Sciences
- Harvey Mudd College Thomas B. Brown Award for Research in Physics

Claremont, California

Sept. 2002 - May 2006

UCSD (University of California, San Diego)

M.S. & PH.D. IN PHYSICS - EXPERIMENTAL COSMOLOGY

- Awarded Additional Specialized Degree in Computational Science, Math, and Engineering

La Jolla, Ca

Sept. 2007 - June 2013

Experience

Intel Corporation

SENIOR RESEARCH SCIENTIST

- Technical lead for Intel's Winter X-Games showcase. Managed a team of over 30 people for a **\$1.6M technology integration** with ESPN. Served as overall lead, algorithms programmer, and software systems design lead and programmer. Accomplishment featured in VentureBeat, Sports Illustrated, Forbes, PC World, and others.
- Technical lead and software systems programmer for 4 keynote demonstrations by Intel's CEO at the Consumer Electronics Show (CES) and the Intel Developer Forum.
- Initiated an energy harvesting and low power systems group within the Smart Device Innovation team. Within a year, was made the manager of a stand-alone organization for R&D in this area.
- Conceptualized and created Intel's Smart Motorbike Helmet ([video](#)). Featured in Intel's new internal and external advertising campaign.

Chandler, Az

June 2014 - Present

Intel Corporation

TECHNICAL ASSISTANT TO INTEL SENIOR VP

- Technical assistant to the head of Intel's Non-Volatile Storage Group.
- Provided research assistance, project management, meeting leadership, and technical support for a **granted \$6B** proposal to Intel's Board of Directors.

Santa Clara, Ca

July 2014 - Nov. 2014

Intel Corporation

ROTATION ENGINEER - DECISION ENGINEER AND YIELD ANALYST

- Designed and built an application optimizing Intel's server design portfolio based on clustering and forecasting of workload characteristics, market models, and server chip attributes. Optimization projections result in the **billions of dollars in savings**.
- Led a team of 8 developers in China and 1 in the US for full-scale application deployment on Intel's cloud.
- Implemented and automated machine learning, simulation, and computer vision algorithms to identify and root cause yield trends. These techniques were used as the factory case study for Intel's Big Data Analytics with Hadoop and have resulted in **millions saved** in time and materials.
- Presented results directly to departmental Vice Presidents and Intel Fellows.

Chandler, Az

June 2013 - June 2014

Manhattan Prep

INSTRUCTOR AND SOFTWARE DEVELOPER

- Industry leading instructor for a company that hires less than 1% of applicants with 99th percentile scores.
- Designed and coded the ManhattanPrep SAT web application, including functionality for real time polling, timing, and scoring in the classroom.
- Instructed thousands of GMAT/LSAT/SAT students with an average review of Outstanding (4.8 out of 5).
- Designed course curriculum and wrote/edited course text books, both consistently voted highest in the industry on Yelp and Amazon.

Southern California and Phoenix, Az

Feb. 2010 - Present

UCSD - Department of Physics

UNIVERSITY RESEARCHER AND RESEARCH SCIENTIST

- Invented new technologies and data analysis techniques for experimental studies of the Cosmic Microwave Background. Resulted in multiple publications and patents.
- Key member of the POLARBEAR research project (> 5 universities and 2 national labs) for both hardware and data analysis. Instrumental to building the telescope and detector array as well as designing, writing, and deploying the data analysis pipeline to run on Lawrence Berkeley National Lab's supercomputing cluster. Collaboration resulted in multiple highly-cited publications.
- Experimental, computational, and theoretical studies of magnetic phase transition materials and current driven magnetic spin values. Resulted in multiple publications.
- Mentor and supervisor to over 10 undergraduate lab employees.

La Jolla, Ca

Sept. 2007 - June 2013

Honors & Awards

FELLOWSHIPS

2013	Einstein Postdoctoral Fellowship , Awarded annually to 12 Ph.D.s in Astrophysics (Declined)	<i>Worldwide</i>
2012	AAUW Dissertation Fellowship , Awarded annually to 50 female doctoral candidates in all fields	<i>Nationwide</i>
2008	NSF Graduate Fellowship , Awarded annually to outstanding graduate students in the sciences	<i>Nationwide</i>
2007	UCSD First Year Graduate Fellowship , Awarded to students showing exceptional promise in Physics	<i>Nationwide</i>
2007	Bell Labs Graduate Fellowship , Awarded annually to 12 women and minorities in the sciences	<i>Nationwide</i>
2006	Thomas J. Watson Fellowship , Awarded to 25 students annually for independent study and research	<i>Nationwide</i>

AWARDS

2016	New Technology Group Award , Leading demos for Intel's CEO in the Consumer Electronics Show Keynote	<i>Intel</i>
2015	DRA (Departmental Recognition Award) , Design and demonstration of learning algorithms in action sports	<i>Intel</i>
2014	DRA , Pioneering the Innovation Symposium - new employee teams innovating on Intel's biggest problems	<i>Intel</i>
2013	DRA , Honored for developing large scale machine learning algorithms for yield analysis	<i>Intel</i>
2006	American Physical Society Apker Award , Best Undergraduate Research in Physics	<i>Nationwide</i>
2006	Vanderbilt Prize Runner Up , Best Undergraduate Research in Physics and Astronomy	<i>Nationwide</i>

Publications and Patents

Patents and Invention Disclosures

US Patents and Intel Corp

LEAD AND CONTRIBUTING AUTHOR

Jun. 2008 - Present

- Two graduate school filed applications for nano-fabrication techniques (Serial No: 61/681056 and 61/814029)
- 14 patent applications filed since Jan. 2015 through Intel Corp. in device architecture, algorithms, and software systems

Getting Started with Intel Edison

O'Reilly and Maker Media

AUTHOR

Oct. 2015

- Authored Maker Media's introduction to Intel Edison book

Peer Reviewed Publications

Ap.J., PRL, etc.

LEAD AND CONTRIBUTING AUTHOR

Oct. 2005 - Oct. 2014

- Authored over 20 peer-reviewed publications with approximately 500 citations and an h-index of 12
- For complete listing, see [Google Scholar](#)

Skills

APP PROGRAMMING

Application development experience in Android, iOS, Web, OSX, Windows, and Linux

SCIENTIFIC COMPUTING

Machine Learning, Forecasting, Statistical Analysis, Big Data, Fast Data, Linear Programming, Data Fitting and Root Finding Algorithms, Partial Different Equations, Monte Carlo Methods, Image Processing, Causal Simulations, Parallel Computing

CODING AND MARK-UP LANGUAGES

Python, R, Java, Matlab, Octave, C, C#, C++, Fortran, VBA, MPI, SQL, NoSQL, BASH, HTML, CSS, PHP, NodeJS, XML, Flash, JavaScript, Version Control

SCIENTIFIC COMPUTER PROGRAMS

Maple, Mathematica, ANSYS, LS-Dyna, JMP, LabVIEW, AutoCAD, Eagle, SolidWorks, PovRay, 3D Studio Max, PhotoShop, CorelDraw

LABORATORY

Photolithography and Nanofabrication, Metrology and Characterization, Cryogenics, Physical Properties Testing

Interests

SPORTS

Judo (former nationally ranked competitor), rugby, wakeboarding, surfing, snowboarding, motorcycling, running, lifting, swimming

ART AND MAKING

Amateur glassblowing, glass fusing, woodworking, metal sculpting, furniture design and creation, electronics design and creation

START UPS

Rapid Rehydration (President and Lead Programmer), boardformula.com (First Hired Programmer)