

# PETER J. KARALEKAS

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## EDUCATION

**Yale University**, New Haven, CT, Graduation Expected May 2015

*Bachelor of Science*, Computer Science and Physics (Double Major) – Cumulative GPA: 3.9

*Selected Coursework*: Systems Programming & Computer Organization, Data Structures & Programming Techniques, Cryptography & Computer Security, Numerical Computation, Discrete Mathematics, Linear Algebra with Applications

**Phillips Exeter Academy**, Exeter, NH, Graduated June 2011

*Diploma*, Cum Laude, Highest Honors, Harvard Book Prize for “excellence in scholarship and high character,” Calculus Prize

*Testing*: National Merit Finalist, AP Scholar with Distinction – SAT: Math 800, Reading 740, Writing 730, Cumulative: 2270

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## RESEARCH EXPERIENCE

**Schoelkopf Lab**, *Senior Thesis Research Assistant*, New Haven, CT, August 2014-Present (<http://www.eng.yale.edu/rsllab/>)

- Designing quantum algorithms for qubit control calibration for my physics senior thesis (my proposal is on GitHub)
- Researching under Robert Schoelkopf, a leader in quantum computing and inventor of circuit quantum electrodynamics
- Developing quantum simulations using the Quantum Toolbox in Python (QuTiP) and other scientific computing methods

**Relativistic Heavy Ion Group**, *Research Assistant*, New Haven, CT, June 2012-August 2012 (<http://rhig.physics.yale.edu/>)

- Wrote a 40-page research proposal on a new state of matter discovered at CERN called the “quark-gluon plasma”
- Designed and programmed virtual particle accelerators in C++ to model and investigate the new state of matter
- Executed virtual particle collisions using the ROOT data analysis framework to search for systematic sources of error

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## WORK EXPERIENCE

**J.P. Morgan – Financial Institutions Group**, *Investment Banking Summer Analyst*, New York, June 2014-August 2014

- Built a rich suite of financial modeling, accounting, and general technical skills during the week-long training program
- Staffed on major deals in the banking space to better understand how businesses make important financial decisions
- Created a merger model and pitch book for the final project and presented it to a panel of junior and senior bankers

**Fidelity Worldwide Investment – Equity Trading**, *Summer Quantitative Analyst*, Hong Kong, June 2013-August 2013

- Collaborated with the equity trading floor to brainstorm questions and develop avenues for quantitative research
- Designed and programmed a rich database in MATLAB that marries Fidelity’s third-party and internal datasets
- Developed functions in MATLAB to perform visualization and analysis on the newly-created database

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## LEADERSHIP EXPERIENCE / EXTRACURRICULARS

**Inner City Lacrosse Non-Profit**, *Yale Administrative Liaison*, New Haven, CT, August 2012-Present

- Helped start the program to provide local inner-city middle-school students with free access to lacrosse equipment
- Organize weekly volunteer participation of members of the Yale men’s and women’s varsity lacrosse teams

**Sigma Alpha Epsilon Fraternity**, *Vice President & Various Chairs*, New Haven, CT, September 2011-Present

- *Vice President*: Establish and oversee the responsibilities of the various chairs; manage alumni relations
- *Philanthropy Chair*: Coordinated weekly volunteer excursions to the local soup kitchen and Habitat for Humanity

**Yale Undergraduate Rover Association**, *Software Team Member*, New Haven, CT, August 2014-Present

- Developing software for the team’s Mars rover for a competition against other rovers in Utah this spring
- Coding in Python and C to allow the onboard Arduino and BeagleBone to communicate and collect output from sensors

**Yale University Heavyweight Crew**, *Varsity Rower*, New Haven, CT, August 2011-April 2012

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## SKILLS / INTERESTS

**Programming**: *Intermediate Proficiency*: C, Java – *Basic Proficiency*: Python, C++, Scheme, R, MATLAB, and LaTeX

**Computer**: Microsoft Office Suite (PowerPoint & Excel), Adobe Photoshop, Mathematica, Basic Bloomberg Terminal, GitHub

**Interests**: Music, Guitar, Crew, Hiking – **LinkedIn**: [www.linkedin.com/in/pkaralekas/](http://www.linkedin.com/in/pkaralekas/) – **GitHub**: <https://github.com/pkaralekas>