DAVID KARAPETYAN

david.karapetyan@gmail.com

http://davidkarapetyan.com

EXPERIENCE

Quantitative Analyst	Ernst & Young New York City, NY	**June 2014–Present**

- Provide valuation and advanced financial modeling expertise to institutional clients with regards to complex securities including: equity and foreign exchange options, rates swaptions, and related embedded derivative instruments.
- Implemented Monte Carlo and Finite Difference models to determine fair value of client instruments for accounting purposes.
- Designed and performed stress-tests for investment bank client's pricing models for CCAR purposes. Evaluated the impact on PV and option Greeks of client's portfolio of equity and foreign exchange exotic instruments under severely adverse market scenarios.

Visiting Assistant Professor	University of Rochester Rochester, NY	**July 2012–July 2014**

- Researcher of partial differential equations, in particular nonlinear evolution equations.
- Publications list with doctoral thesis at http://davidkarapetyan.com/pdfs/publications.pdf
- Developed numerical simulations written in C++ to gain intuition about whether certain equations are well-posed or ill-posed for rough initial data.
- Code included Doolittle factorizations and finite difference schemes with spline interpolation.
- Taught courses on Numerical Analysis, Calculus, Topology, Applied Mathematics, Linear Algebra, Differential Equations, and Financial Mathematics

Research Associate	Institute for Defense Analyses Alexandria, VA	**Aug 2004–Aug 2005**

- Conducted research for Pentagon sponsored and privately sponsored projects.
- Applied k-means clustering to analyze existing data on high occupancy toll lanes in the Los Angeles, San Diego, and Chicago metro areas.

EDUCATION

University of Notre Dame
- **Ph.D**, Mathematics   **Aug 2007–May 2012**

Thesis: *On the well-posedness of the hyperelastic rod equation*
- Awarded the **Schmitt Presidential Fellowship**. Full scholarship.

University of California, Berkeley
- **B.S.**, Mathematics and **B.A.**, English Literature   **Aug 2000–May 2004**
- Awarded the **Regents Scholarship**. Full scholarship.

TECHNICAL SKILLS

- Languages: C/C++, Ruby, Bash, LaTeX. Code at https://github.com/dkarapetyan
- Operating Systems: Unix (Linux, FreeBSD), Mac OS X (10.7, 10.8), Windows (XP, Vista, 7)

HONORS, AWARDS, AND EXTRACURRICULAR ACTIVITIES

- **Chess Expert** http://www.chessdryad.com/articles/mi/article_165.htm
- Nominee for ND Shaheen Graduate School Award for top student