David Keith Love

1629 E. Hedrick Dr., Unit B, Tucson, AZ 85719
(520) 977-8341• dlove@email.arizona.edu
http://www.linkedin.com/in/davidklove
http://math.arizona.edu/~dlove

Summary

- Applied Mathematics Ph.D. graduate seeking a full-time position. Research focus on data-driven optimization and analysis, with experience programming and maintaining scientific software in C/C++, Python, Matlab and R. Leadership work in communicating best practices in quantitative problem solving to fellow researchers.

Education

Ph.D. in Applied Mathematics University of Arizona, Tucson, AZ
Cumulative GPA: 4.00/4.00, Graduated December 2013

Master of Science in Applied Mathematics University of Arizona, Tucson, AZ
Cumulative GPA: 4.00/4.00, Graduated May 2009

Bachelor of Science in Engineering Mathematics University of Arizona, Tucson, AZ
Graduated Summa Cum Laude May 2007

Research & Experience

Graduate Research Assistant, Department of Systems and Industrial Engineering, University of Arizona, Tucson, AZ, *January 2009-December 2013*

- Developed analytic methods for optimal decision-making using empirical data.
- Implemented numerical optimization methods in Matlab and Python.
- Developed data visualization tools in Matlab and R.
- Applied optimization method to analyze future water distribution in Tucson.
- Communicated results in written and oral formats.

Teaching Assistant, Math 263: Introduction to Statistics and Biostatistics, University of Arizona, Tucson, AZ, *Fall 2011-Spring 2012*

- Planned and delivered instructional material three class hours per week.
- Prepared, administered and graded homework, midterm and final exams.

G-TEAMS Fellow, Institute for Mathematics & Education, University of Arizona, Tucson, AZ, *June 2010-May 2011*

- Assisted teaching high school mathematics with an emphasis on improving communication of mathematical ideas.

Graduate Research Assistant, Arizona Center for Mathematical Sciences, University of Arizona, Tucson, AZ, *May 2007-December 2008*

- Interfaced with existing models of semiconductor lasers.
- Executed genetic algorithm-based optimization routine for producing ultrashort pulses.

Engineering Intern, Rincon Research Corporation & Arizona Space Grant Consortium, Tucson, AZ, *September 2006-April 2007*

- Wrote interfaces for extracting raw data from commercial-grade GPS receivers.
- Worked to evaluate GPS receiver ability to perform in applications requiring rapid, high quality data.

Computer Skills

- Microsoft Windows · Linux
- C/C++ · MATLAB · Python · R · SQL
- Microsoft Word · Excel · PowerPoint · LaTeX

Publications

- Love, David and Bayraksan, Güzin, **A Likelihood Robust Method for Water Allocation under Uncertainty**, Accepted to *Proceedings of the 2013 Industrial and Systems Engineering Research Conference*.
- Love, David and Bayraksan, Güzin, **Overlapping Batches for the Assessment of Solution Quality in Stochastic Programs**, *Proceedings of the 2011 Winter Simulation Conference*, pp. 4179-4190.
- Love, David, Kolesik, Miroslav and Moloney, Jerome V., **Optimization of Ultrashort Pulse Generation in Passively Mode-Locked Vertical External-Cavity Semiconductor Lasers**, *IEEE Journal of Quantum Electronics*, Vol. 45, Issue 5, pp. 439-445.

Leadership & Service

Seminar Organizer, Software Interest Group, Department of Mathematics, Tucson, AZ, *Fall 2011-Fall 2013*

- Revived the seminar series after inactive years.
- Communicated best practices in scientific computing to graduate students and faculty.
- Recruited speakers and schedule their talks.
- Managed the budget for the seminar.

After School Program Mentor, Tucson Math Circle, Tucson, AZ, *Fall 2009-Fall 2013*

- Tutored local middle and high school students on mathematical puzzles.
- Enriched students' understanding of mathematics by providing interesting problems.

Mathematical Modeling Mentor, Math 485: Math Modeling, Tucson, AZ, *Spring 2010, 2012, 2013*

- Mentored undergraduate math students on research projects.
- Advised students on conducting research effectively.

Fellowships & Awards

- National Science Foundation Travel Grant, 2013
- Institute of the Environment Graduate Student Travel Award, 2013
- Water Sustainability Program Student Fellow, Fall 2012-Spring 2013
- G-TEAMS Fellowship, Fall 2010-Spring 2011
- Herbert E. Carter Travel Award, 2009
- VIGRE Fellowship, Summer-Fall 2009, Spring 2010
- Program in Applied Mathematics Fellowship, Fall 2007-Spring 2008

Professional Memberships

- Society for Industrial and Applied Mathematics (SIAM)
- Tau Beta Pi
- Institute for Operations Research and Management Science (INFORMS)

Relevant Coursework

- Fundamentals of Optimization (SIE 545) · Algorithms, Graphs, and Networks (SIE 546) · Integer & Combinatorial Optimization (SIE 644) · Topics Of Optimization (SIE 649)
- Probability Theory (MATH 563) · Stochastic Processes (MATH 565A/B) · Stochastic Differential Equations (MATH 565C) · Theoretical Statistics (MATH 567A)

Citizenship

- United States