ERIC Y. CHU

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OBJECTIVE

To continue research and development of programming languages for solving large-scale (convex) optimization problems that arise in image processing, controls, finance, machine learning, and / or robotics.

EDUCATION

Stanford University – *Ph.D. Electrical Engineering in progress* 09/08 – present
Focus is on large-scale optimization with application areas in energy and fleet management. Developing a domain-specific language for distributed optimization. Advised by Stephen Boyd, Dimitry Gorinevsky.

Stanford University – *B.S., M.S. Electrical Engineering, minor in Mathematics* 09/02 – 06/07
Emphasis in image processing. Graduated with distinction.

RESEARCH AND WORK EXPERIENCE

Tensilica, Santa Clara, CA – *Video and Imaging Intern* 06/12 – 09/12
Implemented a near real-time feature detector for HD video on Tensilica's new video and imaging processor. Developed code in C/C++. Additionally worked on compiler code scheduling.

Mitek Analytics, LLC, Palo Alto, CA – *Contract Consultant* 10/09 – 06/12
Implemented a streaming, regularized least-squares solver for a client's large data set. Linear regression used in conjunction with single-class machine learning to detect faults in client's data.

Sandia National Labs, Livermore, CA – *Member of Technical Staff* 06/06 – 08/08
Engineered a tracking system using a network of cameras. Mentored summer interns to solve a data fusion problem. Conducted original research in surface acoustic wave devices and wireless sensor networks.

SELECTED PAPERS

Code Generation for Embedded Second-Order Cone Programming.
E. Chu, N. Parikh, A. Domahidi, and S. Boyd. In preparation. Oct, 2012.

Message Passing for Dynamic Network Energy Management.
M. Kraning, E. Chu, and S. Boyd. In submission. Apr, 2012

Distributed Optimization and Statistical Learning via the Alternating Direction Method of Multipliers.
S. Boyd, N. Parikh, E. Chu, B. Peleato, and J. Eckstein. *Foundations and Trends in Machine Learning*. Michael Jordan, Editor in Chief. 3(1):1-122, 2011.

Detecting Aircraft Performance Anomalies from Cruise Flight Data.
E. Chu, D. Gorinevsky, and S. Boyd. Proceedings AIAA@Aerospace. April, 2010.

AWARDS AND HONORS

Tau Beta Pi and Phi Beta Kappa
Frederick E. Terman Engineering Scholastic Award
2008 Hertz Foundation Fellowship Finalist
2009 National Science Foundation Honorable Mention
2010 Best Student Paper Award AIAA Infotech@Aerospace
2010 Pan Wen-Yuan Fellowship

OTHER

Programming experience: Matlab, C/C++, Haskell, Ruby, Python, Scala