

DEAGLAN HALLIGAN

3275 Pomace Ct
Pleasanton, CA 94566

415-350-2014
deaglanhalligan@gmail.com

EDUCATION	M.S., Computer Science, Purdue University	2014
	B.S., Electrical Engineering and Computer Science, UC Berkeley	2008
	B.A., Mathematics, UC Berkeley	2008
WORK	COMPUTER SCIENCE TEACHING ASSISTANT • Purdue University, West Lafayette, IN Developed Perl analysis software for student Java projects and conducted lab sections	2014
	CONTRACT DEVELOPER • Sandia National Laboratories, West Lafayette, IN Developed generic objected-oriented C++ algorithms for fast distributed linear algebra	2011–2014
	MATHEMATICS TEACHING ASSISTANT • Purdue University, West Lafayette, IN Conducted discussion sections, tutored students and graded student work	2009–2010
	RESEARCH INTERN • Microsoft Research, Redmond, WA Developed C/C++ code for linear algebra and numerical exceptions targeting multicore	2009
	JUNIOR DEVELOPMENT ENGINEER • UC Berkeley, Berkeley, CA	2009
	RESEARCH ASSISTANT AND DEVELOPER • UC Berkeley, Berkeley, CA Implemented Fortran/C algorithms for mixed precision iterative linear solvers in LAPACK	2007–2009
	MATHEMATICS AND ENGLISH TUTOR • Self-employed, San Francisco, CA	2005–2009
	MATHEMATICS TUTOR • UC Berkeley Academic Services, Berkeley, CA	2007–2008
	UNDERGRADUATE INTERN • Lawrence Livermore National Laboratory, Livermore, CA Developed Perl and Python tools for efficient graphical data analysis	2007
SOFTWARE	Tramonto : C/C++ application for computations in fluid density functional theory Trilinos : Generic object-oriented C++ framework for distributed linear algebra, multiphysics, engineering Numerical PDE : Parallel Scheme FEM code for numerical PDE with C/MPI interface LAPACK 3.2 : Fortran algorithms for extra-precise iterative refinement and C testing framework XBLAS 1.0 : C BLAS routines for extra-precise iterative refinement algorithms LLNL ARES Project : Perl and Python graphical data analysis code for physics simulation	
TOOLS	Languages: C, C++, Java, Python, Perl, Scheme, MATLAB, Octave, Fortran Frameworks/Libraries: Trilinos, LAPACK, Sca/LAPACK, MPI, Eigen, Intel MKL, OpenMP, Pthreads Development: Debian and Fedora GNU/Linux on x86 and x86-64, GNU/Linux development tools Documentation: L ^A T _E X, Doxygen, Microsoft Office	
HONORS	Melvin L. Keedy Graduate Scholarship	2009
	California Governor’s Scholar	2004
RESEARCH	- with Amalie Frischknecht and Michael Parks. Electrical Double Layers and Differential Capacitance in Molten Salts from Density Functional Theory. Journal of Chemical Physics, July 2014 (paper). - A Semiring Formulation of Boruvka’s Algorithm. Purdue Graduate Network and Matrix Computations, December 2011 (term project). - Iterative Refinement for Tiled Factorizations with Exception Handling. Microsoft Research and Microsoft Technical Computing, August 2009 (presentation, report). - with Douglas Mason and Marghoob Mohiyuddin. Nested Dissection Survey. UC Berkeley Graduate Numerical Linear Algebra, December 2008 (term project). - Efficient High-Level Scientific Testing in the Perl Language. Lawrence Livermore National Laboratory Student Poster Symposium, August 2007 (abstract, poster).	