

Christopher Mckinlay

CONTACT INFORMATION UCLA Mathematics Department www.math.ucla.edu/~mckinlay/
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EDUCATION **University of California, Los Angeles (Westwood, CA)**
Ph.D. Candidate, Department of Mathematics — 9/06 - present
Candidate in Philosophy, Mathematics — 10/10
Analysis Research and Training Groups Grant Recipient — 9/09 - 6/10
Master of Science, Mathematics — 3/08
NSF VIGRE Scholarship Recipient — 9/06 - 6/09
UCLA Dissertation Year Fellowship Recipient — 6/11
awarded to doctoral candidates with exceptional research promise

Middlebury College (Middlebury, VT)
B.A., Department of Chinese Language — 2/97 to 2/01

Harbin Institute of Technology (Harbin, P.R. China)
Exchange Student, Department of Mathematics — 8/98 to 12/98

EMPLOYMENT HISTORY **California State University, Northridge (Northridge, CA)**
Lecturer — 1/12 to present

National Center for Atmospheric Research (Boulder, CO)
Summer Internships in Parallel Computational Science (SIParCS) — 06/08 - 08/08, 06/09 - 08/09, 06/10 - 08/10

University of California, Los Angeles (Westwood, CA)
Teaching Assistant — 9/06 to 8/11

University of California, Los Angeles (Westwood, CA)
VIGRE Summer Internship Program — 06/07 - 08/07

New York University (New York, NY)
HEOP/CSTEP Teaching Assistant — 10/04 to 5/06

PUBLICATIONS Lord, J.; Rast, M.; Mckinlay, C.; Clyne, J.; Mininni, P.; *Wavelet decomposition of forced turbulence: applicability of the iterative Donoho-Johnstone threshold*. Physics of Fluids 24-2, 2/12

Mckinlay, C.; Citro, C.; *Scalable Application of Compressed Linear Operators on GPU Hardware*. 14th SIAM Conference on Parallel Processing for Scientific Computing, 1/10.

Mckinlay, C.; *Accelerating Separable Tensor Operations with Throughput-Oriented Processors*. In preparation.

Mckinlay, C.; Citro, C.; *Efficient Multi-precision Arithmetic with GPUs*. In preparation.

INVITED TALKS "Accelerating Separable Tensor Operations with Throughput-Oriented Processors":
2/11, SIAM Conference on Computational Science and Engineering (Reno, NV)

"On Porting VAPOR's Wavelet Compression Utility to Many-core Architectures":
8/10, National Center for Atmospheric Research (Boulder, CO)
online video: <http://www.cisl.ucar.edu/dir/10Seminars/mckinlay.html>

"Matrix Operator Compression on Accelerator Hardware":
10/09, Hughes Research Laboratory (Malibu, CA)

"Wavelet Compression Methods for Coherent Vortex Extraction":
8/09, National Center for Atmospheric Research (Boulder, CO)

COMPUTING
EXPERIENCE

Operating Systems

Linux, MacOSX, Microsoft Windows XP
IBM AIX, Cray Linux Environment (CLE)

Programming Languages/Libraries

C, C++, Python, Matlab, Unix shells, Perl, Java, JavaScript
Pthreads, OpenCL, CUDA, OpenMP, MPI, PETSc, Intel TBB, Parallel NetCDF

CONFERENCES AND
WORKSHOPS

SIAM Conference on Computational Science and Engineering (Reno, NV), 2/11

Institute for Digital Research and Education, VSCSE 2010 Proven Algorithmic Techniques for Many-core Processors, August 2-6, 2010

Institute for Digital Research and Education, VSCSE 2010 Petascale Programming Environments and Tools, July 6-9, 2010

SIAM Conference on Parallel Processing for Scientific Computing (Seattle, WA), 1/10

Institute for Pure and Applied Mathematics, Mathematics of Knowledge and Search Engines, September 10 - December 14, 2007