P. Aaron Lott **Curriculum Vitae**

EDUCATION

Ph.D. Applied Mathematics & Scientific Computation 2008
University of Maryland, College Park. Advisors: H.C. Elman & A.E. Deane
Dissertation: Fast Solvers for Models of Fluid Flow with Spectral Elements

B.S. Mathematics, Summa Cum Laude 2001
University of Southern Mississippi, Hattiesburg. Advisor: T.H. Fay
Thesis: Periodic Solutions to Duffing's Equation via the Homotopy Method

PROFESSIONAL EXPERIENCE

National Institute of Standards and Technology
NRC Postdoctoral Fellow. Advisor: G.B. McFadden 2008-Now

University of Maryland, College Park

Research Assistant	Department of Computer Science	2007-2008
Student Advisor	Applied Mathematics & Scientific Computation	2006-2007
Teaching Assistant	Department of Mathematics	2004-2006
Research Assistant	Institute for Physical Science & Technology	2002-2004
Teaching Assistant	Department of Mathematics	2001-2003

NASA Goddard Space Flight Center
Summer Intern Computational Technologies Project. Advisor: T.L. Clune 2004
Student Summer School for High Performance Computational Earth & Space Sciences 2002

National Institutes of Health
PRE-IRTA Fellow Laboratory of Computational Biology 2002-2003

RESEARCH INTERESTS

Scientific Computation, Mathematical Modeling, Fluid Dynamics, Preconditioners, Spectral Element Method, Domain Decomposition, Multiphase Flows, Numerical Climate Modeling.

PUBLICATIONS

P. A. Lott, H. Elman Fast Iterative Solver for Incompressible Navier-Stokes Equations with Spectral Elements. In preparation.

D. L. Cotrell, P. A. Lott and G. B. McFadden Boundary Slip Effects on the Stability of Spiral Poiseuille Flow. In preparation.

P. A. Lott, H. Elman Fast Iterative Solver for Convection-Diffusion Systems with Spectral Elements. Numerical Methods in Partial Differential Equations. In press. DOI 10.1002/num.20518

G. B. McFadden, S. R. Coriell and P. A. Lott Onset of Convection in Two Layers of a Binary Liquid. Journal of Fluid Mechanics. 647:105-124, 2010.

T. H. Fay, P. A Lott Using the homotopy method to find periodic solutions of forced nonlinear differential equations. Int. Journal of Mathematical Education in Science & Technology. 33(5):701-714, 2002.

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Invited Presentations

Computer Science and Mathematics Division Seminar, Oak Ridge National Lab	May 2010
Department of Mathematics Colloquium, Howard University	Feb. 2010
Center for Applied Scientific Computing, Lawrence Livermore National Lab	Feb. 2010
Differential Equations Seminar, University of Maryland Baltimore County	Dec. 2009
Applied and Computational Math Seminar, George Mason University	Dec. 2009
Mathematics and Computational Sciences Division Seminar, NIST	Dec. 2007

Contributed Presentations

11th Copper Mountain Conference on Iterative Methods	Apr. 2010
APS/AAPT Joint Physics Meeting	Feb. 2010
AMS/MAA Joint Mathematics Meetings	Jan. 2010
SIAM Conference on Applied Linear Algebra	Oct. 2009
University of Maryland SPIRAL talk, NIST	Jun. 2009
MD-DC-VA MAA Spring Section Meeting	Apr. 2009
Sigma Xi Sixteenth Annual Post-Doctoral Poster Presentation	Feb. 2009
5th Annual Symposium of the Burgers Program for Fluid Dynamics	Nov. 2008
Symposium on Fluid Science and Turbulence, Johns Hopkins University	May 2008
10th Copper Mountain Conference on Iterative Methods	Apr. 2008
4th Annual Symposium of the Burgers Program for Fluid Dynamics	Nov. 2007
8th Annual Monroe Martin Graduate Research Conference	Nov. 2007
AMSC Student Seminar, University of Maryland	Sep. 2007
Maryland Day, University of Maryland	Apr. 2007
Inaugural Symposium of the Burgers Program for Fluid Dynamics	Nov. 2004
SC Student Seminar, University of Maryland	Oct. 2004
10th Annual USA/USM Mini conference in Undergraduate Research	Apr. 2001
MAA Louisiana MS 78th Annual Section Meeting	Mar. 2001
MAA Louisiana MS 77th Annual Section Meeting	Feb. 2000
9th Annual USA/USM Mini conference in Undergraduate Research	Feb. 2000
8th Annual USA/USM Mini Conference in Undergraduate Research	Feb. 1999

Honors & Awards

National Institute of Standards and Technology

National Research Council Postdoctoral Research Fellowship	2008

University of Maryland, College Park

SIAM Student Chapter Outstanding Service Award	2008
College of Computer Mathematical and Physical Sciences Dean's Fellow	2007
Goldhaber & VIGRE Travel Awards	2007

University of Southern Mississippi, Hattiesburg

Wright W. Cross Senior Scholar	2000
USM NASA Space Grant Scholar	1999
Alton C. Grimes Scholar	1999
Wright W. Cross Scholar	1998

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PROFESSIONAL ACTIVITIES	Chair	AMS Session on Computational Mathematics II, Joint Math Meetings	2010
	Referee	Journal of Fluid Mechanics	2009-Now
	Referee	Washington Editorial Review Board	2008-Now
	President	AMSC Student Council & UMD SIAM Student Chapter	2007-2008
	Secretary	AMSC Student Council	2006-2007
	Co-Founder	UMD Math Department Graduation Conference	2006-2008
	Scribe	Mathematical Research Challenges in Optimization of Complex Systems	2006
	Organizer	Spotlight on Graduate Research Competition	2005
	Founder	Applied Math & Scientific Computation Student Seminar	2004-2007
	President	USM section of the Kappa Mu Epsilon Mathematics Honor Society	2000-2001
	Instructor	Boys and Girls Club of Seminary, MS	Summer 1998
MEMBERSHIP	SIAM, MAA, APS		2008-Now
SKILLS	Fortran 90/95, C/C++, MPI, Matlab, Mathematica		

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