
CURRICULUM VITAE

Born, August 19, 1984, Houma, Louisiana, U.S.A.

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EDUCATION

Diploma, Mathematics & Science
Ocean Lakes Mathematics & Science Academy
June 2002, GPA: 3.51

B.S. Mathematics, Magna Cum Laude
Virginia Polytechnic Institute and State University
May 2005, Cumulative GPA: 3.70, In-Major GPA: 3.70

M.S. Mathematics
Virginia Polytechnic Institute and State University
Expected Date: May 2007
Thesis Advisor: J. A. Ball

WORK EXPERIENCE

07/2005 - GTA, Virginia Tech Math Dept.

01/2004 - 05/2005 Research Assistant
ViTLES (Virginia Tech Large Eddy Simulator)

06/2003 - 08/2003 Grader for Calculus II, Dr. Shahrooz Moosavizadeh

05/2003 - 08/2003 Title: Deli Clerk
12/2003 - 01/2004 Farm Fresh Markets

05/2000 - 08/2003 Title: Farmer
Quail Run Farm
2220 Indian River Rd.
Virginia Beach, VA 23456

RESEARCH INTERESTS

Complex Analysis
Functional Analysis
Operator Theory
Systems Theory
Homological Algebra
Commutative Algebra

PAST & PRESENT COMPUTATIONAL RESEARCH

[2001-2002] Graphics engine design, compiler design, and global illumination via the Photon Mapping method (DNA Graphics Engine).

[2001-2002] Designed Virtual-Interrupt & JIT based operating system (GenOS).

[2002-2003] Designed dynamic network protocol for delivered applications (PropylNet).

[2003-2004] Parallel mesh partitioning for optimized unstructured mesh distribution for parallel finite elements (GRiTS).

PAST & PRESENT MATHEMATICS RESEARCH

[2004] Independent study of Functional Analysis.

[2004-2005] p-Laplacian closure models.

[2005-] Behavioral Systems Theory.

[2005-] Homological algebra and k -theory.

TEACHING EXPERIENCE

1. Virginia Tech Summer 2006, Math 4404 (Numerical Methods): Course instructor, wrote lesson plans, graded assignments, lectured, held office hours.
Texts used:
 - Numerical Recipes in C, W. Press et al, 2nd Edition, Cambridge University Press
 - Introduction to Numerical Analysis, J. Stoer et al, 3rd edition, Springer
 - Iterative Methods for Sparse Linear Systems, Y. Saad
2. Virginia Tech Spring 2006, Math 1224 (Vector Geometry): Coordinated recitations, wrote lesson plans, graded assignments, lectured, held office hours. Text used: Stewart, *Calculus*, 5th edition

3. Virginia Tech Fall 2005, Math 1205 (Calculus I): Course instructor, wrote lesson plans, graded assignments, lectured, held office hours. Text used: Stewart, *Calculus*, 5th edition
4. Old Dominion University Summer 2003, Math 212 (Calculus II): Review sessions and grading
5. Ocean Lakes High: Teaching Assistant, Computer Science

PAPERS

1. "Global Re-Indexing for Triangular(Tetrahedral) Simplices (GRiTS)", ICAM Report Number 04-08-01
2. "A Discrete Study of the SIR Model", (with B. Stigler), not published.

PRESENTATIONS

1. Global Re-Indexing for Triangular Simplices, SIAM Conference on CS & E, February 2005
2. Global Re-Indexing for Triangular Simplices, Young Mathematicians Conference 2004, The Ohio State University, August 2004
3. Global Re-Indexing for Triangular Simplices, Virginia Tech Mathematics Department, April, 2004
4. A Discrete Study of the SIR Model, Virginia Tech, April, 2004
5. Hypercube Projection Methods for Systems of ODEs, Virginia Tech, April, 2004
6. DNA - A Graphics Rendering Package, Ocean Lakes High, May, 2002

CONFERENCES ATTENDED

1. SIAM Conference on CS & E, February 2005
2. YMC 2004, August 2004

TECHNICAL SKILLS

Languages:	C/C++, C#, Perl, XML, BASIC, \LaTeX x86 Assembly, SPARC Assembly, MIX
Toolkits/APIs:	.NET, Win32 API, MPI (LAM, MPICH), Petc, OpenGL, Matlab, Metis/ParMetis
Software:	MS Office, MS Visual Studio 6 - .Net, Matlab, Emacs
Operating Systems	MacOS, Unix (BSD), Linux, Windows 3.1 - XP, BeOS

HONORS & AWARDS

Passing score on the Real Analysis PhD preliminary exam
Passing score on the Complex Analysis PhD preliminary exam
Voted Outstanding Graduate Senior by Virginia Tech Mathematics Faculty
Deans List, Fall 2002 - Spring 2005
Travel Award, OSU Young Mathematicians Conference 2004
SIAM Travel Award Recipient, SIAM CSE '05

PROFESSIONAL SOCIETIES

AMS
 $\pi\mu\epsilon$
SIAM
MAA

HOBBIES

Violin
Cooking
Fishing
Latin translation