

Craig Schroeder

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EDUCATION

Stanford University, Stanford
Ph.D. Computer Science, Expected June 2011

Drexel University, Philadelphia
M.S. in Computer Science, Summa Cum Laude, June 2006
B.S. in Computer Science, Summa Cum Laude, June 2006
B.S. in Mathematics, Summa Cum Laude, June 2006
Cumulative G.P.A. 3.97

EMPLOYMENT

Research Assistant **October 2006 to Present**
Stanford University, Department of Computer Science
Worked under Ronald Fedkiw and with Geoffrey Irving on finite element simulations of volume-preserving deformable objects. Currently working on rigid and deformable object two-way coupling. Responsibilities include extending and maintaining PhysBAM, a solids and fluids simulation code base, and finding solutions to physical, computational, and mathematical problems.

Course Assistant **March 2007 to Present**
Stanford University, Department of Computer Science
Working with Ronald Fedkiw to develop a new course, CS205b, to cover partial differential equations, fluids simulation, and solids simulation.

Guest Researcher **June 2006 to August 2006**
Center for Computing Sciences, Bowie, MD
Work description omitted. Ask for details.

Guest Researcher **June 2005 to September 2005**
National Institute of Standards and Technology, Gaithersburg, MD
Worked with Ana Ivelisse Aviles and Marcus Cicerone on a project in statistical engineering. Responsibilities include writing code in C, C++, perl, and bash; designing, running, and analyzing tests; finding and testing statistically significant patterns; writing documentation for results and code; and giving a talk about my work and results.

Undergraduate Research Assistant **June 2002 to June 2005**
Drexel University, Department of Computer Science
Worked under Dr. William Regli and Dr. Ali Shokoufandeh. Worked on heterogeneous solid modeling, heterogeneous scaffold design, surface reconstruction. Responsibilities include writing code in C++, C, Perl, PHP and Scheme; generating, processing and analyzing data; and proofreading technical papers.

SKILLS

- Significant skill: ISO/ANSI C and C++, 80x86 Intel assembly language, Perl, bash
- Experience with L^AT_EX document preparation system
- Linux: Gentoo, Ubuntu, Fedora

HONORS

National Science Foundation Honorable Mention **April 2006**
National Science Foundation

Summer Undergraduate Research Fellowship **June 2005 to September 2005**
National Institute of Standards and Technology

A* Scholarship Award **February 23, 2005**
11th Annual Engineers Week
Honors Day Awards Ceremony

Research Day 2004 Winner **May 4, 2004**
A Presentation of Scholarship and Creative Activities
Sixth Annual Research Day at Drexel University
Winner in the area of Basic/Applied Science: Undergraduate student

Alvin W. Wene Engineering Scholarship **February 25, 2004**
10th Annual Engineers Week
Honors Day Awards Ceremony

International Science Fair Scholarship **May 2000**
Full-Tuition Scholarship for 5 years at Drexel University
2000 Intel International Science and Engineering Fair

THESIS

“Metric Tree Weight Adjustment and Infinite Complete Binary Trees As Groups.” Craig Schroeder. *Master’s Thesis*, Drexel University, June 2006.

PUBLICATIONS

“Volume Conserving Finite Element Simulations of Deformable Models.” Geoffrey Irving, Craig Schroeder, Ronald Fedkiw. *SIGGRAPH 2007, ACM TOG 26*, (in press).

“Stochastic Microgeometry for Displacement Mapping.” Craig Schroeder, David E. Breen, Christopher Cera, William Regli. *Shape Modeling International 2005*, MIT, Cambridge, 15-17 July 2005.

“Computer-Aided Design of Porous Artifacts.” Craig Schroeder, William C. Regli, Ali Shokoufandeh, Wei Sun. *Journal of Computer-Aided Design*, Sept 2004, Vol. 36.

“Representation of Porous Artifacts for Bio-Medical Applications.” Craig Schroeder, William Regli, Ali Shokoufandeh, Wei Sun. *8th ACM Symposium on Solid Modeling and Applications*, 2002, Seattle, Washington, 16 Jun 2003.