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# Chris Wyman

## Education

- 1999-2004    **University of Utah**, Salt Lake City, UT  
Ph.D., Computer Science, expected Spring 2004
- Dissertation Topic: *Fast Local Approximation to Global Illumination*
  - Advisor: Professor Charles Hansen
- 1996-1999    **University of Minnesota**, Minneapolis, MN  
B.S., Computer Science, June 1999  
B.S., Mathematics, June 1999

## Experience

- August 1999–Present    *Graduate Student, Research Assistant*  
**University of Utah**, Salt Lake City, UT
- Performed research on interactive approximations for realistic rendering techniques. Topics included soft shadows, caustics, diffuse interreflections, Monte Carlo rendering, photon mapping, wavelets, and spherical harmonics.
  - Fulfilled teaching duties occasionally when my advisor was unavailable, including 4 weeks teaching his graduate level graphics course while he recovered from surgery.
  - Wrote code and developed for the University of Utah's Real-time Ray Tracer, including illumination code for the Star-Ray Interactive Ray-Tracer which was demonstrated at SIGGRAPH 2002.
- Summer 1998, 1999, 2001    *Head Teaching Assistant*  
**Summer Science Program**, Ojai, CA
- Background: SSP is an astrophysics program for high school students which teaches college level calculus, physics, and computer programming in the context of observing and computing the orbit of an asteroid.
  - Duties included overseeing other teaching assistants, grading assignments, providing assistance and answering questions on homeworks and the final project.
  - Designed and taught the introductory computer science curriculum. Material included an introduction to computers, how to use compilers and editors, basic C input and output, use of the math library, control and looping structures, functions, and pointers. Many students had never programmed a computer.
- September 1997–June 1999    *Teaching Assistant*  
**University of Minnesota**, Minneapolis, MN
- Responsibilities included grading assignments and exams, holding regular office hours, and leading recitation sections (i.e., clarifications, reviews, discussions, and mini-lectures).
  - Assistant for five quarters for CS 3316 *Structure of Computer Programming I*, an introductory programming course using Scheme.
  - Assistant for one quarter of CS 5107 *Computer Graphics I*, an introductory graphics course.

## Experience (continued)

December 1996–July 1997

*Undergraduate Researcher*

**University of Minnesota**, Minneapolis, MN

- Supported by a university Undergraduate Research Opportunity grant.
- Designed, tested, and wrote code for behaviors to control autonomous robots as they located and collected objects in complex environments while avoiding assorted obstacles.

## Professional Activities

- Professional Memberships: ACM SIGGRAPH, Eurographics
- Reviewer: SIGGRAPH 2003, 2004
- Member of the 2000-2001 Graduate Student Advisory Committee (GradSAC), for the University of Utah's School of Computing.

## Awards and Honors

- Wayne Brown Fellowship, University of Utah (1999-2000)
- University of Utah Graduate School's Supplemental Travel Award
  - For travel to the 2003 Eurographics Symposium on Rendering
- Member of Tau Beta Pi National Engineering Honor Society

## Publications

1. C. Wyman. "Fast Local Approximation to Global Illumination," Ph.D. dissertation, University of Utah, in progress.
2. C. Wyman, S. Parker, P. Shirley, and C. Hansen. "Interactive Display of Isosurfaces with Global Illumination," submitted for review at SIGGRAPH.
3. C. Wyman and C. Hansen. "Penumbra Maps: Approximate Soft Shadows in Real Time," *Proceedings of the 2003 Eurographics Symposium on Rendering*, 202-207.
4. C. Wyman, C. Hansen, and P. Shirley. "Interactive Raytraced Caustics," University of Utah Technical Report, UUCS-03-009, 2003.
5. P. Rybski, S. Stoeter, C. Wyman, and M. Gini. "A Cooperative Multi-Robot Approach to the Mapping and Exploration of Mars," 1997 AAAI/IAAI, 798-799.

## References

*Available upon request.*