

JOSHUA L. LEVENBERG  
1228 Delaware St. #F  
Berkeley, California 94702

E-mail: [josh@technomagi.com](mailto:josh@technomagi.com)  
<http://www.technomagi.com/josh/>  
Messages: 510/526-2435

---

My objective is to work on top quality games, implementing cutting edge graphics.

---

## SKILLS

My skills include computer graphics (including rendering, advanced level-of-detail, OpenGL, matrices, and quaternions), rigid-body physics, splines and spline patches, path finding, implicit surfaces, script language implementation, system administration, C++, object oriented design, rapid knowledge absorption, and more math than will ever be useful.

## EDUCATION

University of California at Berkeley, Ph.D. program in Mathematics. Will complete in May 2003.

Reed College, B.A. in Mathematics, 1994. Graduated in three years, Phi Beta Kappa.

## GAME INDUSTRY EXPERIENCE

*Flintstones Bedrock Bowling* (**Adrenalin Entertainment**) Released late 2000  
(1998–1999) Implemented physics engine for Windows and Playstation. Objects interact with arbitrary level geometry.

*Brunswick Circuit Pro Bowling* (**Adrenalin**) Released second quarter 1998  
(1997) Implemented physics simulation to model the interaction between the ball, lane, and pins. For Windows, Playstation.

*Vampire: The Masquerade* (**Adrenalin**) Unreleased  
(1996) Rewrote graphics and implemented pathfinding, sound compression, and a scripting system. Graphics techniques included sprite scaling, z-buffering, RLE, alpha channel, clipping, and dirty rectangles. For DOS.

## OTHER EXPERIENCE

My dissertation *Contour Finding Using  $C^1$  Data* includes many spline techniques, root finding, interpolation, and implicit surfaces.

Published *Fast View-Dependent Level-of-Detail Rendering Using Cached Geometry* in IEEE Visualization 2002.

*Consultant* (**Mathematical Sciences Research Institute**) Jan 2000 to Dec 2001  
Helped administer a network of approximately 140 machines, mostly Linux. Wrote scripts in Python to automate various tasks.

*Teaching Assistant* (**UC Berkeley**) Aug 1995 to May 2001  
Taught Computer Graphics, Calculus, and Discrete Math.

Illustrated the book *Geometry of the Quintic* (1994).

*Programmer* (**Useful Software**) 1987 to Aug 1995

Programmed database applications for DOS and Windows. Wrote commercial programs including *Sharkware Address Book* and *Books Cards & Labels for Windows*.

#### RESEARCH PROJECTS

Object-oriented scripting language (2001)

C++ 3D engine demo using BSP trees and dynamic lighting (1994–95)

#### ACADEMIC HONORS

Placed in the top 50 on the Putnam Exam (1993). Presented undergraduate research on Magic Squares at a joint meeting of the AMS and MAA (June 1994). Won the Lloyd-Williams Scholarship and a Commendation for Excellence by the President of Reed College, in 1992–93 and in 1993–94.

#### INTERESTS

Juggling, unicycling, science fiction, anime, and ballroom dancing.