Robert Bruce Bauer, Ph.D.

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Employment Goal

Seeking employment within an advanced technology company where I can apply my extensive mathematical background to physical problems. This can include areas similar to my graduate studies in fluid dynamics and signal processing, current work in numerical analysis or new areas drawing on my mathematical foundations.

Present Position

Lecturer, University of Southern California.

Position requires teaching two courses per semester and further advancement of research.

Education

Ph.D. Applied Mathematics, Numerical Analysis.

Brown University, Division of Applied Mathematics. May 1995.

Preliminary Examination Areas:

Major - Numerical Analysis and Wavelets

Minors - Fluid Dynamics and Digital Signal Procession

Thesis Advisor: David Gottlieb

Thesis Title: "Numerical Shock Capturing Techniques using Wavelets and High Pass Filters"

M.S. Applied Mathematics.

Brown University, Division of Applied Mathematics. May 1991.

B.A. Applied Mathematics.

University of California, Berkeley. Department of Mathematics. May 1990.

Work Experience

1995–Present. *Lecturer*, University of Southern California.

Taught two courses per semester and continued research into faster numerical methods for compressible flows.

1992-1995. *Research Assistant* Brown University.

Worked with my advisor on several research projects while continuing my graduate studies.

1992. *Computer Consultant*, Brown University.

Assisted undergraduates with computer problems related to their mathematics courses.

1991-1992. *Teaching Assistant*, Brown University.

Worked as a teaching assistant for an operations research class and a differential equations class.

Work Experience (continued)

1988-1989. *Student Tutor*, University of California, Berkeley.
Worked for special university sponsored student tutoring program.

1987-1989. *Grader*, University of California, Berkeley.
Graded homeworks for several undergraduate courses.

Presentations & Workshops

Third International Conference on Spectral and High Order Methods, Houston, TX. May 1995.
"An Efficient Adaptive Grid ENO Scheme."

Institute of Computer Applications in Science and Engineering/Langley Research Center Short Course on Wavelets, Hampton, VA. February 1993.

Publications

"A Hybrid Adaptive ENO Scheme", R.B. Bauer. To appear in Journal of Computational Physics.

"An Efficient Adaptive Grid ENO Algorithm", R.B. Bauer. Proceedings of the Third International Conference on Spectral and High Order Methods (**ICOSAHOM** 1995).

"Filters for Detecting Shocks", R.B. Bauer. Submitted to SIAM Journal.

Academic Awards

Research Assistant, Brown University. 1993–1995
Teaching Fellowship, Brown University. 1991–1992
University Fellowship, Brown University. 1990–1991

Professional Organizations

Sigma Xi, 1995–Present
American Mathematical Society 1990–Present
Mathematical Association of America 1997–Present

Computer Languages

C Fortran HTML Pascal

Operating Systems

UNIX SunOS DOS/Windows MacOS

References

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