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Objectives:

I seek a research- or development-oriented career which would allow me to apply my diverse background in mathematics/computation, physics and mechanical engineering to a variety of challenging problems.

Employment History:

2004–present:	Marshak Postdoctoral Fellow in Theoretical Particle Physics, Dept. of Physics and Astronomy, University of Rochester
2002–2004:	Fellow, Particle Physics Theory Group, DESY, Hamburg, Germany
1999–2002:	Research Associate, Theoretical Physics Dept., Fermi National Accelerator Laboratory, U.S. Dept. of Energy, Batavia, Illinois
1996-1999:	Research Assistant, Dept. of Physics, Univ. of Wisconsin - Madison
Summer 1998:	NSF Summer Institute Fellow, KEK Theory Group, Japan
Fall 1995:	Teaching Assistant, Dept. of Physics, Univ. of Wisconsin - Madison
1994-1995:	Wisconsin Alumni Research Foundation Fellow
1993–1994:	Research Engineer, AbTox, Inc. (medical device plasma sterilization), Mundelein, Illinois
Summer 1993:	American Nuclear Society Foreign Exchange Student, Tokyo Inst. of Technology, Research Laboratory for Nuclear Reactors
1992–1993:	Research Assistant, Dept. of Physics, Univ. of Missouri - Columbia
Summer 1992:	Engineering Intern, Michael Swim Engineering Consulting (HVAC), Creve Coeur, Missouri
Spring 1992:	Teaching Assistant, Dept. of Physics, Univ. of Missouri - Columbia
Summer 1991:	Student Research Intern, Argonne National Laboratory, Argonne, IL
1990–1991:	Research Assistant, Dept. of Physics, Univ. of Missouri - Columbia

Education:

1999: Ph.D. Physics, Univ. of Wisconsin - Madison (under Dieter Zeppenfeld)
Title: Intermediate mass Higgs searches in weak boson fusion

1993: B.S. Physics, with honors, minor in mathematics, Summa cum laude;
B.S. Mechanical Engineering, Summa cum laude; Univ. of Missouri

Computing Experience:

- Fortran, html, LaTeX, Mathematica, Maple
- Linux, OSF, NeXT, Ultrix, VMS

I have extensive experience performing numerical simulations and calculations. My primary focus has been Monte Carlo integration of particle physics scattering processes relevant for collider observables in various physics models, as well as cosmic ray atmospheric interactions. This includes statistical analysis for signal extraction from known or simulable backgrounds. The basis for these calculations is quantum field theory.

Patents:

- U.S. Patent No. 5,603,895: Plasma water vapor sterilizer and method;
  E.U. Patent equivalent pending; assigned to DePuy Orthopaedics, Warsaw, Indiana.
- U.S. Patent No. 5,753,196: Plasma water vapor sterilizer apparatus;
  E.U. Patent equivalent 0835431; assigned to DePuy Orthopaedics, Warsaw, Indiana.

Publications and Talks:

- 36 refereed scientific publications
- 23 scientific proceedings, including published lectures
- 12 invited conference plenary talks
- 4 conference summary talks, 33 contributed conference talks
- 12 physics department colloquia, 75 seminars

Awards and Society Memberships:

1994-present:	American Physical Society
1991:	Phi Beta Kappa, Outstanding Scholar, Univ. of Missouri
1991:	Tau Beta Pi, Univ. of Missouri

References available on request.