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Education

- **University of Colorado** — Boulder, CO
  Ph.D., Mathematics — *2003-2008 (anticipated)*
  - Emphasis on analysis, non-linear PDE's, and stochastic processes. Thesis topic is removable singularities for the equation $\Delta u = u^{\alpha}$.
- **University of Colorado** — Boulder, CO
  M.A., Mathematics — *2001-2003*
  - Focus was on Analysis and function spaces, particularly Sobolev Spaces.
- **University of Colorado** — Boulder, CO
  B.A., Mathematics — *1998-2001*
  - Graduated with Honors, ΦBK and Golden Key. 3.89 cumulative GPA.

Work Experience

- **Qualstar Corporation** — Boulder, CO
  Software Engineer — *May 2006-Present*
  - Developed linux processes in C++ that serve as dameons to robotics in a tape library.
  - Worked on building a graphical user interface using Java/Struts, used System V message queues to communicate with other processes.
  - Maintain nightly build environment, wrote several shell scripts to automate deployment of software packages.
- **University of Colorado** — Boulder, CO
  Instructor — *August 2001 - May 2008*
  - Taught several courses, including calculus I,II and III.
  - Held regular office hours, staffed a walk in help lab, and wrote/proctored/graded exams.
- **University of Colorado** — Boulder, CO
  Research Assistant — *Summer 2000*
  - Developed code in C++ to solve partial differential equations using the Finite Element Method.
  - Set up a cluster with linux, used MPI to implement parallel processing code.
- **University of Colorado** — Boulder, CO
  Informal Program Coordinator — *August 2003 - May 2004*
  - Managed $10,000 budget for student programs in residence halls.
  - Coordinated informal student-faculty programs on campus.
  - Supervised a tutor training program for small group tutors.

Talks/Workshops

- **The Brower Fixed Point Theorem** Summer 2000
  Buffalo, NY
  - Present an elementary proof of the Brower Fixed Point Theorem that was discovered by J. Milnor.
- **Approximation in Hilbert Spaces, I** Fall 2002
  Boulder, CO
  - Part one of a two part talk about using least squares techniques in Hilbert Spaces. Introduce least squares, derive the error minimizing property of least squares approximations.
- **Approximation in Hilbert Spaces, II** Fall 2002
  Boulder, CO
  - Part two of a two part talk about using least squares techniques in Hilbert Spaces. Show how one can obtain uniform estimates for approximations of functions using Sobolev norms in the $W^{2,k}$ spaces.
- **Sobolev Spaces, Orlicz Spaces and Embedding Theorems** Spring 2003
  Boulder, CO *(M.A. Presentation)*
  - Examine the so called critical case: $mp = n$ for target spaces to embed the sobolev space $W_{m,p}(R^n)$. Show how one can not embed into L^∞, but a suitable alternative can be found in the Orlicz Spaces.
- **Distributions and the Direct Delta Function** Fall 2004
  Boulder, CO
  - It is often stated that "the direct delta function isn't a function"... So what exactly is it? This talk gave an overview of distribution theory and weak derivatives.
- **C++/Java Workshop** Fall 2006
  Boulder, CO
  - Gave an introduction to using the GNU C++/Java tools available to graduate students in the Math department.
- **HTML Workshop** Fall 2006
  Boulder, CO
  - Workshop for first year graduate students on how to create course web pages on the department server. Brief introduction to working in a Unix environment.
- **The Trace Problem and Fractional Order Differentiation** Fall 2007
  Boulder, CO
  - Discuss what happens when one takes elements of Sobolev Spaces and restricts them to lower dimensional subsets. The main result being that for each lost dimension, the function loses $\frac{1}{p}$ derivatives.

Skills

Languages: C/C++, LaTeX, Java, Servlets/Struts, Expect, Bash, HTML. Exposure to MySQL and PHP.

Operating Systems: Linux, Solaris, UNIX, Windows 95/98/NT/2000/XP.

Applications: Mathematica, LaTeX, OpenOffice, MS Office, MS Visual Source Safe, Visual Slick Edit, Netbeans IDE.

Miscellaneous: Strong verbal and written communication skills, excellent troubleshooting and debugging skills, exceptional problem solving skills, good teams skills. Basic spanish and german.

Interests

Academic: Numerical PDE's, Finite Element Methods, Analysis, Probability, Stochastic Processes, Sobolev Spaces.

Sports: Skiing, mountain biking, hiking, backpacking.

Computers: SuSe linux web server using Apache, Windows XP Pro desktop, Windows Vista Home laptop. At work I use Redhat linux and Windows 2000.

Musical: Playing Banjo.