Steven J. Koch

Contact Information

Research Data Scientist, University Libraries
Visiting Applications Scientist, CARC
University of New Mexico
Albuquerque, NM

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CAREERS 2.0: careers.stackoverflow.com/sjkode

Coding

TORQUE, Gnu Parallel, LabVIEW / NI-DAQmx (extensive experience), Python, R, C, Java, LaTeX, git, bash
stackoverflow reputation 382

Other skills

Image processing / tracking, hardware automation, molecular biology, microscopy, metal machining, Monte Carlo and Markov chain analysis, teaching and mentoring

Education

Cornell University, Ithaca, NY

Ph.D., Physics (Biophysics minor) **May 2003**

- Dissertation: Probing protein-DNA interactions by unzipping single DNA molecules with a laser trapping microscope
- Advisor: Professor Michelle D. Wang

M.S., Physics **2000**

University of Michigan, Ann Arbor, MI

B.S., Honors Physics **1996**

Recent Experience

University of New Mexico, Albuquerque, NM

Research Data Scientist (University Libraries) **June 2013 – Present**

Visiting Applications Scientist (CARC) **January 2014 – Present**

Leading a pilot project within the University Libraries to help connect campus researchers with high performance computing (HPC). I work one-on-one with researchers, helping them learn the basics of the HPC environment, the nuances of the various machines, and adapting their code to run in parallel on CARC machines. Specific emphasis is on non-traditional supercomputing problems that do not need to have intrinsically parallel code. This is part of broader role as team member of growing Research and Data Services at the UNM Libraries.

University of New Mexico, Albuquerque, NM

Assistant Professor **August 2006 – May 2013**

One large grant (DTRA, $1.5M, co-PI with Atlas), state of the art optical tweezers and automated kinesin gliding motility assays. Four Ph.D. students graduated. Mentored 8 undergraduate researchers. Taught more than 700 students, mostly undergraduate courses, with excellent reviews. Open-science advocate.

Sandia National Labs, Albuquerque, NM

CINT Distinguished Postdoctoral Fellow, Appointee **2003 – 2006**

Implemented wide array of collaborative biophysics projects across Sandia and LANL / CINT. Major publications in MEMS (Applied Physics Letters) and Kinesin (Fungal Genetics and Biology)

Scientific Publications

Available on my Google Scholar page (Steven J. Koch http://goo.gl/kszZ3). Highly-cited publications in Biophysical Journal (2002, 90 citations), Physical Review Letters (2003, 47 citations), Advanced Materials (2008, 26 citations), Nano Letters (2008, 18 citations), Applied Physics Letters (2006, 17 citations), Fungal Genetics and Biology (2007, 7 citations).

Honors and Awards

Addgene Resource Sharing Award, CINT postdoctoral fellowship, US Dept. Ed. GAANN TA/RA fellow, Honorable Mention NSF Graduate Research Fellowship, U. Michigan: Sigma Pi Sigma, Phi Beta Kappa, James B. Angell Scholar, and Sharon Naughton-Briggs Memorial Scholarship.