Jeremy E. Kozdon, PhD

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EDUCATION

Stanford University   Stanford, CA
Ph.D. in Computational and Mathematical Engineering   *2009*
M.S. in Computational and Mathematical Engineering   *2006*

University of California Santa Cruz   Santa Cruz, CA
B.A. in Physics with minor in Computer Science   *2004*

EXPERIENCE

NextSilicon   (fully remote) Monterey, CA
HPC Applications Engineer   *2022 – Present*

- Profiling and tuning various HPC applications
- Providing guidance and mentoring to team members
- Helping with customer support and documentations
- Participating in the development of best practices for performance on hardware

Naval Postgraduate School   Monterey, CA
Associate Professor of Applied Mathematics   *2019 – 2022*
Assistant Professor of Applied Mathematics   *2012 – 2019*

- **High Performance Computing:** Developed multi-GPU scientific software for seismic and climate modeling
- **Computational Methods:** Created robust, accurate, and adaptive methods for modeling of wave phenomena (earthquakes and atmosphere)
- **Teaching:** Taught a variety of mathematics courses from calculus and differential equations to numerical linear algebra and high performance computing
- **Mentoring:** Mentored undergraduate, graduate, and postdoctoral students on projects related to scientific computing
- **Research Funding:** PI or co-PI on funding from the National Science Foundation, Department of Navy, and cooperative agreements for other universities

Department of Geophysics   Stanford, CA
NSF Fellow for Transformative Computational Science using CyberInfrastructure   *2011 – 2012*
Postdoctoral Research Scholar   *2009 – 2011*

- Lead development of finite difference methods for earthquake rupture dynamics simulations in complex geometries
- Co-developed a MPI-based software for earthquake science that was used to simulate the 2011 Tohoku earthquake and tsunami

SKILLS

- Skills: numerical methods development, finite {element, difference, volume} methods, scientific software design, parallel computing, numerical linear algebra
- Programming and technologies: C, C++, Fortran, Julia, MATLAB, CUDA, MPI, OpenMP, Git, LaTeX, continuous integration testing

PUBLICATIONS

Over 20 peer-reviewed publications in journals such as SIAM Journal on Scientific Computing, Journal of Computational Physics, Journal of Scientific Computing, and Computational Geosciences.