

CHRIS OSTROUCHOV

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EDUCATION

University of Tennessee

A.B.D. in Computational Materials Science and Engineering; **GPA: 3.7**

M.S. in Computational Materials Science and Engineering; **GPA: 3.7**

Knoxville, TN

Sep 2013 – Nov 2018

Dec 2022

Clemson University

B.S. in Applied Mathematics with Minors in Computer Science & Materials Science; **GPA: 3.4**

Clemson, SC

Sep 2009 – May 2013

WORK EXPERIENCE

Quansight

Senior Software Engineer II

(Remote) Austin, Texas

Nov 2018 – Current

- Architect and tech lead behind Nebari (an open-source data science platform which runs on all major cloud platforms) and Conda-Store (an open-source platform for managing conda environments across organizations), both deployed in several Top 500 companies
- Lead the administration of all cloud accounts for Azure, AWS, GCP, Digital Ocean, Auth0, Cloudflare, & Hashicorp
- Implemented a company-wide GitOps platform via Terraform & Python to automate internal on/off boarding, users/clients/repositories access, and cost monitoring across all managed clouds
- Manage and upskill 4 employees performing mostly DevOps-related work
- Optimized distributed computations to speed up Spark and Dask for several large financial firms, achieving dramatic speedups and reductions in memory usage using tools such as Numba, Cython, and C++
- Active contributor to several open-source communities including JupyterHub, Nixpkgs, conda-forge, and conda while obtaining commit rights for conda
- A main contributor to conda-libmamba-solver and assisted in rollout to over 4 million conda users
- Participate regularly in sales calls as DevOps subject matter expert

University of Tennessee

Computational Materials Science Graduate Research Assistant

Knoxville, Tennessee

Aug 2013 – Oct 2018

- Automated high-throughput computations of molecular dynamics (MD) and density functional theory (DFT) packages on several HPC systems including NERSC and Titan OLCF
- Wrote open-source multi-objective global optimization code, DFTFIT, for fitting and evaluating interatomic potentials to DFT data
- Developed pysrim package for automating running simulations of ions (SRIM, an old Windows code) in Docker
- Taught 20 classes over five semesters and graded homework for graduate level computational materials science and thermodynamics courses

Clemson University

Undergraduate Internships

Clemson, SC

Aug 2009 – Apr 2013

- *Lawrence Berkeley National Lab*: Implemented similarity algorithm in C++ code Zeo++ performing high-throughput analysis of micro-porous materials (Berkeley, CA - Summer 2012)
- *Clemson University Advanced Materials Research Lab*: Synthesized and quantified mechanical, thermal, and optical properties of over 50 high-purity chalcogenide glasses consisting of *Ge*, *As*, *Te*, and *S* (Clemson, SC - Fall 2010 - Fall 2011)
- *Oak Ridge National Lab*: Programmed a Qt C++ GUI for drawing and simulating complex radial symmetric nanoscale materials (Oak Ridge, TN - Summer 2010)

AWARDS & ACHIEVEMENTS

Graduate Student Award for Excellence in Teaching: Awarded to one student annually in the University of Tennessee's Materials Science program (Spring 2017)

Chancellor's Fellowship: Awarded to five students annually in the University of Tennessee's College of Engineering (2015 - 2017)

President, Materials Research Society: University of Tennessee (2016 - 2017)

Joint Institute for Advanced Materials & Manufacturing (JIAM) Fellowship: Awarded to 2 students annually at the University of Tennessee (2013 - 2016)

President's List for College of Engineering & Sciences: Awarded to undergraduate students achieving a 4.0 GPA (2009, 2010)

PUBLICATIONS (160+ TOTAL CITATIONS)

Ostrouchov C., Zhang Y., Weber W., pysrim: Automation, Analysis, and Plotting of SRIM Calculations, Journal of Open Source Software, June 2018, doi:10.21105/joss.00829

Zhang Y., Xue H., Zarkadoula E., Sachan R., **Ostrouchov C.**, Liu P., Wang X., Zhang S., Wang T., Weber W., Coupled electronic and atomic effects on defect evolution in silicon carbide under ion irradiation, Current Opinion in Solid State and Materials Science, October 2017, doi:10.1016/j.cossms.2017.09.003

Zhang Y., Aidhy D., Varga T., Moll S., Edmondson P, Namavar P., Jin K., **Ostrouchov C.**, Weber W., The effect of electronic energy loss on irradiation-induced grain growth in nanocrystalline oxides, Physical Chemistry Chemical Physics, Vol. 16, pg. 8051-8059, Feb. 2014, doi:10.1039/C4CP00392F

Jones, A., **Ostrouchov, C.**, Haranczyk, M., Iglesia, E., From Rays to Structures: Void Structure Representations from Stochastic Calculations, Elsevier, Vol. 181, pg. 208-216, Nov. 2013, doi:10.1016/j.micromeso.2013.07.003

SELECT PRESENTATIONS

SciPy, July 2023 Tutorial: "Data of an Unusual Size: A practical guide to analysis and interactive visualization of massive datasets"

Packaging Con, Nov 2021 Presentation: "Serving and Managing Reproducible Conda Environments via Conda-Store"

Hashicorp Talks, Feb 2021 Presentation: "Terraforming Jupyter and Dask: How to Get Your Own Cloud Data Science Platform on the Cheap"

JupyterCon, Oct 2020 Presentation: "Introducing QHub: How to Get Your Own Cloud Data Science Platform on the Cheap"

SKILLS

Programming: Python, SQL (Postgresql, SQLite), Javascript, C, C++

DevOps: Kubernetes, Terraform, Ansible, Github Actions

Packaging: Conda, PyPi, Nixpkgs

Clouds: GCP, AWS, Azure, Digital Ocean, Linode, Cloudflare, Auth0

Technologies: Git, Emacs, JupyterHub, Prometheus, Grafana, Argo, Keycloak, Traefik, NGINX, Hashicorp Vault, Airflow, systemd, Redis

CERTIFICATES

Google Cloud Professional Cloud Architect

Nov 2018

Certificate for designing, developing, and managing solutions on Google Cloud