

Maksim S. Rakitin

Honors, awards and certificates

About

Name: Maksim S. Rakitin

Summary: I am a computational scientist at NSLS-II, BNL. I help beamline staff and users run scientific experiments and perform data analysis. I write code in Python to integrate hardware (motors, cameras, detectors, etc.) and 3rd-party software systems with the Bluesky data acquisition framework. I am developing the Sirepo-Bluesky library that integrates Bluesky and the Sirepo browser-based interface to scientific modeling codes to enable access to “virtual” beamlines. I am a proponent of well-tested, modular, reusable, sustainable, and easily accessible code. I am fluent with modern CI systems (GitHub Actions, MS Azure Pipelines, etc.) I use Docker/Podman (including the creation of images), Linux (RHEL8, CentOS, Ubuntu, etc.), vagrant/VirtualBox on a daily basis. I am maintaining [over 100 conda-forge feedstocks](#) (Python, Python with C-extensions, C/C++, Fortran). I lead the continuous integration efforts to deploy and test the conda environments with the Bluesky software stack. I am enthusiastic about new technologies and AI/ML projects. I am a PI on an AI/ML LDRD project and a PI for two SBIR subcontracts with Radiasoft LLC (total funds of \$1M+).

News: “Computer, Is My Experiment Finished?” (September 16, 2022)

<https://www.bnl.gov/newsroom/news.php?a=220832>

“Seeing the Forest Through the Trees: Brookhaven Lab Scientists Develop New Computational Approach to Reduce Noise in X-ray Data.” (April 18, 2022)

<https://www.bnl.gov/newsroom/news.php?a=219533>

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[ORCID: 0000-0003-3685-852X](#)

Honors, awards and certificates

- 2021.02 Certificate of Recognition for scientific contribution to the U.S. Department of Energy National Virtual Biotechnology Laboratory Project “Molecular Design and Analysis to Inform Therapeutics Related to COVID-19” (part of the DOE COVID-19 Pandemic Response in 2020)
- 2021.01 Certificate of Completion of the course “Scientific & Numeric Computing with Python” (James Powell, DUTC)
- 2021.01 Certificate of Completion of the course “Expert Level Python” (James Powell, DUTC)

- 2020 Spotlight Award in recognition of exceptional job performance (Brookhaven National Lab, Upton, NY)
- 2018 Spotlight Award in recognition of exceptional job performance (Brookhaven National Lab, Upton, NY)
- 2012 Certificate of summer school on computer simulations and massive calculations in modern physics with invited lectors from the US (Chelyabinsk, Russia)
- 2010 Certificate of summer school on computational material sciences (San-Sebastian, Spain)
- 2010 Scholarship of the University President (Chelyabinsk, Russia)
- 2009 Certificate of courses on high-performance computational systems (Nizhny Novgorod, Russia)
- 2009–2010 State contract (grant) on Federal Programme “Scientific and pedagogical staff for an innovative Russia” (Moscow, Russia)
- 2007 Diploma of the 13th All-Russian Physics Students Conference for the talk “Computer simulation of hydrogen atom in bcc iron” (Rostov-on-Don, Russia)
- 2006 Summa cum laude in Bachelor’s studies (Chelyabinsk, Russia)
- 2006 Scholarship of the President of Russia