

# Maksim S. Rakitin

## Education

### 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+).

Links: [BNL](#) • [SBU](#) • [SUSU](#)

[@mrakitin](#) • [in @mrakitin](#) • [Google Scholar](#) • [ResearchGate](#) • [ORCID](#)

### Education

2008.10–2012.09



**Ph.D. in Condensed Matter Physics (defended on September 19, 2012)**

*South Ural State University (National Research University), Chelyabinsk, Russia*

*Thesis:* Study of impurities influence on the hydrogen dissolution energy in the bcc iron

*Scientific adviser:* Prof. A.A. Mirzoev, Dr. of Sciences

2006.09–2008.06



**M.S. in Applied Mathematics and Physics (June 13, 2008)**

*South Ural State University (SUSU), Chelyabinsk, Russia*

*Thesis:* Computer simulation of influence of structural relaxation and impurities on dissolution energy of H in Fe

*Scientific adviser:* Prof. A.A. Mirzoev, Dr. of Sciences

*GPA:* 3.85 / 4.0

2002.09–2006.06



**B.S. in Applied Mathematics and Physics (June 20, 2006), *summa cum laude***

*South Ural State University (SUSU), Chelyabinsk, Russia*

*Thesis:* Binding energy of hydrogen in bcc iron lattice

*Scientific adviser:* Prof. A.A. Mirzoev, Dr. of Sciences

*GPA:* 3.69 / 4.0