

# Petr Stepanov

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Ph.D. graduate in physics with expertise in materials science, gamma spectroscopy, defect studies, and nuclear physics.  
Over 7 years of experience in data analysis, particle simulations and scientific software development.

## Summary of Qualifications

- More than 7 years of experience in GUI desktop software development for data analysis and statistics (C++, ROOT, Qt, Python, Wolfram Mathematica).
- Solid background in Monte-Carlo particle simulations (Geant4) in high-energy physics (HEP) and photonics research.
- BASH scripting on High-Performance Computing (HPC) Linux environment.
- Hands-on experience with data acquisition setups and fast electronics (Hamamatsu, ORTEC, Canberra, Tektronix).
- Strong materials science skills. Application of the positron spectroscopy (PAS) and SEM techniques for defect characterization and porosity studies in materials.

## Work Experience

### Research Collaborator (On-Site)

[Thomas Jefferson National Laboratory \(JLab\)](http://www.jlab.org), Newport News, VA.

Jul 2020 - Jan 2023

CERN ROOT   Geant4   High Energy Physics (HEP)   High Performance Computing (HPC)   C++   CMake

### Postdoctoral Researcher (Remote)

[Catholic University of America \(CUA\)](http://www.cua.edu), Washington, DC.

Jul 2020 - Jan 2023

Python   Fast-Fast BNC Electronics   Scintillation   Single Photon Counting

### Research Assistant

[Bowling Green State University \(BGSU\)](http://www.bgsu.edu), Bowling Green, OH.

Aug 2014 - May 2020

Data Analysis   Wolfram Mathematica   C++   Makefiles   e+ Annihilation Spectroscopy

## Education

### Bowling Green State University (BGSU) • OH, United States

Aug 2014 - May 2020

Ph.D. in Photochemical Sciences • GPA 3.423. [Dissertation](#): Novel developments in positron spectroscopy (PAS).

### Ohio Supercomputer Workshop • OH, USA

Jan 2017 - Feb 2017

Hands-on sessions in High-Performance Computing Infrastructure (HPC, SSH, BASH, SLURM).

### National Research Nuclear University (MEPhI) • Moscow, Russia

Sep 2004 - Feb 2011

B.S. and M.S. in Solid State Physics. Thesis: application of PAS for defect concentration studies in bulk materials.

## Professional Networks

- Find examples of my code [on GitHub](#) (50+ repositories).
- Discover my professional contacts [on LinkedIn](#) (200+ connections).
- Skim through the list of my publications [on Google Scholar](#) (24 articles, 300+ citations).

## Relevant Interests

- Hosting an open-source project for keyboard remapping on Linux [300+ stars on GitHub](#).
- Developed a persistent [RAMDisk plugin](#) for Linux that provides 50% increase in source code indexing time.
- Created two shared libraries for the ROOT data analysis framework [\[1, 2\]](#).