

## **Andrei Shishlo**

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### **RESERACH INTERESTS:**

Accelerator Physics, Beam Dynamics, Computational Physics, High Performance Computing, Control Systems

### **SKILLS:**

**Accelerator physics:** Accelerator simulations, particle tracking algorithms, collective effects, instabilities.

**Computational Physics:** Complex physical systems simulation, Monte-Carlo techniques, optimization algorithms, data analysis, integral and differential equations.

**Nuclear Physics:** direct nuclear reactions, polarization effects in nuclear reactions, potential description of hadron-nucleon interaction, interaction of ionizing radiation with substance.

### **Computers:**

- Methodologies: Design Patterns, OO
- Languages: Java, C++, Python, FORTRAN, Perl, Visual Basic
- Operating Systems: Windows, UNIX/LINUX
- Parallel and High Performance Computing.
- EPICS data acquisitions applications

### **EDUCATION:**

1985-1989: Ph.D. Nuclear and Elementary Particles Physics, St. Petersburg State Technical University, Russia

1980-1985: M.S. Experimental Nuclear Physics, St. Petersburg State Technical University, Russia

### **PROFESSIONAL EXPERIENCE:**

**2002-Present, Accelerator physicist, SNS Warm linac area physicist, Senior R&D Staff, Accelerator Physics Group leader, and now SNS linac physicist, SNS-project, ORNL, USA**

**2000-2002, Computer Analyst/Advanced Application Engineer, SNS-project, Brookhaven National Laboratory, USA**

**1997-2000, Associate Professor, Department of Experimental Nuclear Physics, St. Petersburg State Technical University, Russia.**

**1994-1997, Research Associate, Department of Experimental Nuclear Physics, St. Petersburg State Technical University, Russia.**

**1992-1994, Associate Professor, Department of General Physics, Ulyanovsk Polytechnic Institute, Russia.**

**1989-1991, Assistant Professor, Department of General Physics, Ulyanovsk Polytechnic Institute, Russia.**

**1985-1989, Postgraduate Student, Department of Experimental Nuclear Physics, St. Petersburg State Technical University, Russia.**

### **TEACHING EXPERIENCE:**

**Courses at St. Petersburg State Technical University, Russia.**

- Lectures on Quantum Field Theory (1999-2000)
- Seminars on Computational Methods for Physical Data Analysis (1998-2000)
- Seminars on Nuclear Physics (1997-2000)
- Seminars on Atomic Physics (1997-2000)

**Courses at Ulyanovsk Polytechnical Institute, Russia.**

- Lectures and Seminars on General Physics (1989-1993)

**Awards and Honors:**

- ORNL Supp Performance Award, 2010
- ORNL Supp Performance Award, 2013
- ORNL Supp Performance Award, 2014
- ORNL Special Event Award, 2016
- ORNL Supp Performance Award, 2019
- ORNL Supp Performance Award, 2021

**PUBLICATION:**

30 articles, 6 manuals, 53 reports.

**LANGUAGES:**

Russian, English