
Sergei Kladov

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Profile

I am an accelerator science physicist working on BINP VEPP-2000 e^+e^- collider. I am familiar with beam dynamics, especially in systems with betatron coupling, resonances and nonlinearities. Also programming in java, modeling particle motion. I am looking for international practice and interesting projects related to these topics, or the new ones for me, which are able to expand my horizons.

Current Work

Budker Institute of Nuclear Physics

September 2020 – Present

Senior assistant, researcher on VEPP-2000 e^+e^- collider.

- Develop theoretical treatment of beam dynamics in machines with strong coupling in the presence of wake fields
- Develop Java program for such dynamic modeling
- VEPP-2000 operator-physicist

Education

MSc Physics in accelerator science

September 2020 – Present

Novosibirsk National Research State University, Novosibirsk, Russia

BSc Physics in accelerator science

September 2016 – June 2020

Novosibirsk National Research State University, Novosibirsk, Russia

GPA – 4.88/5

Work and research experience

Budker Institute of Nuclear Physics

September 2017 – July 2020

Laboratory assistant

Researcher on VEPP-2000

June 2019 – July 2020

- Develop theoretical treatment of nonlinear betatron dynamics in machines with strong coupling in the simultaneous presence of different resonances
- VEPP-2000 operator-physicist
- Awarded by S. G. Popov scholarship

Laboratory assistant on electron beam welding machine

June 2018 – December 2018

- Create optical commutator using Arduino
- Operate electron beam welding machine

Researcher of accelerator targets

September 2017 – December 2017

- Modeling the different targets heating by beam passing using COMSOL

Skills and interests

Computer competence

Programming languages: Java, Python, C#, HTML, CSS, JavaScript, C++

Software: Mathematica, COMSOL, Arduino, Processing, Fritzing

Languages

Russian: native

English: advanced level

Other interests

Data science, machine learning, neural networks, game developing.

Conferences

“Study of nonlinear effects near the main coupling resonance in the VEPP-2000 collider”.
International Scientific Student Conference (ISSC). Instrumental methods and technique of
experimental physics, 2020.