

Vladimir Solokha

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Education

- 2015–2017 **MSc**, *Peter the Great St.Petersburg Polytechnic University*, GPA – 4.0/4.0.
Plasma Physics
Thesis: Thomson scattering diagnostics for Globus-M/M2 upgrade
Advisor: Research Fellow Gleb Kurskiev
- 2011–2015 **BSc**, *Peter the Great St.Petersburg Polytechnic University*, GPA – 3.5/4.0.
Plasma Physics
Thesis: The study of the plasma disruption in tokamak T-10 caused by massive gas injection
Advisor: Associate Professor Vladimir Kapralov

Peer-Reviewed Publications

- 2018 **V. Solokha et al.**, "Simulation of Peeling-Ballooning modes in Globus-M", Journal of Physics: Conference Series (submitted)
- 2018 **V. Solokha et al.**, "Digital filter polychromator for Thomson scattering applications", Journal of Physics: Conference Series, 982, 012003, 10.1088/1742-6596/982/1/012003
- 2017 **V. Solokha et al.**, "Study of kinetic parameters of Globus-M plasma by Thomson Scattering using advanced digital polychromator", Problems of atomic science and technology", ser. thermonuclear fusion, Vol. 40, p.5, DOI: 10.21517/0202-3822-2017-40-1-5-13
- 2017 **V. Minaev et al.**, "Spherical tokamak Globus-M2: design, integration, construction", Nuclear Fusion, Volume 57, Number 6, DOI: 10.1088/1741-4326/aa69e0
- 2017 **E. Mukhin et al.**, "Hardware solutions for ITER divertor Thomson scattering", Fusion Eng. Des., Volume 123, DOI: 10.1016/j.fusengdes.2017.06.014

Research Experience

- 2015–Present **Engineer**, IOFFE INSTITUTE, Saint-Petersburg, Russia.
Developed Edge Thomson Scattering System (TS) at the Globus-M Tokamak. Investigated stability of plasma edge.
Detailed achievements:
 - Developed Markov Chain Monte-Carlo Bayesian interface for TS data handling
 - Performed BOUT++ 3D MHD simulation of edge plasma to investigate ELM structure and stability
 - Simulated ITG and KBM modes growth in GKW for investigation of energetic particles influence on pedestal parameters
 - Designed optical scheme of TS system with CODE V software
- 2013–2015 **Assistant**, PETER THE GREAT ST.PETERSBURG POLYTECHNIC UNIVERSITY, Saint-Petersburg, Russia.
Investigated Massive Gas Injection (MGI) impact on T-10 tokamak plasma stability.
Detailed achievements:
 - Investigated influence of MGI valve position on $m/n=2/1$ mode stability.
 - Calculated parameters of steady state plasma and argon penetration using ASTRA code.
 - It was found that the main runaway generation mechanism is "hottail" mechanism.

Awards

- 2016 Best Oral Presentation at the XIV Kurchatov Youth Science School in Plasma Physics Section
- 2015 Best Oral Presentation at the Peter the Great St.Petersburg Polytechnic University Week of Science Conference

Communication Skills

- 2017 Poster Presentation at the Russian Academy of Sciences Zvenigorod Plasma Physics Conference
- 2016 Oral Presentation at the XIV Kurchatov Youth Science School
- 2016 Oral Presentation at the International 7th International Workshop and Summer School on Plasma Physics
- 2016 Poster Presentation at the Russian Academy of Sciences Zvenigorod Plasma Physics Conference
- 2016 Poster Presentation at the Youth Science Conference
- 2015 Poster Presentation at the Russian Academy of Sciences Zvenigorod Plasma Physics Conference
- 2015 Poster Presentation at the Peter the Great St.Petersburg Polytechnic University Week of Science Conference

Additional Education

- 2016 XIV Kurchatov Youth Science School
- 2016 IPP Summer University 2016 in Greifswald
- 2016 7th International Workshop and Summer School on Plasma Physics
- 2015 Machine Learning and Algorithms Online Courses

Languages

English **Fluent**
Russian **Native**
Deutsch **Basic**

Computer skills

PYTHON, FORTRAN, C, C++, MPI, \LaTeX , Linux, MATLAB, SciPy, SCIKIT-LEARN, PYMC, MICROSOFT WINDOWS, CODE V, JULIA

References

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Alsu D. Sladkomedova, Ph.D., Division of Plasma Physics, Atomic Physics and Astrophysics, Ioffe Institute, Russia, Saint-Petersburg Politekhnikeskaya Ulitsa, 26, 194021 tel: +7(951)682-69-16 *email*: a.sladkomedova@mail.ioffe.ru *email*: alsu.sladkomedova@gmail.com