

PERSONAL INFORMATION

Aleksei Zhukov



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Sex Male | Date of birth 13/02/1991 | Nationality Russian

WORK EXPERIENCE

2022 - present

RnD Team Lead in Aptekar

Development of drug price forecasting and natural language processing models for drug specification recognition

2020 - present

Lecturer and Research Fellow in Irkutsk National Research Technical University

2014 - 2021

Research Fellow, Energy System Institute SB RAS

2018 - 2020

Research Fellow in Institute of Solar-Terrestrial Physics SB RAS

EDUCATION AND TRAINING

2008 - 2013

Specialist (MSc), Radio-physics and Microelectronics

Irkutsk State University

- Embedded systems, Neural networks, Parallel computing

2013 - 2016

PhD student, Mathematics

Irkutsk State University

- Ensemble machine learning methods for power system security assessment

PERSONAL SKILLS

Communication skills

- public speech skills gained through my experience as lecturer and conference participant
- cross-cultural communication skills which have been acquired during international collaboration
- teamwork

Organisational / managerial skills

- remote work managing
- leadership (currently responsible for a team of 3 people)

Job-related skills

- Statistics, Power systems, Renewable Energy, Machine Learning, Mathematical Modelling, Time series forecasting, Reinforcement learning, Data Visualization, Computer Vision, Point Cloud Analysis, Python, R, Matlab, C, LaTeX
- Paper analysis and writing

Other skills

- Embedded systems development

ADDITIONAL INFORMATION

Publications

- [1] A. V. Zhukov, Y. V. Yasyukevich, and A. E. Bykov, "Gimli: Global ionospheric total electron content model based on machine learning," *GPS Solutions*, vol. 25, no. 1, pp. 1–9, 2021.
- [2] D. Sidorov, A. Zhukov, D. Panasetsky, et al., "Toward zero-emission hybrid ac/dc power systems with renewable energy sources and storages: A case study from lake baikal region," *Energies*, vol. 13, no. 5, p. 1226, 2020.
- [3] N. Samad, S. Denis, M. Ildar, and Z. Aleksei, "Control of accuracy on taylor-collocation method for load leveling problem," *THE BULLETIN OF IRKUTSK STATE UNIVERSITY. SERIES «MATHEMATICS»*, vol. 30, 2019.
- [4] N. I. Voropai, N. V. Tomin, A. V. Zhukov, et al., "A suite of intelligent tools for early detection and prevention of blackouts in power interconnections," *Automation and Remote Control*, vol. 79, no. 10, pp. 1741–1755, 2018.
- [5] A. Zhukov, D. Sidorov, A. Mylnikova, and Y. Yasyukevich, "Machine learning methodology for ionosphere total electron content nowcasting," *International Journal of Artificial Intelligence*, vol. 16, no. 1, pp. 144–157, 2018.
- [6] A. Zhukov, N. Tomin, V. Kurbatsky, D. Sidorov, D. Panasetsky, and A. Foley, "Ensemble methods of classification for power systems security assessment," *Applied Computing and Informatics*, 2017.
- [7] A. A. Lempert, D. N. Sidorov, A. V. Zhukov, and G. Nguyen, "A combined work optimization technology under resource constraints with an application to road repair," *Automation and Remote Control*, vol. 77, no. 11, pp. 1883–1893, 2016.
- [8] A. Zhukov and D. Sidorov, "Modification of random forest based approach for streaming data with concept drift," *Vestnik Yuzhno-Ural'skogo Universiteta*, vol. 9, no. 4, pp. 86–95, 2016.
- [9] N. Tomin, A. Zhukov, D. Sidorov, V. Kurbatsky, D. Panasetsky, and V. Spiryaev, "Random forest based model for preventing large-scale emergencies in power systems," *International Journal of Artificial Intelligence*, vol. 13, no. 1, pp. 211–228, 2015.
- [10] A. V. Zhukov, V. G. Kurbatsky, V. A. Spiryaev, N. V. Tomin, P. Leahy, and D. N. Sidorov, "Power system parameters forecasting using hilbert-huang transform and machine learning," *The Bulletin of Irkutsk State University*, vol. 9, pp. 75–90, 2014.