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Professional Experience

Lead Engineer

LLC "ESP Service" (LUKOIL Project Support Dept.) – Moscow, Russia

Jan 2025 – 30.09.2025

- Supporting and implementing engineering solutions for complex energy infrastructure projects

Scientific Researcher

Lab of Nanomaterials and Nanoelectronics – Tyumen State University

Apr 2022 – 31.12.2025

- Developing algorithms for memristor-based neuroprocessors
- Leading computational modeling efforts for AI-integrated nanodevices

Research Engineer

World-Class Research Center for Advanced Digital Technologies – Tyumen State University

Mar 2021 – Sep 2024

- Designed microchip **microfluidic and photonic systems** to optimize oil extraction processes

Research Engineer

Nanotechnologies Research Center – Tyumen State University

Mar 2020 – Dec 2021

- Developed simulation frameworks for nanostructured material characterization

Electrical Design Engineer

АО "НТЦ ЭНЕРГОСБЕРЕЖЕНИЕ" (Scientific & Technical Center for Energy Saving)

2024

Contributed to electrical design optimization for industrial energy-saving systems

Education

Ph.D. in Mathematical Modeling, Numerical Methods & Software

Tyumen State University, Russia | Admitted 2018

Dissertation: Mathematical Modeling of Resistive Switching Processes in Memristors and Neuroprocessors

M.Sc. in Power Supply of Industrial Enterprises

Kazan State Power Engineering University | Sep 2015 – Jun 2017 | GPA: 5.0/5.0

B.Sc. in Power Supply of Industrial Enterprises

Kazan State Power Engineering University | Jun 2015 | GPA: 4.98/5.0

Grants & Projects

- **RSF Grant No. 24-21-00171 (2024–2025)**
Modeling resistive switching in memristor arrays for neuromorphic computing
- **Grant No. 20-37-90003 (2020–2022)**
Physical process modeling in memristor-diode neuroprocessor

crossbars

- **Registered Software:** Five official programs for memristor simulation (e.g., MDC-SPICE, 2021)
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Selected Publications

1. **Busygin A.N. et al. (2022)** – *Mathematical Model of Metal-Oxide Memristor Switching, Physica Status Solidi (a)*
 2. **Ebrahim A.H. et al. (2023)** – *Computer Simulation of the Biomorphic Neuroprocessor, IEEE REEPE Conference*
 3. **Udovichenko S.Y. et al. (2021)** – *Input Device for a Biomorphic Neuroprocessor, Nanobiotechnology Reports*
(Complete list available via online profiles above)
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Awards & Honors

- **Presidential Scholarship of Russia** (2016–2017, 2021–2023)
 - **Government of Russia Scholarship** (2021–2023)
 - 1st Prize – *Lobachevsky Scientific Paper Competition* (2019)
 - 3rd Prize – *All-Russian IT Competition for International Students* (2019)
 - "Talent++" Postgraduate Recruitment Awardee (2018)
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Professional Certifications

- Certified Electrician: Repair/Maintenance of Electrical Equipment (2016)
 - Certified Translator in Professional Communication (2015)
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Professional Development

- Digital Industry Technologies – Peter the Great St. Petersburg Polytechnic University (2022)
 - Dissertation Writing & Scientific Communication – Tyumen State University (2022)
 - Applied Psychology in Research Contexts – Tyumen State University (2021)
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Leadership & Community Involvement

- President – *Foreign Students Union*, Kazan State Power Engineering University (2014–2016)
 - Coordinator – *Buddy Program*, Tyumen State University (2019–2023)
 - HR Manager – *Graduate Community Promotion Office*, Tyumen (2020)
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Soft Skills:

- Project Leadership & Management
- Scientific Research & Grant Writing
- Cross-functional Collaboration

- Problem-solving for Complex Engineering Challenges

Languages:

- Arabic: Native
- Russian: Fluent
- English: Intermediate