

Lubomír Bureš

Nuclear engineer focused on computational modelling and technical problem solving.

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Professional Experience

Saltfoss Energy (formerly Seaborg Technologies)

Senior Multiphysics Specialist

Copenhagen, Denmark

March 2024 – present

- Collaborate as a technical lead on the Saltfoss molten-salt reactor design, guiding key architectural decisions and ensuring effective system integration.
- Address complex technical challenges in reactor physics, thermal hydraulics, and design optimisation.
- Develop, verify, and validate computational models for advanced nuclear applications.
- Publish research and present at scientific conferences to bolster the company's technical visibility.

Multiphysics Specialist

October 2021 – March 2024

- Developed multiple computational models for molten-salt reactor analysis.
- Supervised a master thesis project with the candidate then joining the company as a full-time employee.
- Published peer-reviewed research and represented the company both in Denmark and internationally.

Paul Scherrer Institute

Doctoral Researcher

Villigen, Switzerland

October 2018 – September 2021

- Conducted independent doctoral research in computational physics.
- Designed and programmed software for high-fidelity numerical simulations applied to scientific research.
- Supervised four student projects, resulting in published research and successful student outcomes.
- Led exercise sessions for a course at ETH Zurich, improving student understanding.

Supplementary Projects

Winterlead

Independent Consultant

Remote

April 2024 – present

- Provide software development, computational engineering, and consultancy services on ad hoc basis.
- Developed software solutions for Quantified Carbon.
- Volunteered technical expertise to the Repower Initiative.

Education

EPFL, Institute of Physics

Doctor of Science (PhD)

Paul Scherrer Institute (PSI), Villigen, Switzerland

2018 – 2021

- *Degree awarded by:* École Polytechnique Fédérale de Lausanne (EPFL)
- *Thesis:* Fundamental study on microlayer dynamics in nucleate boiling
- *Achievements:* Passed without reserve (highest grade). Awarded the 2022 PhD Prize by the European Nuclear Education Network Association. Awarded the 2019 Fellowship for Research in Japan (cancelled due to Covid-19) by the Japanese Society for the Promotion of Science.

ETH Zurich – EPF Lausanne
Joint MSc in Nuclear Engineering

Zürich & Lausanne, Switzerland
2016 – 2018

- **Thesis:** Direct numerical simulation of phase change in the presence of non-condensable gases
- **Achievements:** Graduated with distinction, overall GPA: 3.973/4.000 (third best among 1043 Master graduates). Awarded the EPFL Excellence Fellowship over the duration of the study programme.
- **Certifications:** Received the European Master of Science in Nuclear Engineering certification.
- **Internships:** National Cooperative for the Disposal of Radioactive Waste (Wettingen, Switzerland).
- **Extracurricular:** Represented the class in the EPFL student organisation (Fall semester 2016).

Czech Technical University
BSc in Nuclear Engineering

Prague, Czech Republic
2013 – 2016

- **Thesis:** Application of calculation codes based on Monte-Carlo method for benchmark experiments
- **Achievements:** Graduated with honours, overall GPA: 3.935/4.000. Won a student thesis competition. Received the 2015 Talented Student Award from the Czech Technical University.
- **Internships:** Nuclear Physics Institute of the Czech Academy of Sciences (Řež, Czech Republic), Joint Institute for Nuclear Research (Dubna, Russia).

Skills

Languages	Czech: Native speaker. English: Full professional proficiency (C2), certificate: Cambridge English: Advanced (CAE), grade A. German: Professional working proficiency (C1). Danish: Professional working proficiency (B2), certificate: Prøve i Dansk 3, grade 8.5/12.
Programming Languages	Python, C++, Modelica, MATLAB
Software Tools	Git, Jupyter, VS Code, Vim, MS Office, LaTeX
Operating Systems	Windows, Linux

Organisational Involvement

IDA Nuclear *Danish Society of Engineers, Denmark*
Board Member September 2025 – present

- Organise events promoting knowledge and education about nuclear and atomic technology.

PhD and Postdoc Association *Paul Scherrer Institute, Switzerland*
President October 2019 – May 2021

- Oversaw the creation of the association's bylaws, enabling its registration as a non-profit organisation.
- Led the association through the challenging times of the Covid-19 pandemic, ensuring continued support and engagement for members.
- Represented the association externally and within the institute, enhancing its visibility and influence.

Social Committee Head March 2019 – September 2019

- Organised social events and activities, fostering a sense of community among members.