

Lubomír Bureš

Nuclear engineer focused on computational modelling and technical problem solving.

✉ hello@winterlead.com || 🌐 www.lubomirbures.com

🌐 www.linkedin.com/in/lubomir-bures || 🆔 www.orcid.org/0000-0001-6204-0938

Professional Experience

Saltfoss Energy (formerly Seaborg Technologies)

Copenhagen, Denmark

Senior Multiphysics Specialist

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

Villigen, Switzerland

Doctoral Researcher

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

Remote

Independent Consultant

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

Paul Scherrer Institute (PSI), Villigen, Switzerland

Doctor of Science (PhD)

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

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| 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
Board Member

Danish Society of Engineers, Denmark
September 2025 – present

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

PhD and Postdoc Association
President

Paul Scherrer Institute, Switzerland
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.