



Vítězslav Lužný

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Education

Charles University in Prague, Faculty of Mathematics and Physics <i>pursuing bachelors degree in Mathematical Modelling</i>	September 2020 – Present <i>Prague, Czech Republic</i>
Gymnázium Christiana Dopplera <i>School-leaving examination</i>	September 2016 – June 2020 <i>Prague, Czech Republic</i>

Work Experience

Technician <i>Nano Optics group, The Institute of Photonics and Electronics of the Czech Academy of Sciences</i> <ul style="list-style-type: none">• Currently working on "Analysis and reconstruction of iSCAT fluctuation patterns"• Developing a controlling software for high speed iSCAT microscopy (C/C++, Python)• Developed a controlling system for phase vortex generation using heat signature (Arduino, C/C++)• International team composition - Communication in english	July, 2022 – Present
Speckle pattern analysis <i>Nano Optics group, The Institute of Photonics and Electronics</i> <ul style="list-style-type: none">• (Python)	January, 2022 – June, 2022
Software development for high speed iSCAT microscopy <i>Nano Optics group, The Institute of Photonics and Electronics</i> <ul style="list-style-type: none">• (C/C++, Python, LabView)	September, 2021 – November 2021 February, 2021 – May, 2021 June, 2020 – September, 2020
Internship <i>Nano Optics group, The Institute of Photonics and Electronics</i> <ul style="list-style-type: none">• Point Spread Function estimation from measurements (Matlab, LabView)	January, 2019 – December, 2019
Extending Jídelna application <i>BARDA SW, HW, s.r.o.</i> <ul style="list-style-type: none">• Bug fixes (Java)	October, 2018 – February, 2019
Extending module Objednávky in Jídelna application <i>BARDA SW, HW, s.r.o.</i> <ul style="list-style-type: none">• Data synchronization (Java)	July, 2018 – August, 2018
Nano Optics exposition at Veletrh vědy <i>Nano Optics group, The Institute of Photonics and Electronics</i>	June, 2018 – June, 2018
Internship <i>Nano Optics group, The Institute of Photonics and Electronics</i> <ul style="list-style-type: none">• Developed a controlling software for confocal iSCAT microscope (C#)	January, 2018 – December, 2018

Projects, Competitions & Achievements

Qualified for working with electronic devices

From May 2022

The Institute of Photonics and Electronics

- Trained according to the §4 Decree 50/1978 Coll.

International Young Physicists' Tournament

September 2018 - June 2020

- Demonstrated leadership skills as the **Captain** of the team **Kudlankográľ GChD (Mantegral)**
- Personally worked on many open-ended inquiry problems, such as *Popsickle Chain Reaction*, *Moiré Thread Counter*, *Sweet Mirage* and more
- **Won the second place at the national level in 2020**
- Won the third place at the regional level in 2019

Highschool technical project (Středoškolská Odborná Činnost - SOČ)

2020

- Project *Graphics Engine in C++ and OpenGL*
- Learned about graphics programming and programmed a library for simple 3D and 2D graphics in OpenGL
- Won the third place at the regional level

Matfyz FEAT

2018

- Teamwork, project Acoustic Levitator
- Won the Jury Prize

Regular participation in competitions

2018 and before

- Such as *Purple Comet*, *Mathematical Olympiad*, *Physics Olympiad*, *Young Programmer* and more

Specialized Skills

Programming Languages: C/C++ (advanced), Python (intermediate) and more

Languages: Czech (native), English (good), German (basic)

Other Interests

Sports: Swimming, Hiking