

Vít Šimurda

Research and Development Engineer

<http://simurda.eu>



I'm a hard-working and passionate engineer with 4 years of experience in automotive lighting. I specialize in designing optics for signal lighting LED systems, but I also have a lot of knowledge of manufacturing processes, quality control and lab measurements.

I am an author or co-author of cca 10 patents and patent applications. I'm also well versed in data analysis and programming.

I'm an experienced CATIA designer and I've been a part of a software development team that created tool for computation of optical NURBS surfaces using C++ integrated in Catia v5. I've also created several tools for optimization and data analysis using Python.

MY EXPERIENCE



Research and Development Engineer

[Varroc Lighting Systems](#)

November 2015 – October 2019

Exterior Automotive Lighting | Signal lighting
Go to [simurda.eu](#) for more information



Masaryk University Brno

1 year study of Masters Level

September 2014 - November 2015

Plasma Physics

[Steamer Properties and Software Development](#)
[Passive Current Probe Development](#)



Masaryk University Brno

Bachelor of Science

September 2011 - September 2014

Physics

[Thin Layer Deposition](#)
[Plasma Enhanced Deposition](#)
[Electron Microscopy](#)
[Surface Treatment](#)

Thesis: Deposition of inorganic polymers on textile surfaces using dielectric barrier discharge ([available in Czech](#))

MY SKILLS

CATIA V5

- Optical and mechanical design of plastic and aluminium parts
- Catia Macros

LIGHTING DESIGN

- Computation of NURBS optical surfaces using C++
- Proficiency with [LightTools](#)
- Design of reflectors, lenses, TIR lenses, Fresnel lenses etc.
- Backlight design and optimization
- Thin film design
- Optical microstructure design
- Raytracing
- Renderings

C++

- Programming of tools used to calculate optical surfaces
- Optimization Tools

PYTHON

- Data Analysis
- Catia V5 integration
- Django

Please visit [simurda.eu](#) for more details and information