

# Bc. Ing. Boleslav Vraný, Ph.D.

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46 years old, Czech

## PROFESSIONAL EXPERIENCE

**2007 – present**

**Contractor and technical development lead for eSpline LLC, Rhode Island**

External processing of data retrieved from SAP, the Variant Configurator component. This allowed for functions not offered by the SAP systems. I develop tools for understanding complex models, automated checking for known errors, easy synchronization of models among SAP systems of the same company, translation of models to third-party configurators. My primary responsibility is design and development of the proprietary technologies used for model translation, as well as maintenance and improvements of an ASP.NET web application used to expose the functions to consumers.

**2019 – present**

**Contractor for ALT s.r.o., Prague**

Enhancements of custom software for laser cutting, esp. for parsing the input DXF files and processing them to entities which can be cut. C# and XAML.

**2019 – present**

**Contractor for Innokind Inc., California**

Firmware improvements in C on Cypress Cortex M0. Bluetooth Low Energy (BLE) communication with Windows, processing the acquired data using C# a UWP.

**2002 – present**

**OSVČ, freelance developer and contractor**

Custom development of software in the C/C++/C# languages, Java, SQL, also in C and assembler for 8051, Atmel AVR, Cypress Cortex M0 microchips. Formerly also some Visual Basic 6 projects. Communication with devices over LPT, RS-232, virtual RS-232 over USB, and GPIB.

**2003 – 2018**

**Custom made point-of-sales system and stock control**

Design, development and updates of a point-of-sales and stock control software meeting specific customer demands. Originally VB6 and MS Access, later re-coded in C# and SQL Server.

**2006 – 2007**

**Contractor for Codep s.r.o., Prague**

An application for design and control of shows displayed on LED screens for stadiums, public events etc. The app allowed for screen set up and calibration, playback of MPEG and AVI files and also contained its own scripting language for detailed show design. It also communicated with the screen device driver. Visual C++ and MFC.

**2002 – 2004**

**Contractor for RLC a.s., Prague**

An application for measurement of optical patchcord attenuation, automated DB storage and view of the measured data, printing of labels with the measured values. Visual Basic 6, MS Access, communication with the meters and a specialized printer over RS-232 and GPIB.

Software to control a furnace in C on Atmel AVR microchips. Software to program and optical fiber transmitters/receivers in C on Atmel AVR and a PC control app in Visual C++ and MFC.

**2002 – 2008**

**Researcher, Institute of Photonics and Electronics, The Czech Academy of Sciences**

Developed software for controlling experiments and processing the measured data using genetic algorithms. Mostly C/C++.

**2000 – 2002**

**Alternate military service, Children and Youth Centre of Prague**

Teacher of C++ and Delphi programming, administration of a small Windows network.

## EDUCATION

**2002-2010**

**Ph.D., Charles University, Faculty of Mathematics and Physics**

Study program *Quantum optics and optoelectronics*. Major fields included femtosecond laser pulses, their propagation in nonlinear optical fibers and the FROG method to measure such pulses. The doctoral thesis especially dealt with reconstructing the measured data using genetic algorithms.

**1993-2000**

**Ing., Czech Technical University, Faculty of Nuclear Sciences and Physical Engineering**

Study program *Physical engineering*. Major fields included laser physics, applications of lasers in industry, telecommunications and health care, optical fibers and optical spectroscopy. The diploma thesis focused on optimization and control of a measurement device, esp. to increase the number of experiments possible.

**2008-2014**

**Bc. Charles University, Catholic Theological Faculty**

Study program *Theological sciences*. Major fields included biblical studies, systematic theology and ethics. The bachelor thesis dealt with the topic of relation between Christian faith and employment or entrepreneurship in contemporary professions and connections between work and faith.

## SKILLS

- C/C++/C# programming: very advanced, ASP.NET advanced, REST APIs, Java advanced, common skills in SQL and XSLT. Advanced assembler and C/C++ on 8051, Atmel AVR and Cypress Cortex microchips. Slightly advanced skills in WiX installer, ant, NAnt, Jenkins.
- Experience with design and implementation of own domain specific languages (DSL), parsers for DSL of third-parties and translation between DSLs.
- Very good understanding of lasers and the principles of applying lasers in industry and medical care, understanding of optical fibers and optical spectroscopy
- Communication with devices over RS-232, GPIB, BLE
- Administration and securing of MS Windows and small computer networks.
- Fluent in English, can read Russian.

## **AWARDS AND ACTIVITIES**

- The Czech and Slovak Society for Photonics Award for young scientist 2005
- Lead Bible study groups at Czech Technical University and Faculty of Mathematics and Physics of the Charles University
- Swimming, photography, interested in aviation and railways.