

M I R O S L A V D O B Š Í Č E K

CAREER GOAL

Work in a demanding international environment, both in a private and government sector that invest in long-term budgeted and well researched/interesting software projects.

WORK EXPERIENCE

PERIOD Sep 2011 – Present
EMPLOYER Xdin AB Göteborg, Sweden
JOB TITLE Software developer

Currently on assignment at Ericsson.

RESPONSIBILITIES: Baseband infrastructure. DSP communication stack.

SKILLS: Embedded DSP programming.

PERIOD Sep 2010 – Dec 2010
EMPLOYER Czech Technical University in Prague Prague, Czech Republic
Faculty of Information Technology - FIT
JOB TITLE Assistant professor

Member of the Department of Theoretical Computer Science.

RESPONSIBILITIES: Discrete mathematics and mathematical logic courses.

SKILLS: Algorithms. Combinatorics. Solving recursive equations.

PERIOD Jan 2007 – Jun 2010
EMPLOYER Chalmers University of Technology Göteborg, Sweden
MC2 and CSE departments
JOB TITLE Researcher & Postdoctoral fellow

Member of the Applied Quantum Physics Laboratory and Programming Logic Group.

RESPONSIBILITIES: Designing proof-of-concept quantum algorithms and protocols for a superconducting quantum information processor within the EuroSQIP integrated project, www.eurosqip.org. Computer & network services administration in the laboratory. Co-lecturing Quantum informatics course.

SKILLS: Computer simulations. Expertise in algorithms. Programming. High level methods in computer science.

PERIOD Oct 2003 – Sep 2005
EMPLOYER Czech Technical University in Prague Prague, Czech Republic
Faculty of Electrical Engineering - FEE
JOB TITLE Assistant

Member of the Applied Numerics and Cryptography Group.

RESPONSIBILITIES: Graduate and undergraduate courses on C/C++, Lisp and Quantum computing. Head of quantum steganography grant. Supervision of students' final projects.

SKILLS: Proposals writing. Grant investigation. Lecturing. Supervision.

METEORGATAN 38, SE-415 20 GÖTEBORG

✉ M.DOBSICEK@GMAIL.COM 🌐 WWW.SCYCORE.COM

PERIOD	Nov 2000 – Jan 2003	
EMPLOYER	Student's Union	Prague, Czech Republic
	Czech Technical University in Prague	
JOB TITLE	Executive board member, Network administrator	
	<u>RESPONSIBILITIES:</u> Responsible for a subnetwork of 300+ computers. Technical support for users.	
	<u>SKILLS:</u> Computer network & servers administration. High responsibility. Decision making.	

EDUCATION

PH.D.	Faculty of Electrical Engineering, Czech Technical University in Prague, Czech Republic.	Jun 2008
	I did my PhD in the field of novel computer architectures and algorithms. This work resembled a lot the building of computers in the '50s when people had only few bits at hand and wondered what it can be good for, how to combine small subsystems into larger ones and how errors spread under various circumstances. However, in my setting, the classical physics was replaced with quantum physics and its laws. This work had been done in cooperation with Chalmers University of Technology/Department of Microtechnology and Nanoscience. I graduated with honors.	
	<u>DISSERTATION:</u> Quantum computing, phase estimation and applications.	
	In the thesis I described in detail my research on trade-off between availability of extremely rare physical resources (quantum bits) and delay costs in the time domain. This included both the design of a specific algorithm, now known as IPEA, and its implementation/simulation. Most of simulations were written in Matlab and occasionally in C for efficiency. My work has been cited in scientific journals such as Nature Chemistry and Journal of Chemical Physics.	
MASTER'S DEGREE	Faculty of Electrical Engineering, Czech Technical University in Prague, Czech Republic.	Jun 2003
	I studied the programme Operating systems and compilers for programming languages. This programme included a dose of databases, networking and other related topics. My main focus was the Linux kernel and in due course I read through the source code for process/thread implementation and management in the kernel, mastered how the C language is compiled into assembly code, how memory is allocated or eventually leaked etc.	
	<u>THESIS:</u> Low-level security in GNU/Linux system.	
	This work involved a lot of using C compiler (gcc), debugger (gdb) and hexeditors. The main aim was to understand how exploits/viruses gain administrator rights and suggest improvements in the security. The thesis was awarded by the Czech Chapter of AFCEA, 🌐 www.afcea.org , and later republished as a book by Kopp Publishing.	

COMPUTER SKILLS

Programming languages

C/C++, Assembler x86, Matlab, SQL, Lisp, LaTeX.
Adding Erlang and Haskell to my skillset recently.
Various scripting languages such as Perl and Bash.

Verification environments

Coq proof assistant.

Operating systems

UNIX/Linux with 10+ years of experience, including networking.
Windows 2000 Server/XP/Vista/7.
Wide range of experience with Open Source software.

Specialization

Algorithm design & analysis.
Fast routines.
Code correctness.

LANGUAGE SKILLS

Fluent in English, Czech and Slovak.
Limited working proficiency in Swedish (SAS A) and Spanish.

EXTRA SKILLS

Background in electrotechnical engineering, physics and mathematics
– I can talk and understand to people from different fields.
Proposals writing, results presentation, lecturing.
Good overview of global economy.
Scientific data evaluation.

PERSONAL TRAITS

Problem-solving oriented.
Responsible.
Team player.
Respectful of other people's work.

PERSONAL INFO

Czech citizenship, right of residence in Sweden.
Married with children.

EXTRACURRICULAR ACTIVITIES

REVIEWER: American Physical Society Journals.

AUTHOR: A book with R. Ballner, **Linux - security and exploits** (in Czech), Kopp Publishing, České Budějovice, 2004.

2 refereed journal papers, 10+ international presentations.

ORGANIZING EXPERIENCE: co-organizer and staff member at various events in Prague, e.g. Cryptofest 2005, IMF/WB 2000 annual meeting and ACM-ICPC World Finals 2004.

VOLUNTEERING: Children's Summer Camp Leader. 2001 — 2005