

# Christo Radev

*professional resume*

## Personal Information

**Date of birth:** 23 April 1953, Plovdiv, Bulgaria.

**Nationality:** Bulgarian.

**Marital status:** Married, two children (1977 and 1980 born).

## Objectives

**Main:** Seeking contract or full-time job in team building, management and working on a telecommuting basis in the field of embedded systems HW, SW and FW design and development.

**Benefits:** Could be involved in projects even long term, wide, innovative and interdisciplinary ones, where my skills and knowledge in mathematics, physics, quantum electronics, engineering (electronics, nuclear and mechanical), instrumentation, automation, computer sciences and IT will be best fitted and profitable.

## Keywords

Embedded, distributed, parallel, real-time and Internet programming, wired/wireless communications, audio/video processing and streaming, SAOP, RTOS, SSL, TCP/IP, C/C++, Java, C#, Linux, Windows, Eclipse, ECF, RCP, RAP.

## Experience

**Hardware:** Cluster/Cloud computing incl. low power, ARM Cortex M3/M4, A7/A8 incl. multicore, Arduino/Maple and alike HW, AVR 8/32 bit, MIPS32, XScale, x86/IA32/IA64, x86-64, TC65, E1-16/32SX, x51, R4000, MC 6800/68000, IMS T414/T800, SCSI/PCI/ISA/IDE, VME-bus, Q-bus, CAMAC, Ethernet/CAN, IEEE488, RS232/RS485, RFID/NFC.

**Platforms (OS):** Many RTOS (FreeRTOS, ChibiOS, eCOS etc.), many Linux distributions incl. embedded (Debian/Ubuntu, Angstrom etc.), Yocto distribution building platform, QNX, AperiOS, MS Windows (incl. Server 2008), Solaris, Unix/Helios.

**Technologies:** Eclipse SCOUT, ECF, RCP, RAP, (R-)OSGi; SOA/OSA, real-time control, data/audio/video streaming and processing, Internet and access security, SSI/CSI, OO/distributed/multi-agent, client/server, HTM/CLA.

**SW Languages:** C/C++, Java, XML, HTML/DHTML, SQL, .C# .Net, Basic/VB, Pascal/Delphi, Fortran, Clipper, Lisp, OCCAM, user defined/parallel/script languages, assemblers.

**Networking:** SOAP, HTTP, SSL, TCP/IP, GPRS/GPS/wireless/Ethernet/serial/parallel, dial-up/X25/CAN; streaming and real-time networking, homogeneous/heterogeneous networks, servers/routers/switches/gateways, services/protocols.

**SW Tools:** Eclipse C/C++/Java etc. development platforms, MS .NET Visual Studio, Xcode for MacOS, IAR Embedded Workbench for Arm, Arduino/Maple and alike SW, C++ Builder 6, Siemens TC65 WTK, E1-32SX SDKs and RTOS, Borland Delphi 6, MS C/C++ with MFC & MS Windows SDK 7.0; Linux, Unix, Helios and QNX C/C++ SDKs/GDKs; Sony's & Green Hill's AperiOS C++ SDK and middleware for Aibo robots; Symantec's Cafe 3; Sun's PC NFS 4.0 SDK; Waterloo TCP SDK for MS-DOS; Clipper, DBase, Gupta SQL 4.0 for MS-DOS and Windows; WATCOM SQL 3.2, Sybase Anywhere SQL 6.0, InterBase SQL Server 5, MySQL etc.; PowerSoft's PowerMaker 3.0; ODBC, BDE administration and programming; OCCAM 2 TDS, programming toolsets for Parallel C and Fortran.

**Special SW:** OpenCloud, ZeroConf, ZeroMQ, gSOAP; Expat; OpenSSL; SOAP/HTTP embedded client and servers; VLC, WEB servers Apache for Linux, PWS, IIS and Apache for Windows; WEB browsers – IE for Windows, Chrome, Firefox, Netscape and other browsers for Windows, Linux and QNX; NTOP, CUPS, PHPMyAdmin and other administration software for Linux, Windows and QNX; Graphic development platforms for Windows, X Windows, KDE for Linux and Photon for QNX; Sun's PC NFS 4.0, Ka9Q network OS, PC Route, IP Route, Novell's LAN Analyser; Creative Labs and other companies' software for video, audio, music and speech processing; MS PowerPoint, QuickTime and other software for multimedia presentation; Ulead, Xing Technology Corp. and other software for MPEG processing.

**Application SW:** Virtualisation SW (VMware, Qemu etc.), MS Office 2010; Corel Draw 9, Adobe's Acrobat 6.0, PageMaker 5.0, Illustrator and Photoshop; Ulead's Media Studio 2.5, Sound Forge 4.0; Ventura Publisher for MS-DOS; AutoCAD for MS-DOS and Windows; REDAC's RedBoard and OrCAD for schematic and PCB design and many others.

**Open Source SW** GNU (gcc, binutils etc.), Linux (Yocto, Debian, Ubuntu, OpenWRT, SlugOS etc.), Apache (HTTP server, Ant, Continuum, Geronimo etc.), Eclipse (IDE, MyLyn, DSDP, ECF, RCP, RAP, SODA etc.), OSGi (Equinox, Knopflerfish, Concierge etc.), MySQL, PHP, VLC, OpenOffice, JBoss, Tomcat, Jetty, Trac, Bitten, BuiltBot etc.

## Education

**1997 – 1998** Finance and accounting at University of National and World Economy Sofia

### Finances, credit and accounting – secondary MS degree

- Graduation thesis "Finances, credit and duties of capital companies with limited responsibility";
- Interests in IT and mathematical aspects of economics, data processing and storing.

**1983 – 1984** Bulgarian Academy of Science, CLASI Sofia

### Computer sciences and scientific instrumentation – secondary MS degree

- Conference and exhibition participations, copyright certificate, scientific publications;
- Graduation work: "HW/SW co-design of intelligent RS232/RS485/IEEE488 controllers";
- Interests in HW, SW, FW, system and sub-systems design, implementation, production and quality assurance, scientific instrumentation and automation, computer sciences and IT.

**1974 – 1979** Sofia University, Department of Physics Sofia

### Engineering Physics – MS degree

- Conference participations, scientific publications;
- Graduation work: "X-Ray emission in a laser created plasma in the presence of high electric field";
- Interests in interaction of high energy laser beams and matter, scientific instrumentation, optics, image processing in astronomy, photoelectric effects on a surface of semiconductors.

## Occupations

<b>2014 – now</b>	Working on own projects <b>Freelancer in embedded and distributed systems development</b> <ul style="list-style-type: none"><li>Family Multi-Tree (FMTTree) web application – software developer, JavaScript, open source project</li><li>UWB ground penetrating radar system – HW/SW platform (architect, software and hardware developer) STM32F4/ChibiOS, A20/Linux/Armbian, HTML5, WebSocket, SSL, SEG-Y, JSON, JavaScript, NodeJS, platform independent distributed application, data capturing/streaming/processing/visualisation/storing;</li><li>Power wind generator, power control system and test suite – mechanical/HW/SW (design and development) AutoCAD Mechanical 2008, CorelDraw 9, Maxwell 13, FEMM, 2D/3D electrostatics modelling, Curtis power motor controller usage and programming, power system monitoring and control, Eagle/KiCAD, Arduino/Mapple, ChibiOS, meteorological monitoring systems.</li></ul>	Plovdiv
<b>2011 – 2014</b>	Sogodi Ltd. (R&D for RISCO Group – Israel) <b>Access Control Systems – Embedded systems programmer</b> <ul style="list-style-type: none"><li>New generation RISCO readers – research and development of embedded and cloud application for access control NXP RFID/NFC HW/SW, Allwinner A10/20 Arm MCUs, embedded Linux incl. X window and web browsers, OpenJDK, ZeroMQ, cloud computing MW/SW and tools, Eclipse Scout/ECF/RCP/RAP, Derby DB, Tomcat 7;</li><li>Long term testing of functional reliability at extreme overload of RISCO RFID readers and AxesPLUS system own methodology, SW and HW for a long term, extremely intensive in-system product testing and analyses;</li><li>RISCO RFID readers – firmware development, testing and support C/C++, FreeRTOS, NXP RFID chipsets, IAR ARM Workbench, original testing methodology;</li><li>RISCO Access Control System (AxesPLUS) – installation, testing and usage.</li></ul>	Plovdiv
<b>2009 – 2011</b>	Freelancer, consulting and telecommuting <b>Freelancer in embedded and distributed systems development</b> <ul style="list-style-type: none"><li>Undisclosed – Teklogix 7530 G2 embedded scanning software for ERP System Windows CE, .Net CF 2.0, SOAP, client implementation and JSP/Progress SOAP service setup;</li><li>Undisclosed – Micro impulse and geo radar HW/SW platform (architect, software and hardware developer) Cortex-M3/RTOS, (R-)OSGi, multiplatform RCP application, RT control and DSP, C/C++/Java;</li><li>Undisclosed – VLF Metal detector (software and hardware developer) Arnel's AVR128, uSmartOS, gLCD, GUI, fast and precise real-time control.</li></ul>	Plovdiv
<b>2003 – 2008</b>	Sogodi Ltd. (R&D for Electronics Line 3000 Ltd. – Israel) <b>Security and home automation – Embedded systems programmer</b> <ul style="list-style-type: none"><li>Infinite-I – SOAP, HTTP, TCP/IP, audio and video support in embedded Internet enabled security system;</li><li>Hyperstone RTK, SND's HyNetOS, Windows 2003 Server, RedHat Linux 9, IIS 6, Apache 2, Java 2, MySQL;</li><li>Hyperstone and SND's SDKs, Eclipse, Borland C++ Builder 6, MS .NET Visual Studio;</li><li>gSOAP, Expat, OpenSSL porting and usage; encryption/decryption; audio/video streaming over Internet;</li><li>Own methodology for long term testing of functional reliability at extreme overload of distributed systems;</li><li>Research, development and testing of reliability and security at public domain communication;</li><li>Research on usage and integration of open source products in company development process;</li><li>Research on usage of OSGi, Wi-Fi, GSM/GPRS, wireless sensor networks, audio/video etc. in security systems;</li><li>New product line in security systems research, definition, development, testing and introduction.</li></ul>	Plovdiv
<b>1995 – 2003</b>	Freelancing, consulting and telecommuting <b>Freelancer and consultant in Computer Sciences and IT</b>	Plovdiv
<b>1989 – 1994</b>	Nova Ltd. <b>Computer department and company manager, founder</b>	Plovdiv
<b>1983 – 1989</b>	Central Laboratory on Automation and Scientific Instrumentation, Bulgarian Academy of Science <b>Branch manager</b>	Plovdiv
<b>1979 – 1983</b>	Laboratory of Applied Physics, Bulgarian Academy of Science <b>Quantum Electronics department manager</b>	Plovdiv

## Publications

<b>Scientific:</b>	Many publications in international and national magazines and conferences on physics, laser techniques and technologies, computer sciences, scientific instrumentation and automation.
<b>IP:</b>	2 copyright certificates in laser techniques and intelligent device controllers.
<b>Courses:</b>	2 university courses in the fields of laser technologies and parallel computer architectures.
<b>Participations:</b>	Many participations in international, national and students exhibitions and workshops on physics, astronomy, laser, computer, information and automation techniques, technologies and sciences.
<b>Competitions:</b>	Taken part in scholar and student competitions and exhibitions and RoboCup2001, Sony's league.

## Awards

<b>1971 – 1983</b>	Golden, silver medals and other won prizes from scholar and student competitions and exhibitions.
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## Others

<b>1990</b>	Member of Computer Society of Malta.
<b>1992</b>	Co-founder of Bulgarian association on protection of the Intellectual Property, Sofia.
<b>1994</b>	Completed self-studying and a course of Silva's Method of Mind Control at International Centre, Sofia.

## Languages

<b>Bulgarian:</b>	Mother tongue.
<b>English:</b>	Excellent read, very good written and spoken, good understanding.
<b>Russian:</b>	Excellent read and understanding, good spoken and written.

## Resent photos

Me and my desks:

