

Curriculum vitae

Personal Information

First/Last name	Cristian Anghel
Address	Mihail Sebastian 108, bl V87, sc 1, ap 19, Sect 5, BUCURESTI, Romania
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Birth date	26-04-1980
Gender	Male

Desired job

Job type	Full Time, Part Time
Professional objective	I target working in a research and development team, especially in projects for 3rd and 4th generation communication systems. I have more than 8 years experience in this field and I have the required technical education (M. Sc., Ph. D.)
Activity domain	Superior education, Telecommunications
Desired job locations	Bucharest

Work experience

Experience by domains	Telecommunications - 8 years Education/Training - 8 years
Job	Lecturer
Period	2011-10 <> present
Name and address of the employer	University Politehnica of Bucharest, Faculty of Electronics, Telecommunications and Information Technology
Domain	Superior education/Training
Job description	The company has 1000-3000 employees. - Teaching the course "Hardware Description Language and Methodology for FPGA Implementation" for two master directions - Workshops and laboratories: Advanced Techniques for Digital Signal Processing, Microwaves - Coordinating dissertations and graduation projects - Coordinating small research teams that have developed modules and have proposed hardware implementation solutions
Job	Teaching assistant
Period	2003-11 <> 2011-09
Name and address of the employer	University Politehnica of Bucharest, Faculty of Electronics, Telecommunications and Information Technology
Domain	Education/Training
Job description	The company has 1000-3000 employees. - Teaching the course "Hardware Description Language and Methodology for FPGA Implementation" for two master directions - Workshops and laboratories: Digital signal processing, Microwaves, Antennas and propagation, Radar - Coordinating dissertations and graduation projects - Coordinating small research teams that have developed modules and have proposed hardware implementation solutions

Job	Technical Leader
Period	2010-07 <> present
Name and address of the employer	Pentalog Technology
Domain	Telecommunication
Job description	The company has 100-1000 employees. - Embedded software for 3G mobile platforms - UMTS Physical Layer expert
Job	System Senior Engineer
Period	2007-05 <> 2010-07
Name and address of the employer	Redline Communications Romania, part of Redline Communications Canada
Domain	Telecommunications
Job description	The company has 100-250 employees. In this position I was involved in: - solving system issues of an WiMAX Base Station equipment (Link Adaptation, Tx and Rx MIMO schemes, Network Entry and Periodic Ranging, Hand-over, Idle Mode, Sleep Mode) - solving issues regarding GPS-based synchronization for WiMAX base stations (synchronization algorithm proposed and implemented in VHDL) - implementing and testing in VHDL language different modules from the WiMAX BS PHY level: CTC decoder, Fast Feedback Channel, Ranging, OBSAI RP3-01 Interface, Management and Control compliant with the MicroTCA standard From this position I was selected as a member of the Technical Working Group from the WiMAX Forum (http://www.wimaxforum.org/)
Job	Hardware System Engineer
Period	2003-05 <> 2007-05
Name and address of the employer	Redline Communications Romania, part of Redline Communications Canada
Domain	Telecommunications
Job description	The company has 100-250 employees. In this position, I have participated in the specification, implementation and testing of various blocks described in VHDL hardware language for communication systems based on 802.16d and 802.16e standards

Education and training

Obtained diploma	Doctorship
Period	2004 - 2010
Institution	University Politehnica of Bucharest, Faculty of Electronics, Telecommunications and Information Technology
City	BUCURESTI
Major	Electronics
Description (specialization)	Thesis title "Contributions to the implementation of MIMO channel-based communications systems" Obtained title: cum laude

Obtained diploma **Postuniversity degree**
Period 2003 - 2004
Institution University Politehnica of Bucharest, Faculty of Electronics,
Telecommunications and Information Technology
City BUCURESTI
Major Electronics
Description (specialization) Specialization "Radio-communications, microwave and optical
communications"
The average of the marks: 9.84
The mark of the dissertation: 10

Obtained diploma **University (graduate)**
Period 1998 - 2003
Institution University Politehnica of Bucharest, Faculty of Electronics,
Telecommunications and Information Technology
City BUCURESTI
Major Electronics
Description (specialization) Specialization "Mobile and satellite communications"
The average of the marks: 9.55
The mark of the graduation exam: 10

Obtained diploma **Highschool**
Period 1994 - 1998
Institution Mihai Viteazul Theoretical Highschool
City Ploiesti
Major Mathematics
Description (specialization) The mark of the graduation exam: 9.36

Personal skills and competences

Foreign Languages English - Advanced; French - Medium; Spanish - Beginner;
Driving license Yes
Skills Knowing in detail the architecture of the most important families of FPGA's
and the VHDL hardware description language

Detailed knowledge of communications 802.16e standard and partial
knowledge of 802.16m and LTE standards

Working with the software tools used for FPGA implementation:
- ModelSIM 6.5
- Xilinx ISE 12.1 Design Suite
- Xilinx XST
- Xilinx ISE
- ChipScope
- System Generator
- Simplify
- Matlab and Simulink

Working with the hardware tools used for analysis and testing :
- Rohde & Schwarz VSA
- SanJole WaveJudge for WiMAX
- Tektronix digital oscilloscope
- Azimuth channel emulator

Medium knowledge of C++
Complete PC operation

Other activities

Conferences and publications

1. **Cristian Anghel**, Adrian Andronache, "A controlled NLMS algorithm for echo cancellation, implemented on MOTOROLA STARCORE SC140 DSP", Revue Roumaine, Sci. Techn.– Électrotechn. et Énerg., 47, 4, Bucarest, 2002
2. **Cristian Anghel**, Andrei Alexandru Enescu, "Implementarea eficientă pe FPGA a unui decodor turbo compatibil cu standardul 802.16e", Telecomunicatii Magazine, 2007
3. **Cristian Anghel**, Remus Cacoveanu, "A digital method for obtaining high accurate clock reference using GPS-disciplined VCXO", accepted for publication in Buletinul Științific al Universității Politehnica din Timișoara, Tom 53(67), Fascicola 2, 2008, pag. 113-117
4. **Cristian Anghel**, Remus Cacoveanu, "BS Split Architecture with MIMO Capabilities Support Based on OBSAI RP3-01 Interface", Buletinul Științific al Universității Politehnica din Bucuresti, ISSN 1454-234x
5. Andrei Alexandru Enescu, Constantin Paleologu, **Cristian Anghel**, "Spatial multiplexing turbo receiver with reduced complexity", The Third International Conference on Sensor Technologies and Applications SENSORCOMM 2009, Athens/Glyfada, Greece
6. **Cristian Anghel**, Andrei Alexandru Enescu, "FPGA implementation of a CTC Decoder for H-ARQ compliant WiMAX systems", Proceedings of International Conference on Design & Technology of Integrated Systems, DTIS 2007, Marocco, Page(s): 82-86
7. V. Mocanu, **C. Anghel**, A. A. Enescu, "FPGA Implementation of a Digital Front End Block for a Multi-Carrier Multi-Antenna System", Proceedings of International Semiconductors Conference CAS 2009, Sinaia, pag. 431-434.
8. **Cristian Anghel**, Constantin Paleologu s.a, "FPGA Implementation of an Acoustic Echo Canceller Using an VSS-NLMS Algorithm", Proceedings of International Conference ISSCS 2009, Iași, pag. 369-372.
9. Andrei Nedelcu, Andrei Alexandru Enescu, **Cristian Anghel**, "An overview of soft-output sphere decoders with constant throughput", Proceedings of International Conference ISSCS 2009, Iași, pag. 109-112.
10. **Cristian Anghel**, Remus Cacoveanu, "BS split architecture with MIMO capabilities support based on OBSAI RP3-01 Interface", Proceedings of International Conference ISSCS 2009, Iași, pag. 271-274.
11. **Cristian Anghel**, Andrei Enescu, Remus Cacoveanu, "VLSI turbo decoder with H-ARQ capability for WiMAX", Proceedings of International Conference Communications 2008, București, pag. 301-304
12. Silviu Ciochina, **Cristian Anghel**, Andrei Alexandru Enescu, "Sub-optimal solutions to code synthesis for space-time diversity", Proceedings of International Conference SCS 2003, Iași, pag. 53-56
13. Adrian Andronache, **Cristian Anghel**, "A novel adaptation scheme in the NLMS algorithm for digital network echo canceller implemented on MOTOROLA STARCORE SC140 DSP", Proceedings of International Conference Communications 2002, Bucharest
14. **Cristian Anghel**, Andrei Alexandru Enescu, Constantin Paleologu, Silviu Ciochina, "CTC Turbo Decoding Architecture for H-ARQ Capable WiMAX Systems Implemented on FPGA", Proceedings of the Ninth International Conference on Networks ICN 2010, France
15. **Cristian Anghel**, Constantin Paleologu, Jacob Benesty, Silviu Ciochina "FPGA Implementation of a Variable Step-Size Affine Projection Algorithm for Acoustic Echo Cancellation", Proceedings of International Conference EUSIPCO 2010, Aalborg, Denmark
16. Alexandru Andreescu, Alexandru Ghita, Andrei Alexandru Enescu, **Cristian Anghel**, "Long Term Evolution Primary Synchronization Algorithms", ISETC 2010, Pag 125-128, Timisoara, Romania
17. Mihai Bartis, Vlad Mocanu, Andrei Alexandru Enescu, **Cristian Anghel**, "Achieving Secondary Synchronization for Downlink in the Long Term Evolution Standard", ISETC 2010, Pag 129-132, Timisoara, Romania
18. Cristian Stanciu, **Cristian Anghel**, Constantin Paleologu s.a., "A Proportionate Affine Projection Algorithm Using Dichotomous Coordinate Descent Iterations", Proceedings of International Conference ISSCS 2011, Iași, pag. 343-346.
19. Cristian Stanciu, **Cristian Anghel**, Constantin Paleologu s.a., "FPGA Implementation of an Efficient Proportionate Affine Projection Algorithm for Echo Cancellation", EUSIPCO 2011, Barcelona, Spania
20. **C. Anghel**, R. Cacoveanu, „MicroTCA compliant WiMAX BS Split Architecture with MIMO Capabilities Support Based on OBSAI RP3-01 Interfaces”,chapter in „WiMAX/ Book 1”, Editura InTech, ISBN 978-953-307-965-3, 2011

Projects

1. "Contributions to the implementation of MIMO channel-based communications systems", Grant CNCSIS TD1 number, 2008-2009, director
2. "Solutions for spectral efficiency increase in OFDM communication systems", CNCSIS 59 number, 2006-2008, participant
3. "Resonant phenomena in selective structures for signal processing in 0.1 to 18 GHz bandwidth", CERES C3/2003, 2003-2005, participant
4. "Using multiple coupling phenomena in signal processing in UMTS systems", CERES C4/2004, 2004-2006, participant
5. "ATHENA- Digital Switchover: Developing Infrastructures for Broadband Access", STREP (FP6), nr FP6-507312, participant
6. "Robust solutions for adaptive interference suppression", PN II – IDEI, cod CNCSIS 1027 number, 2007-2010, participant
7. "Research and implementation of selective radial thumbnail for mobile communications of 3rd generation (3G)", participant
8. "Solutions to increase performances of multi-channel acoustic echo canceller. Teleconferencing systems applications", participant
9. "Implementation of an echo canceller on Motorola StarCose SC140 DSP", Motorola scholarship, 2002, director

Training courses

Achieved the "3G systems and mobile communication systems" course, organized by the Faculty of Electronics, Telecommunications and Information Technology and sponsored by Connex SA.

Additional information

Mobility

I am available for business trips, representing a percentage of the work program