europass Curriculum Vitae

PERSONNAL INFORMATION

Ciprian-Romeo COMȘA, EE PhD, http://www.researcherid.com/rid/B-9358-2012

Telecommunications Dept Bd. Carol I, Nr. 11, Iași 700506, Romania

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http://telecom.etc.tuiasi.ro/telecom/staff/ccomsa/

Gender Male | | Nationality Romanian

OCCUPATIONAL FIELD

Electronics, Telecommunications and Information Technology

OBJECTIVE

To lead, manage, develop, and implement various teams and projects related to automotive electronic control systems, wireless communications and signal processing areas; To contribute to an educational framework to enable innovation and creativity fostering.

QUALIFICATION HIGHLIGHTS

- Strong analytical and engineering background in communications and signal processing area
- Teaching, training and people developing demonstrated capabilities
- Good leadership and innovation project management skills
- Aptitude for learning new skills, constructive critical thinking, strategic planning and implementation
- Familiarity with product life cycle (e.g., planning, analysis, testing, operations, and maintenance)
- Systems and SW development capabilities for Research and Development projects

WORK EXPERIENCE

2002 - now

Associate professor (2017-now), Assistant professor (2013-2017), Teaching Assistant (2002-2013), (on leave 2006-2011)

"Gheorghe Asachi" Technical University of Iași
Faculty of Electronics, Telecommunications and Information Technology
Bd. Carol I Nr. 11A, Iaşi, 700506, România
http://www.etti.tuiasi.ro

- Coordination of Master's program "Information Technology for Telecommunications"
- Lab instructing: Computer Programming and Programming Languages (C, C++); Electronic Computer Aided Design (in Spice and VHDL); Mobile Communications; Digital Communications
- Lecturing: Automotive Connected Mobility; Mobility and Wireless Technologies; Digital Communications; Advanced Techniques for Signal Processing in Communications; Spread Spectrum Communications and MIMO Systems
- Research activities within the field of Wireless Communications and Signal Processing

Business or sector Research and Higher Education

2012 - 2019

Innovation Management & Academic Liaison; Functional Safety Engineer; Team Leader (part-time)

Continental Automotive Romania SRL
Blvd. Poitiers No. 6, Iaşi 700671, România
www.continental-corporation.com

- Advanced Technology and Artificial Intelligence team in Chassis & Safety Division (2018-2019):
- Scout for new trends, ideas, products, start-ups
- Propose innovation projects and taking care of their implementation
- Maintain relation with local academia and supporting common projects
- Leading the Lights Control Unit System Engineer team in Interior, Body and Security Department from Iași (until 2017):
- Manage the full process to implement activities related to product safety during the full course of project development (from quotation until production)
- Define detailed safety planning for work product development
- Analyze client requirements, and provide safety concepts for developed work product
- Develop, maintain, and track of requirements on system level
- Ensure support in defining system architecture
- Perform the verification of safety related documents

- Supervise safety process to be employed by all the divisions engaged in the development
- Familiar with safety standards, e.g., ISO 26262
- Provide support regarding safety requirements to the engaged divisions
- Provide support in performing technical analyses, e.g. Failure Mode and Error Analysis (FMEA), Fault Tree Analysis (FTA)
- Responsible for mentoring new colleagues
- Moderate periodic meetings related to functional safety
- Deliver trainings on safety process to various divisions (e.g., SW, testing)

Business or sector Research and Development in Automotive Electronic Control Systems

2006 - 2011 **Research Assistant**

New Jersey Institute of Technology
Center for Wireless Communications and Signal Processing Research
University Heights Newark, New Jersey 07102, United States of America
http://cwcspr.njit.edu/

Projects on Geolocation for passive and active systems:

- Developed high accuracy localization techniques for sensor networks
- Derived mathematical bounds to assess the performance of the localization techniques for vary system parameters.
- Simulated the localization techniques using a system model which utilizes GSM signals
- Researched and developed optimization algorithms using convex optimization techniques
- Researched and developed localization algorithms based on compressive sensing / compressed sampling techniques

Business or sector Research and Higher Education

2000 - 2002 **Communication Systems Design Engineer**

S.C. Isratech S.R.L. Iaşi
http://www.asicart.com

- Integrated circuits computer aided design, using Matlab with Simulink, HDL and C++ tools
- Study of Bluetooth technology

Business or sector Information and Communication Technologies Industry

EDUCATION AND TRAINING

2006-2011 **PhD in Electrical Engineering**

New Jersey Institute of Technology, New Jersey, United States of America

- GPA for attended classes: 3.65 on a scale of 4 to 1
- Thesis Source Localization via Time Difference of Arrival
- Main topics covered: Signal processing, source localization, compressive sensing
- Relevant Courses: Digital Signal Processing, Advanced Digital Signal Processing, Advanced Wireless Communications, Advanced Topics in Wireless Communications, Computer Network Design Analysis, Information Theory, Probability and Random Process

2000-2001 **Master of Science in Digital Radio-communications**

"Gheorghe Asachi" Technical University of Iași

- GPA: 9.85 on a scale of 10 to 1
- Thesis Bluetooth Applications Introductory

1995-2000 **Diploma Engineer in Telecommunications**

"Gheorghe Asachi" Technical University of Iași

- GPA: 9.51 on a scale of 10 to 1
- Diploma Examination: 9.62 on a scale of 10 to 1

1991-1995 **Bachelor**

Computer Science High school "Grigore C. Moisil" of Iași

- GPA: 8.67 on a scale of 10 to 1
- Bachelor examination: 8.83 on a scale of 10 to 1

PERSONAL SKILLS

Mother tongue Romanian

Other languages

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C1	C1
	TOEFL, GRE (in 2005)				
French	A2	A2	A1	A1	A1
	-				

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user
Common European Framework of Reference for Languages

Communication skills

- Solid communication skills acquired through lecturing and teaching, research and development team work, both in academic and industry environments
- Pedagogical competences acquired from courses taken during 1995-2000 at the Didactical Training Department of “Gh. Asachi” Technical University Iaşi, graduated with GPA 9.25 on a scale of 10 to 1

Organisational / managerial skills

- Leadership skills developed through leading System Engineering teams and through research activities and from the process of supervising students
- Project management skills through participation at the Project Manager track of the POSDRU project "Dezvoltarea inovației, creativității, responsabilității și sustenabilității antreprenoriatului strategic românesc"
- Teamwork and project management skills gained with the research activities developed during the last >15years at the “Gheorghe Asachi” Technical University of Iaşi and at New Jersey Institute of Technology (including collaborating with researchers from Princeton University for the US Army)
- Organizational skills acquired from the “Organizational Culture and European Integration” postgraduate course of CETEX Department of the “Gh. Asachi” Technical University Iaşi, 2003

Technical skills

Expertise and professional interest areas:

- Innovation Management; Product development
- Automotive products development, Automotive communication protocols, Intervehicular (V2X) wireless communications, Requirements Engineering, Functional Safety Management
- Signal Processing for Communications. Geolocation techniques. Compressive sampling.
- Digital Communications Techniques. Bluetooth. OFDM Technique. Wireless, MIMO Systems.
- System Level Modelling and Simulation of Circuits for Telecommunications.
- Object Oriented Programming Techniques. Numerical Methods and Algorithms.
- HDL Modelling of Circuits for Telecommunications.

Digital competence

Advanced user of Microsoft Windows, Microsoft Office, and other typical productivity computing tools, as well as of some specific SW tools: Mathworks Matlab, CVX, Microsoft Visual C++, MentorGraphics Modelsim, Orcad PSpice, Rational DOORS

ADDITIONAL INFORMATION

Award achievements

- Second place award at The Dana Knox Student Research Showcase at NJIT, 2011
- Travel grant from the IEEE Signal Processing Society for participation at the ICASSP conference 2011
- Ross Fellowship awarded by the ECE Dept. of NJIT, 2006-2011
- Socrates Erasmus scholarship at The National Technical University of Athens, Greece, 2000
- Stipend scholarship awarded (bi-yearly evaluation) by the Romanian Ministry of Education and Research, uninterrupted during all the 6 years pursuing the Bachelor and Masters degrees, 1995-2001
- Ranked 2nd out of 15 at the graduation of the MSc program, 2001
- Ranked 5th out of 54 at the graduation of the Bachelor program, 2000

Professional activities

- IEEE membership: student member since 2007, member since 2012
- Member of IEEE Signal Processing Society (SPS)

- Member of IEEE Vehicular Technology Society (VTS)
- Active reviewer for scientific conferences (e.g., ISSCS) and journals (e.g., IEEE Transactions on Signal Processing, IEEE Transactions on Aerospace and Electronic Systems), Elsevier Physical Communication)
- Member of the local organization committee of The International Symposiums on Signals, Circuits and Systems: SCS2003, July 10-11, Iasi, Romania, 2003 and ISSCS2005, July 14-15, Iasi, Romania, 2005

ANNEXES

- Publication list
- Research project participations

Publications

IEEE Conferences

[1] A. Abunei, **C.R. Comşa**, C. F. Caruntu and I. Bogdan, "Redundancy Based V2V Communication Platform for Vehicle Platooning," in the Proceedings of the 2019 International Symposium on Signals, Circuits and Systems (ISSCS), Iasi, Romania, pp. 1-4. doi: 10.1109/ISSCS.2019.8801781

[2] A. Abunei, **C.R. Comsa**, D Mnesciuc, M Ferent, A Drenciu, "Open source hardware and software V2V emergency braking warning application", in the Proceedings of the 10th International Conference on Electronics Computers and Artificial Intelligence (ECAI) 2018, pp. 1-4, 2018. doi: 10.1109/ECAI.2018.8678953

[3] V. M. Chiriac, **C.R. Comsa** and D. Burdia, "Safety Concepts for Body Control Automotive Functionalities," in the Proceedings of the 10th International Conference on Electronics Computers and Artificial Intelligence (ECAI) 2018, pp. 1-4, 2018. doi: 10.1109/ECAI.2018.8678953

[4] A. Abunei, **C.R. Comşa** and I. Bogdan, "Implementation of ETSI ITS-G5 based inter-vehicle communication embedded system," in the Proceedings of the 2017 International Symposium on Signals, Circuits and Systems (ISSCS), Iasi, 2017, pp. 1-4. doi: 10.1109/ISSCS.2017.8034921

[5] A Abunei, **C.R. Comsa**, I Bogdan, "Implementation of a Cost-effective V2X hardware and software platform," in the Proceedings of the 2016 International Conference on Communications (COMM2016), Bucharest, June 2016, pages: 367 - 370, DOI: 10.1109/ICComm.2016.7528312

[6] A Abunei, **C.R. Comsa**, I Bogdan, "RSS improvement in VANETs by auxilliary transmission at 700 MHz," in the Proceedings of the 2015 International Symposium on Signals, Circuits and Systems (ISSCS2015), Iasi, July 2015, pages: 1 - 4, DOI: 10.1109/ISSCS.2015.7203998

[7] **C.R. Comsa**, "Array Processing for Passive Localization of a Source in the Near Field", in the Proceedings of the 2013 International Symposium on Signals, Circuits and Systems (ISSCS2013), Iasi, July 2013, pages: 1 - 4, DOI: 10.1109/ISSCS.2013.6651187

[8] **C. R. Comsa**, A. M. Haimovich, "Performance Bound for Time Delay and Amplitude Estimation from Low Rate Samples of Pulse Trains," presented at the 20th European Signal Processing Conference, EUSIPCO 2012, Bucharest, Romania, Aug. 27-31, 2012.

[9] **C. R. Comsa**, A. M. Haimovich, S. Schwartz, Y. H. Dobyns, and J. A. Dabin, "Source Localization using Time Difference of Arrival within a Sparse Representation Framework," presented at the International Conference on Acoustics, Speech and Signal Processing, ICASSP 2011, May 22-27, Prague, Czech Republic.

[10] **C. R. Comsa**, A. M. Haimovich, S. Schwartz, Y. H. Dobyns, and J. A. Dabin, "Time Difference of Arrival Based Source Localization within a Sparse Representation Framework," presented at the 45th Annual Conference on Information Sciences and Systems, CISS 2011, March 23-25, Baltimore, MD, USA.

[11] **C. R. Comsa**, J. Luo, A. M. Haimovich, and S. Schwartz, "Wireless Localization using Time Difference of Arrival in Narrow-Band Multipath Systems," in the Proceedings of the IEEE International Symposium on Signals, Circuits and Systems, ISSCS 2007, vol. 2, pp. 469 - 472, Iași, Romania, 12-13 July 2007.

[12] **C. R. Comsa** and I. Bogdan, "Simulation model for WLAN and GSM interoperating," in the Proceedings of the IEEE International Symposium on Signals, Circuits and Systems, ISSCS 2005, vol. 1, pp. 271 - 274, Iași, Romania, 14-15 July 2005.

[13] P. Cotae, **C. R. Comsa**, and I. Bogdan, "On the Stackelberg equilibrium of total weighted squared correlation in synchronous DS-CDMA systems: theoretical framework," in the Proceedings of the IEEE International Symposium on Signals, Circuits and Systems, ISSCS 2005, vol. 2, pp. 665 - 668, Iași, Romania, 14-15 July 2005.

[14] P. Cotae, **C. R. Comsa**, and I. Bogdan, "On the Stackelberg equilibrium of total weighted squared correlation in synchronous DS-CDMA systems: algorithm and numerical results," in the Proceedings of the IEEE International Symposium on Signals, Circuits and Systems, ISSCS 2005, vol. 2, pp. 669 - 672, Iași, Romania, 14-15 July 2005.

[15] D. Burdia, R. G. Bozomitu, and **C. R. Comsa**, "Some aspects on modeling and characterization of deep submicrometer CMOS gates driving lossless transmission lines," in the Proceedings of the 27th IEEE International Spring Seminar on Electronics Technology: Meeting the Challenges of Electronics Technology Progress, ISSE 2004, vol. 2, pp. 184 – 190, Sofia, Bulgaria, 13-16 May 2004.

[16] **C. R. Comsa** and I. Bogdan, "System level design of baseband OFDM for wireless LAN," in the Proceedings of the IEEE International Symposium on Signals, Circuits and Systems, SCS 2003, vol. 1, pp. 313 – 316, Iași, Romania, 10-11 July 2003.

[17] I. Bogdan and **C. R. Comsa**, "Analysis of circular arrays as smart antennas for cellular networks," in the Proceedings of the IEEE International Symposium on Signals, Circuits and Systems, SCS 2003, vol. 2, pp. 525 – 528, Iași, Romania, 10-11 July 2003.

Other conferences

[18] I. Bogdan and **C. R. Comsa**, "Dual GSM/WLAN Mobile terminal Modelling," in the Proceedings of the Anniversary Symposium "Gr. C. Moisil" SASM'05, organized by the Romanian Academy - Iași Branch, pp. 99-112, Iași, Romania, 5 - 7 May, 2005.

[19] D. Burdia, **C. R. Comsa**, and C. Ionascu, "Short-circuit power evaluation of deep submicrometer CMOS gates driving lossless transmission lines," in the Scientific Bulletin of the Politehnica University of Timisoara, Romania, Transactions on Electronics and Communications, Tom 49(63), Fascicola 1, 2004, pp. 178-183.

[20] D. F. Chiper and **C. R. Comsa**, "An efficient linear systolic array architecture for a memory-based VLSI implementation of Type III generalized Hartley transform," in the Scientific Bulletin of the Politehnica University of Timisoara, Romania, Transactions on Electronics and Communications, Tom 49(63), Fascicola 1, 2004.

[21] **C. R. Comsa**, D. Burdia, and D. F. Chiper, "Implementation of an OFDM synchronizer," in the Scientific Bulletin of the Politehnica University of Timișoara, Romania, Transactions on Electronics and Communications, Tom 49(63), Fascicola 2, 2004, pp. 382-384.

[22] **C. R. Comsa**, F. S. Beldianu, and P. Cotae, "Windowing Techniques for OFDM Systems," in the Scientific Bulletin of the Politehnica University of Timişoara, Romania, Transactions on Electronics and Communications, Tom 49(63), Fascicola 2, 2004, pp. 386-388.

[23] **C. R. Comsa**, I. E. Alecsandrescu, I. Bogdan, and A. Maiorescu, "Simulation Model for Mobile Radio Channels," in the Proceedings (on CD-ROM) of the European Conference on Intelligent Technologies ECIT2002, Iaşi, Romania, 17-20 July 2002.

Revue Articles

[24] I. Bogdan and **C. R. Comşa**, "Dual Gsm/Wlan Mobile Terminal: Model Building And Its Validation," Romanian Academy Scientific Sections Memoirs (romanian: "Memoriile secţiilor ştiinţifice ale Academiei Române"), (accepted for publishing in Jan. 2006).

[25] A. Sîrbu, **C. R. Comşa**, and I. Bogdan, "Monitoring and Control Personal Networks using Bluetooth," (in romanian), in "Telecomunicaţii" revue, Bucharest, Romania, no. 2/2005, pp. 16-24.

[26] **C. R. Comsa** and G. Grigore, "FIR Filters Implementation Approaches," in the Scientific Bulletin of "Gheorghe Asachi" Technical University of Iaşi, Romania, Transactions on Electronics and Communications, Tom XLIX (LIII), Fasc. 3-4, 2004.

[27] **C. R. Comşa** and I. Bogdan, "OFDM, Coded Data Transmission Technique," (in romanian), in "Telecomunicaţii" revue, Bucharest, Romania, year XXX / no. 2/2003, pp. 30-38.

[28] **C. R. Comşa**, "Bluetooth Technology Overview," (in romanian), in "Comunicaţii Mobile" revue, Bucharest, Romania, no. 2/2002 pp. 38-39

[29] **C. R. Comşa** and I. Bogdan, "Bluetooth, Present and Future," (in romanian); in "Telecomunicaţii" revue, Bucharest, Romania, no 2/2001, pp. 62-86.

Published Books

Ciprian Comșa, *Source Localization via Time Difference of Arrival*, ISBN: 978-606-13-3394-3, 117 pagini B5, Editura PIM, 2016, Iaşi.
Ciprian Comșa, *Comunicații Digitale*, ISBN: 978-606-13-3393-6, 160 pagini A4, Editura PIM, 2016, Iaşi.
Ciprian Comșa, *Rețele WLAN - OFDM şi legătura de date*, ISBN: 978-606-13-3424-7, 145 pagini A4, Editura PIM, 2016, Iaşi.
Ciprian Comșa, Ion Bogdan, *Comunicații Mobile - Îndrumar de laborator*, ISBN: 978-606-13-3425-4, 78 pagini A4, Editura PIM, 2016, Iaşi.

Research projects participation

1.	Project Partners: *Princeton University and New Jersey Institute of Technology* Local project manager: *Prof. Dr. Alexander Haimovich (NJIT)*			
Title:	*Signal Processing Algorithms for Very Accurate Geolocation in the Presence of Multipath.*			
Financing:	*US Department of the Army*		Year: *2006-2011*	Stage: *Finished*
2.	Project Coordination: *National Institute of Studies and Researches in Communications Bucharest* Local project manager: *Prof. Dr. Ion Bogdan (TU Iași)*			
Title:	*Bluetooth Access to 4G System applied in personal home networks implementation.*			
Financing:	*INFOSOC-C6*		Year: *2004-2006*	Stage: *Finished*
3.	Project Coordination: *Prof. Dr. Ion Bogdan (TU Iași)*			
Title:	*Simulink – Stateflow Modeling and Simulation of an WLAN – GSM System in Order to Implement a Dual Transceiver.*			
Financing:	*ASICAhead Bucharest*		Year: *2004–2005*	Stage: *Finished*
4.	**Project Manager: *Ciprian Comșa (TU Iași)***			
Title:	*Modeling, Implementation and Performance Evaluation of an OFDM Receiver in High Speed Communication Systems.*		CNCSIS Code 171	
Financing:	*CNCSIS-Td*		Year: *2004-2006*	Stage: *Finished*
5.	Project Manager: *Dr. Dănuţ Burdia (TU Iași)*			
Title:	*Submicrometer CMOS Gates Driving Transmission Lines Modeling for Discrete Events Simulation and High Speed VLSI circuits performance evaluation*		Contract No. 33557/2003, Theme 54, CNCSIS Code 323	
Financing:	*CNCSIS-At*		Year: *2003-2004*	Stage: *Finished*
6.	Project Manager: *Lucian Stoica* **Project respondent: *Ciprian Comșa (TU Iași)***			
Title:	*VLSI Design of High Speed Prediction Circuits*		Contract No. 33557/2003, Theme 63, CNCSIS Code 358	
Financing:	*CNCSIS-At*		Year: *2003-2004*	Stage: *Finished*
7.	Project Coordination: *National Institute of Studies and Researches in Communications Bucharest* Local project manager: *Prof. Dr. Ion Bogdan (TU Iași)*			
Title:	*Methods and Solutions for Introduction of 3rd Generation Mobile Services in Romania*			
Financing:	*INFOSOC-C1*		Year: *2001-2003*	Stage: *Finished*

Note: CNCSIS and INFOSOC are Romanian National Research Financing Institutions