

PERSONAL INFORMATION

Călin Vlădeanu



Sex Male | Date of birth | Nationality Romanian

JOB APPLIED FOR
POSITION
PREFERRED JOB
STUDIES APPLIED FOR

WORK EXPERIENCE

01.10.2014 – present

Professor

"Politehnica" University of Bucharest, Romania, Faculty of Electronics, Telecommunications and Information Technology, Telecommunications Department

- lecture / applications in: Advanced Data Communications; Computer Networks

Business or sector Education

2008 – 2014

Associate Professor

"Politehnica" University of Bucharest, Romania, Faculty of Electronics, Telecommunications and Information Technology, Telecommunications Department

- lecture / applications in: Data Communications; Computer Networks

Business or sector Education

2004 – 2008

Lecturer

"Politehnica" University of Bucharest, Romania, Faculty of Electronics, Telecommunications and Information Technology, Telecommunications Department

- lecture / applications in: Data Communications; Data Transmissions
- applications in: Data Transmissions, Computer Networks

Business or sector Education

1998 – 2004

Teacher Assistant

"Politehnica" University of Bucharest, Romania, Faculty of Electronics, Telecommunications and Information Technology, Telecommunications Department

- applications in: Data Communications; Data Transmissions; Computer Networks

Business or sector Education

EDUCATION AND TRAINING

2014

Habilitation Thesis

"Politehnica" University of Bucharest, Romania, Faculty of Electronics and Telecommunications, Telecommunications Department

- Electronics and Telecommunications
Non-conventional Coding and Modulation Techniques for Data Transmissions

2010-2013

Post-Doctoral fellowship

grant POSDRU/89/1.5/S/62557, EXCEL, "Politehnica" University of Bucharest, Romania

- Cognitive Communications in the Context of the Future Internet
- *Applications of Non-linear Dynamical Systems for Numerical Transmissions over Wireless Channels*

- 1999-2006 **PhD**
 "Politehnica" University of Bucharest, Romania, Faculty of Electronics and Telecommunications, Telecommunications Department
- Mobile Communications
 - *Contributions to DS-CDMA Mobile Communications Systems. Chaotic spreading sequences with better correlation properties than conventional sequences*
- 1998-1999 **Master of Science in Electrical Engineering (MSEE)**
 "Politehnica" University of Bucharest, Romania, Faculty of Electronics and Telecommunications, Telecommunications Department
- Telecommunication Networks
 - *The Carrierless Amplitude-Phase Modulation Technique*
- 1993-1998 **Bachelor of Science, Electrical Engineering (BSEE)**
 "Politehnica" University of Bucharest, Romania, Faculty of Electronics and Telecommunications, Telecommunications Department
- Transmission and Processing of Data and Voice Signals
 - *An Orthogonally Frequency Division Multiplexing Modulation Technique*

PERSONAL SKILLS

Mother tongue(s) Romanian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1
French	C2	B1	B1	B2	A1

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user
 Common European Framework of Reference for Languages

Communication skills ▪ good communication skills gained through my experience as teacher and researcher

Organisational / managerial skills ▪ Management skills – Director of 3 CNCSIS/UEFISCDI grants (1TD + 1AT + 1TE); responsible for a team of up to 4 people
 ▪ Member of several international and national conferences organizing committees;

Job-related skills ▪ Design, Implementation, and Testing of Telecommunications systems using Matlab and C programming - implementing and testing signal processing algorithms for: channel coding, MIMO, OFDM, CDMA, etc.;
 ▪ participant to 12 national grants and 1 international grant - involved in activities for physical layer design and testing in several mobile communications systems;
 ▪ Member of several international and national conferences / journals technical committees (more than 50 reviews of research papers);

Computer skills ▪ preparation of research reports and dissemination - good command of Microsoft Office™ and Latex tools

Driving licence

ADDITIONAL INFORMATION

Publications

Books

1. C. Vlădeanu, S. El Assad, *Nonlinear Digital Encoders for Data Communications*, Ed. John Wiley & Sons, 2014, ISBN 978-1-84821-649-5.
2. C. Vlădeanu, *Signal Detection in DS-CDMA Systems* (in Romanian), Ed. Printech, Bucharest, Romania, 2013.
3. C. Vlădeanu, *High Performances Chaotic Spreading Sequences for DS-CDMA Systems*, (in Romanian), Ed. Printech, Bucharest, Romania, 2008.
4. C. Vlădeanu, I. Bănică, S. Popescu, *Data Communications Systems and Networks* (in English), Ed. Printech, Bucharest, Romania, 2007.
5. C. Vlădeanu, *Spreading sequences for the DS-CDMA system*, (in Romanian), "ELECTRONICA 2000", Bucharest, Romania, 2003.

Journals (selected)

1. A. Martian, M.J.A. Al Sammarraie, C. Vlădeanu, D.C. Popescu, *Three-Event Energy Detection with Adaptive Threshold for Spectrum Sensing in Cognitive Radio Systems*, *Sensors*, 20(13):3614, DOI 10.3390/s20133614, 2020.
2. C. Vlădeanu, I. Bănică, B. O. Hogstad, M. Pätzold, C. E. D. Sterian, *Combining Super-Orthogonal Space-Frequency Trellis Coding, Constellation Shaping by Shell Mapping, and OFDM for High Data Rate Broadband Mobile Communications*, *Transactions on Emerging Telecommunications Technologies (ETT)*, Wiley, 2014, ISSN 2161-3915, vol. 28, Issue 1, January 2017.
3. C. Vlădeanu, C. V. Năstase, A. Marțian, *Energy Detection Algorithm for Spectrum Sensing Using Three Consecutive Sensing Events*, *IEEE Wireless Comm. Letters*, DOI: 10.1109/LWC.2016.2543723, , vol. 5, pp. 284-287, June 2016, ISSN 2162-2337.
4. C. Vlădeanu, *Coding Gain Distance Exact Estimation for Space-Time Trellis Coded Modulation*, *Circuits, Systems, and Signal Processing*, Springer, Birkhäuser Boston, vol. 32, no. 2, pp. 919-929, Apr. 2013, ISSN 0278-081X.
5. C. Vlădeanu, S. El Assad, *Hybrid Maximum-Likelihood Detector for Trellis Coded Spatial Modulation*, *Revue Roumaine des Sciences Techniques – Serie Electrotechnique et Energetique*, Ed. Academiei Romane, vol. 57, no. 4, pp. 383-393, Bucharest, Romania, 2012.
6. C. Vlădeanu, S. El Assad, I. Marghescu, A.F. Paun, J.-C. Carlach, and R. Quéré, *Recursive $GF(2^N)$ Encoders Using Left-Circulate Function for Optimum TCM Schemes*, *Revue Roumaine des Sciences Techniques – Serie Electrotechnique et Energetique*, Ed. Academiei Romane, vol. 55, no. 3, pp. 320-329, Bucharest, Romania, 2010.
7. C. Vlădeanu, S. El Assad, J.-C. Carlach, R. Quéré, and I. Marghescu, *Recursive $GF(2^N)$ Encoders Using Left-Circulate Function for Optimum PSK-TCM Schemes*, *Elsevier Signal Processing*, vol. 90, no. 9, pp. 2708-2713, Sept., 2010 doi:10.1016/j.sigpro.2010.03.021.
8. C. Vlădeanu, S. El Assad, J.-C. Carlach, R. Quéré, *Improved Frey Chaotic Digital Encoder for Trellis-Coded Modulation*, *IEEE Trans. Circuits and Systems – II*, vol. 56, no. 6, pp. 509-513, June, 2009.
9. C. Vlădeanu, C. Paleologu, I. Marghescu, *Multilevel Chaos-Based Spreading Sequences for DS-CDMA System Performance Improvement*, *Revue Roumaine des Sciences Techniques – Serie Electrotechnique et Energetique*, 2008.
10. C. Vlădeanu, C. Paleologu, *Fast convergence adaptive MMSE receiver for asynchronous DS-CDMA systems*, *Revue Roumaine des Sciences Techniques – Serie Electrotechnique et Energetique*, Tome 52, no. 1, pp. 51-60, Jan.-Mar., 2007.

Projects

1. *New Convolutional Coding Schemes with Reduced Complexity Operating over Higher Order Galois Fields for Channel Error Correction*, grant UEFISCSU type RU-TE, 2010-2013, manager C. Vlădeanu.
2. *New Turbo Multi-User Detection receivers for CDMA systems*, 2007-2008, grant CNCSIS AT, manager C. Vlădeanu.
3. *Performance Analysis of DS-CDMA Mobile Communications Systems*, grant CNCSIS Type Td, 2004-2005, CNCSIS Code 471, phase 1 (*Spreading sequences for the DS-CDMA system - 2004*) and phase 2 (*BER performances analysis for the DS-CDMA system using chaotic sequences - 2005*), manager C. Vlădeanu.
4. *Cognitive Radio Technology and RF Spectrum Efficient Utilization*, UEFISCSU Grant, PN-II-PCE-Ideii, 2007-2011, manager I. Marghescu.
5. *New Adaptive Receivers for CDMA Communications Systems*, Grant type CEEX-ET, MEC-UEFISCSU, 2006-2008, manager C. Paleologu.
6. *A new family of least squares adaptive algorithms suitable for finite precision implementation*, 2004, AT type contract, CNCSIS, manager C. Paleologu.
7. *Multimedia Communications Systems*, phase IV (2002): *Fast adaptive algorithms for channel equalization and interference cancellation in multimedia communications systems*, Orizont 2000, UPB-ITC-ANSTI, nr.540 /2000, Manager Adelaida Mateescu.
8. *Multimedia Communications Systems*, phase III (2001): *A study of access systems in multimedia communications systems: new solutions*, Orizont 2000, UPB-ITC-ANSTI, nr.540 /2000, Manager Adelaida Mateescu.
9. *Access interfaces of the telecommunications network to the global communications network*, UPB-ANSTI, nr.836 /A6, 2000, Manager Adelaida Mateescu.

Conferences (selected)

1. O. -M. Ungureanu, C. Vlădeanu and R. Kooij, "Collaborative Cloud - Edge: A Declarative API orchestration model for the NextGen 5G Core," 2021 IEEE International Conference on Service-Oriented System Engineering (SOSE), 2021, pp. 124-133, doi: 10.1109/SOSE52839.2021.00019.
2. A. Martian, F. -L. Chiper, R. Craciunescu, C. Vlădeanu, O. Fratu and I. Marghescu, "RF Based UAV Detection and Defense Systems: Survey and a Novel Solution," 2021 IEEE International Black Sea Conference on Communications and Networking (BlackSeaCom), 2021, pp. 1-4, doi: 10.1109/BlackSeaCom52164.2021.9527871.
3. C. Vlădeanu, O. M. K. Al-Dulaimi and A. Marțian, "A Modified Double-Threshold Spectrum Sensing Algorithm Based on Adaptive-Threshold Mean Energy Detection," 2021 International Symposium on Signals, Circuits and Systems (ISSCS), 2021, pp. 1-4, doi: 10.1109/ISSCS52333.2021.9497419.
4. A. Martian, C. Vlădeanu and I. Marghescu, "Novel Software Defined Radio Testbed for Spectrum Occupancy Measurements," 2020 International Symposium on Electronics and Telecommunications (ISETC), Timisoara, NOV 05-06, 2020, Pages: 383-386, doi: 10.1109/ISETC50328.2020.9301075, WOS:000612681000092.
5. O. M. Khodayer Al-Dulaimi, M. Jalal Ahmad Al Sammarraie, C. Vlădeanu, A. Marțian and D. C. Popescu, "Cooperative Spectrum Sensing for Three Secondary Users with Sequential Relaying for Cognitive Radio," 2020 13th International Conference on Communications (COMM), Bucharest, Romania, 2020, pp. 221-226, doi: 10.1109/COMM48946.2020.9141968, WOS:000612723900040.
6. C. Vlădeanu, M. J. A. A. Sammarraie and A. Marțian, "Amplify-and-Forward Cooperative Spectrum Sensing Using Three Secondary Users for Cognitive Radio," 2019 International Symposium on Signals, Circuits and Systems (ISSCS), Iasi, Romania, 2019, pp. 1-4. doi: 10.1109/ISSCS.2019.8801814.
7. M. J. Ahmad Al Sammarraie, A. Martian and C. Vlădeanu, "Adaptive IED Spectrum Sensing Algorithm for Different Duty Cycle Values," 2018 International Conference on Communications (COMM), Bucharest, Romania, 2018, pp. 51-54. doi: 10.1109/ICComm.2018.8430110
8. C. Năstase, A. Marțian, C. Vlădeanu and I. Marghescu, "Spectrum Sensing Based on Energy Detection Algorithms Using GNU Radio and USRP for Cognitive Radio," 2018 International Conference on Communications (COMM), Bucharest, Romania, 2018, pp. 381-384. doi: 10.1109/ICComm.2018.8430143
9. A. Marțian and C. Vlădeanu, "On the Compromise between Delay and Performance of the Three-Event Energy Detection Algorithm in Cognitive Radio Systems," 12th IEEE International Symposium on Electronics and Telecommunications (ISETC), Timisoara, ROMANIA, OCT 27-28, 2016, pp. 111-115, ISBN:978-1-5090-3748-3.
10. E. I. Dobre, C. Vlădeanu, and A. Marțian, "USRP-based Experimental Platform for Energy Detection in Cognitive Radio Systems," IEEE 11th International Conference on Communications (COMM), Bucharest, ROMANIA, JUN 09-11, 2016, pp. 185-188, ISBN: 978-1-4673-8197-0.
11. C. V. Năstase, A. Marțian, C. Vlădeanu, I. Marghescu, *An Accurate Average Energy Detection Algorithm for Spectrum Sensing in Cognitive Radio Systems*, IEEE 11th International Symposium on Electronics and Telecommunications - ISETC 2014, Timisoara, Romania, Nov. 14-15, 2014.
12. C. Vlădeanu, *Spatial Modulation with Joint Antenna Index and Symbol Index Turbo Trellis Coding*, IEEE 11th Int. Symp. on Signals, Circuits and Systems - ISSCS 2013, p. 1-4, Iași, Romania, 11 - 12 July, 2013.
13. C. Vlădeanu, *Turbo Trellis-Coded Spatial Modulation*, IEEE Global Communications Conference - GLOBECOM 2012, pp. 4240-4245, Anaheim, CA, USA, Dec. 3-7, 2012.
14. C. Vlădeanu, A. Marțian, A.F. Paun, S. El Assad, *A New ML Detector for Trellis-Coded Spatial Modulation Using Hard and Soft Estimates*, IEEE 10th International Symposium on Electronics and Telecommunications - ISETC 2012, pp. 143-146, Timisoara, Romania, Nov. 15-16, 2012.
15. C. Vlădeanu, R. Lucaciu, A. Mihăescu, *Optical Spatial Modulation for Indoor Wireless Communications in Presence of Inter-Symbol Interference*, IEEE 10th International Symposium on Electronics and Telecommunications - ISETC 2012, pp. 183-186, Timisoara, Romania, Nov. 15-16, 2012.
16. C. Vlădeanu, A. Marțian, S. El Assad, *EXIT Charts Analysis for Turbo-TCM Schemes Using Non-Binary RSC Encoders*, IEEE 8th Advanced Int. Conf. on Telecomm. AICT 2012, pp. 150-155, Stuttgart, Germany, May 27-June 1, 2012.
17. C. Vlădeanu, S. El Assad, *Punctured 8-PSK Turbo-TCM Transmissions Using Recursive Systematic Convolutional $GF(2^N)$ Encoders*, 19th European Signal Proc. Conf. -EUSIPCO 2011, pp. 111-115, Barcelona, Spain, Aug. 29-Sept. 2, 2011.
18. C. Vlădeanu, S. El Assad, *Designing Optimum 2D-TCM Schemes Using New Systematic Convolutional Encoders over $GF(2^N)$* , IEEE 10th Int. Symp. on Signals, Circuits and Systems - ISSCS 2011, pp. 479-483, Iași, Romania, 30 June - 1 July, 2011.
19. C. Vlădeanu, S. El Assad, *Optimum QAM-TCM Schemes Using Left-Circulate Function over $GF(2^N)$* , IEEE 7th Advanced Int. Conf. on Telecomm. AICT 2011, pp. 112-116, St. Maarten, Dutch Antile, Mar. 20-25, 2011.

Memberships

- IEEE member;

References