

CURRICULUM VITAE  
EUROPEAN



PERSONAL INFORMATION

Name	Alexandru Serbanescu
Address	
Telephone	
Fax	
E-mail	

Citizenship	Romanian
Nationality	Romanian
Date of birth	03.02.1943

WORK EXPERIENCE

<i>Dates (from – to)</i>	1965-1967
<i>Name and address of employer</i>	„ELECTROMAGNETICA” Factory, Bucharest, Romania
<i>Occupation or position held</i>	<b>Engineer</b>
Type of business or sector	<i>Technologic</i>
<i>Dates (from – to)</i>	1967-1982
<i>Name and address of employer</i>	Telecommunications Research Institute, Bucharest, Romania
<i>Occupation or position held</i>	<b>Scientific Researcher</b>
<i>Type of business or sector</i>	Telecommunications Department
<i>Dates (from – to)</i>	1982-1991
<i>Name and address of employer</i>	Military Technical Academy, Bucharest, Romania
<i>Occupation or position held</i>	<b>Assistant Professor</b>
<i>Dates (from – to)</i>	1991 – 2019
<i>Name and address of employer</i>	Military Technical Academy, Bucharest, Romania
<i>Occupation or position held</i>	<b>Professor</b>
<i>Type of business or sector</i>	Communications Department
<i>Main activities and responsibilities.</i>	

EDUCATION AND TRAINING

<i>Dates (from – to)</i>	Sept. 1960 - Aug. 1965
Name and type of organization providing education and training	<b>Bucharest Politehnic Institute, Romania</b>
<i>Title of qualification awarded</i>	<i>The state diploma in Telecommunications Engineering</i>
<i>Dates (from – to)</i>	Oct. 1970 - Apr. 1974
Name and type of organization providing education and training	<b>Bucharest Politehnic Institute, Romania</b>
<i>Title of qualification awarded</i>	<b>Doctor's degree: engineer – in fundamental domain "ENGINEERING SCIENCES", domain "TELECOMMUNICATIONS ENGINEERING", thema "Contributions in computer aided electrical filter design"</b>

Dates (from – to)	1992- 2011
Principal subjects/occupational skills covered	Doctoral Director in fundamental domain " ENGINEERING SCIENCES ", domain "TELE-COMMUNICATIONS ENGINEERING"

<b>PERSONAL SKILLS AND COMPETENCES</b>	

<b>Mother tongue</b>	Romanian
----------------------	----------

**LANGUAGES**

	French
Ability of reading	good
Ability of writing	good
Ability of speaking	good

	English
Ability of reading	good
Ability of writing	good
Ability of speaking	good

<b>SOCIAL SKILLS AND COMPETENCES</b>	<ul style="list-style-type: none"> <li>➤ Loyal</li> <li>➤ Honest</li> <li>➤ With Abnegation</li> <li>➤ Problem-solving attitude</li> <li>➤ Responsible</li> <li>➤ Tenaciously</li> <li>➤ End-oriented work capacity</li> <li>➤ Organized person</li> </ul>
	<b>Hobby</b> <ul style="list-style-type: none"> <li>➤ Sports: tennis</li> <li>➤ Classical music</li> </ul>

<b>ORGANISATIONAL SKILLS AND COMPETENCES</b>	<b>17 years experience in Research and Management in Telecommunications Institute;</b>	
	<i>Trainings, laboratories, projects of circuits and sub-systems for:</i>	
	- Analog circuits and communications system design	
	- Digital communications system design	
	- Computer aided circuits and system analysis and design	
	<i>Project Management in FDMA and TDMA Comm. Systems</i>	
	<b>Teaching experience: over 50 years:</b>	
	- 1967 - 1982 Assistant in Comm. Dept. of Bucharest Polytechnic Institute, Romania	
	- 1982 - 2001 Assistant Professor in Military Technical Academy, Bucharest, Romania	
	- 2001 – Professor, PhD in Military Technical Academy, Bucharest, Romania	
	<b>37 years experience in research activities in Communications Dept. of Military Technical Academy, Bucharest Romania.</b>	
	More than 10 years experience in project management from national fineness (RELANSIN, CEEEX, PN II) as project manager or member of project team , with responsibilities in elaboration, evaluation and report of the results for governmental structures, training trainers.	

Program/Project	Function	Period: from... to...
Orizont2000/ subsystems of STAR: Managem Optimization (100 mil.)	Coordinator (subtema)	1998-1999
Grant ANSTI tip S/Sistem de comunicatie cu purtatoare haotica (25 mil)	Coordonator tema Luca Mihai Îndrumător șt. Șerbănescu Alex.	1999-2000
Grant ANSTI tip S Controlul sistemelor dinamice haotice:	Coordonator tema Baston Ciprian	2001-2002

Aplicații în studiul circuitelor electronice neliniare (19 mil.)	Îndrumător șt. Șerbănescu Alex.	
<b>Grant ANSTI/ Comunicatii de banda larga folosind sisteme dinamice haotice (65 mil.)</b>	Director tema	2000-2002
<b>Program MATNANTEH</b> “Circuite de recepție obținute prin prelucrarea siliciului pentru unde milimetrice ”	Coordonator subtem □	2001-2002
<b>Contract MAPN</b> “Elaborarea liniilor directoare pentru proiectarea și implementarea arhitecturilor ADL”	Coordonator subtema	2004
<b>Program MATNANTEH</b> “Filtre reconfigurabile pe siliciu in unde milimetrice”	Coordonator subtema	2000-2005
<b>Program Sectorial MAPN</b> “Studii avansate pentru dezvoltarea sistem □lor de comunicatii militare”	Coordonator subtema	2005-2006
<b>Program Sectorial MAPN</b> “Studii avansate pentru dezvoltarea sistemelor de comunicatii militare- <b>APLICATII</b> ”	Coordonator subtema	2006
<b>Program CEEX</b> ”Influenta defectelor intrinseci si induse in cristalul de Langasit asupra performantelor structurilor piezoelectrice”	Coordonator subtema	2006-2008
<b>Program CEEX</b> „Securitatea sistemelor si actiunilor militare si civil-militare în gestionarea crizelor și conflictelor armate”	Coordonator subtema	2006-2008
<b>Proiecte de cercetare complexe</b> „Comunicatii securizate compatibile SCIP pentru retele EUROCOM”	Coordonator subtema	2006-2008
<b>Proiect cooperare internationala ECO-NET 2007-2009</b> cu tema: „Advanced works on transient Signal Characterization” <b>Participanti:</b> ATM-Romania, INP Grenoble-Franta, Univ. din Muntenegru	Coordonator din partea ATM	2007-2009

A. BOOKS, COURSES					
Nr crt	Titlul	Autori + A.Șerbănescu	Nr. de pag.	Editura	Anul apar.
1	Filtres electriques (traducere în limba franceză)	S. Ștefănescu	783	MASSON	1972
2	Electrical Network Theory (traducere din limba engleza)	N.B. Iabăbanian	900	Ed Tehnică	1974
3	Probleme de analiza și sinteza circuitelor	A. Mateescu	532	Ed Tehnică	1976
4	Circuite cu capacitati comutate	A. Mateescu	215	Ed. Militara	1987
5	Sisteme moderne de comunicatii	A. Mihălcea	325	Ed Militara	1992
6	Semnale , circuite și sisteme - probleme	A. Mateescu	450	Ed Tehnică	1998
7	Electronique, phisique et signal pour telecommunication	Claude Gimenes A. Mateescu	28	Ed. Tehnica București	1997
8	Semnale , circuite și sisteme - culegere de probleme	A. Mateescu N. Dumitriu	454	Ed. Militara București	1998
9	Prelucrarea numerica a semnalelor	A. Mateescu N. Dumitriu	200	Ed. Tehnica București	1998
10	Le traitement du signal sous MATLAB, Ed. ATM, București, 1998, (reeditat Ed. Hermes, Paris, 2000)	Quinquis A. Radoi, E.	235	Ed. ATM, Ed. Hermes	1998 2000
11	Comunicații de bandă largă folosind sisteme dinamice haotice	A. Șerbănescu	233	Ed. ATM București	2000
12	„Aplicații ale sistemelor dinamice haotice în comunicații”, (ISBN 973-640-032-8).	Șerbănescu A (Editor)	14	Ed. ATM, București	2004
13	l'Optimisation Multicriterielle dans l'Approche Systemique en utilisant des Algorithmes Genetiques et les Strategies Evolutionistes”, (ISBN(13)978-973-640-118-3).	A. Șerbănescu,	250	Ed. ATM, București,	2007
14	„Systemes et signaux face au chaos - Applications aux communications”, (ISBN 978-973-640-111-0).	A. Șerbănescu, I. Rancu	300	Ed. ATM, București	2008
15	” Prelucrarea digitala a semnalelor. Aplicații și implementări hardware în structuri reconfigurabile și cu procesoare digitale de semnale”, (ISBN (973-640-132-9)	Șerbănescu A., Șerban, G., Iana G., Oroian T.	400	Ed. Univ. Pitești,	2009
16	„Semnale și Sisteme Analogice” (ISBN 978-973-640-200-5)	Șerbănescu A., Oroian T.	300	Ed. ATM, București	2010
17	„Prelucrarea semnalelor in Sisteme Analogice”	Șerbănescu A., Oroian T.	300	Ed. ATM, București	2011
18	„Analiza neliniară a seriilor de timp”, (ISBN 878-973-640-206-7)	A. Șerbănescu, O. Stanasila, F.M. Birleanu	356	Ed. ATM, București	2011

B. Papers published between 2000-2018

...

- [71] “Results in simulation of spread spectrum systems based on chaos”, Șerbănescu, Simp. Electronics and Telecommunications Etc2000, Timișoara, 23,24 noiembrie 2000
- [72] “Aplicații ale tehnologiei bazată pe dinamica neliniară și haos”, A. Șerbănescu, Simpozionul ITA, 27 oct. 2000
- [73] “Chaotic modulation method based on evolutionary strategies”, A. Șerbănescu, Simpozionul Communications 2000, 7-9 dec. 2000, București
- [74] “A time frequency way for improving the quality of the synthesized speech signal in classical lpc compression method”, L. Cernaianu, A. Șerbănescu, A. Quinquis, in Mathematics and Computers in modern science, Nikos Mastorankis Editor, 2000
- [75] “Didactic Software for Signal and Image Processing”, A. Quinquis, L. Cernaianu, A. Șerbănescu, in DSP2000 Workshop and First Signal Processing Education Workshop, oct. 15-18, 2000, Waldman Ranch Resort, Hunt Texas
- [76] “Chaotical Sequences for Multiple Access in Spread Spectrum Communications”, A. Șerbănescu, V. Greu, B. Cristea, International Conference for Telecommunications Bucharest Romania 4-7 iun. 2001
- [77] “Selected Pseudo noise Sequences for Spread Spectrum Communications”, V. Greu, A. Șerbănescu, M. Luca, International Conference for Telecommunications, Bucharest, Romania 4-7 iun. 2001
- [78] “Signal Processing in Communications network applications based on genetic algorithms and evolution computation”, A. Șerbănescu, A. Negulescu, International Conference for Telecommunications, Bucharest Romania 4-7 iun. 2001
- [79] “Noi tehnologii pentru comunicații”, A. Șerbănescu, Simpozionul AFCEA “Tehnologii necesare țarilor candidate”, 17 mai 2000, București
- [80] “Abordarea sistemică în pregătirea inginerilor”, Simpozionul internațional “Microelectronics, Technologies and Microsystems” Pitești noi. 2000
- [81] “Design and simulation of a chaotic-based cryptosystem”, Simpozionul internațional “Microelectronics, Technologies and Microsystems” Pitești, mai, 2001
- [82] “Self learning educational software for signal and image processing”, in Proc. of OPTIM 2002, Brasov, May, 16-17, 2002, Romania
- [83] “Applications of chaos theory in cryptography” in Proc. of Intern. Scientific symposium of ACTTM, may, 23-24, 2002, Bucharest, Romania
- [84] “Random sequence generator based on nonlinear function”, in Proc. of Intern. Symp. ETC. 2002, 19-20 sept 2002, Timișoara, Romania
- [85] “Echipamente electronice și inteligentă artificială”, la INFOSOC 2002, Pitești, 13-14 iunie 2002, Romania
- [86] “Controlul sistemelor haotice utilizând Dither-ul” lucrare prezentată la INFOSOC 2002, Pitești, 13-14 iunie 2002, Romania
- [87] “Performances evaluation of some chaos based cryptosystems” lucrare la Communications 2002, 7-9, dec. 2002, București, Romania

- [88] "Educational software for signal processing", in Proc. of Communications 2002, 7-9, dec. 2002, București, Romania
- [89] "Applications of dynamic Chaotic Systems in Communications", Șerbănescu A. Tutanescu I., SofronE., Schecianu D, Irimia C., ECIT 2002, july., 17-19, 2002, Iași, Romania, Republicata in Memoriile Secțiilor Științifice A seria IV, Tomul XXV, 2002, Ed, Academiei Romane București, 2005;
- [90] "Chaotic system control with dither", A. Șerbanescu in Proc. METRA, 29 mai, 2003 (4 pag.);
- [91] "Application of the nonlinear dynamical system in communications security", in Proc. CAIM, Oradea, 29-31 mai 2003
- [92] "I hear and I forget, I see and I remember, I do and I understand" Proc. of IEEE Intrenational. Conference, Sarajevo, 01-03 July, 2003 (6 pag.)
- [93] "A microwave circuits optimization approach using a genetic algorithm" Lucrare acceptata pt. Simpozionul ATM, noiembrie 2003 (6 pag.)
- [94] "Noi soluții pentru realizarea accesului multiplu", Simpozionul ATM, noiembrie 2003 (6 pag.)
- [95] "The optimisation with evolutionary strategies of chaotic control systems with Dither", ACTTM, București, mai, 2004 [96] "An Analysis of Chaotic Signals using Higher Order Statistics", ACCTTM, mai, 2004
- [97] "Controlul haosului- Aplicații in medicina", Simp. Inteligența artificială- Aplicații in medicina, iulie, Pitești, 2004
- [98] "Hardware Implementation of a Sigma-Delta Modulator", OPTIM, Barasov, 2004
- [99] "A New Compression Method using a Chaotic Symbolic Approach", Simp. Communications, București, 2004
- [100] "Techno-economic Politics in Communications modelled with Chaotic Systems", Communications, București, 2004
- [101] "Applications of Chaos Based Systems in Communications", Communications, București, 2004
- [102] "Performance Evaluation of a Multiple Access DCSK System under a noisy Multiuser Environment", Simp. ETc 2004, Timișoara, oct., 2004
- [103] "On Layout Optimization of the Microwave Diplexor filter using genetic Algorithms", Simp. CAS, Sinaia, oct., 2004
- [104] "MEMS Optimization Using Genetic Algorithms", Symp. CAS, Sinaia, oct., 2004
- [105] "Microwave Passive Circuit Optimization Using Genetic Algorithms", Takacs, A., Șerbănescu A., Leu G., Aubert H., Pons P., Parra T., Plana R., Romanian Journal of information science and Technology, Vol. 4 No. 3-4, 2004, pg. 309-316;
- [106] "Physical implementations of the chaos based communications systems", Șerbănescu A., Conference ATM, Bucharest, Romania, 3-4 nov., 2005;
- [107] "Control methods on unstable periodic orbits of a chaotic dynamical system", Șerbănescu A., ACCTTM, Bucharest, Romania, 26-27 mai, 2005;
- [108] „Chaos Based Cryptography”, Șerbănescu A., Sesiune de informare pentru cercetare-dezvoltare în securitate și apărare GIMS, Agenția Spațială Română, Agenția de Cercetare pentru Tehnică și Tehnologii Militare, 29 martie 2005, București;
- [109] "Use of chaos in Communications" Ion Tutanescu, Emil Sofron, Al. Șerbănescu, ECAI, Pitesti, Romania, 2005;
- [110] "Performances of voice transmission (Voip) over cabled (lan) and wireless (wi-fi) networks" Alina Cristina BANCIU, Sorin Mircea PAȘA, Alexandru Șerbanescu, SpeD 2005, 13-14 mai, Cluj-Napoca, Bucharest, Romania, 2005;
- [111] "Multipath Combining in Chaotic Direct-Sequence Spread Spectrum Communications through Dual Estimation", S. Azou, M. Luca, G. Burel, A. Șerbănescu, Symp. OCEAN'05, june 20-23, Brest, France, 2005;
- [112] "A complete Receiver Solution for a Chaotic Direct Sequence Spread spectrum Communication System", S. Azou, M. Luca, G. Burel, A. Șerbănescu, Proc. of IEEE, Intern. Symp. on Circuit and Systems- IEEE-ISCAS, may, 2005, Kobe, Japan;
- [113] "Effects of Digital Processing in Chaos-Based Cryptography", C.I.Rincu, A. Șerbănescu, C. Danalachi, G. Budariu The 31-th internationally attended conference *Modern Technologies in the XXI Century of Military Technical Academy*, Bucharest, 03-05 November 2005;
- [114] "Digital to Analog Converter Based on Sigma Delta Modulation with Reprogrammable Structures", V. Iana, E.Sofron A. Șerbănescu, Proc. ECAI 2005, Univ. Pitești, Romania, 2005, Romania.
- [115] "On Exact Kalman Filtering of Polynomial Systems", Luca B., Azou S., Burel G., Șerbănescu A., *IEEE Transactions on Circuits and Systems - Part I*, (2006-06) (2006) 53 6 1929-1340
- [116] "Blind symbol estimation in the case of chaotic direct sequence spread-spectrum system", M. Luca, S. Azou, E. Hodina, A. Șerbănescu, G. Burel, 13 dec. 2005, Paper published in *Communications 2006*, Bucharest, Romania, 2006
- [117] "Multiple Access with LPTV Filters", B. Cristea, D.Roviras, B. Escrig, W. Chauvet, A. Șerbănescu, dec. 2005, paper published in *Communications 2006*, Bucharest, Romania, june, 2006
- [118] "Pseudo-Blind demodulations of Chaotic DS-SS Signals Through Exact Kalman Filtering", dec. 2005, paper published in *Communications 2006*, Bucharest, Romania, june, 2006
- [119] "Chaos-Based Cryptography. Past and Trends" Cristian-Iulian RÎNCU, Alexandru ȘERBĂNESCU, Adelaida MATEESCU", dec. 2005, Paper published in *Communications 2006*, Bucharest, Romania, june, 2006
- [120] "Genetic Optimization of Wavelet Packet Compression for Speech Signal", L. Cernaianu, E. Oancea, A. Șerbănescu, paper published in Proc. of Conference on SpeD 2007, Iasi, May 9-12, Romania;
- [121] "Evolvable Hardware: From Theory to Practical Implementation", L.M. Ionescu, V.G. Iana, A. Șerbănescu, G. Șerban, paper published in Proc. of International Conf. ECAI-2007, June 29-30, Pitesti, Romania.
- [122] „Traffic Modeling of an ATM-type communication network using dynamic systems” Paper presented in Muntegru-Budva Workshop, 29, may, 2007
- [123] "Applications of nonlinear time-series analysis", A. Șerbănescu, M. Mazilu, L. Cernaianu, C. Ivan, Paper published in Proc. of International Conf. Communications-2008, June 5-7, București, Romania.
- [124] "Doppler based aerial target tracking – A systemic approach", A. Șerbănescu, C. Ioana, F. Totir, J. Stopin, Paper published in Proc. of International Conf. Communications-2008, June 5-7, București, Romania.
- [125] "Control of chaos" Paper published in Proc. of International Conf. OPTIM-2008, June 27, Brasov, Romania.
- [126] "Applications of nonlinear time-series analysis", A. Șerbănescu, L. Cernaianu, C. Ivan, Paper published in Proc. of International Conf. on Communications-2008, June 5-7, București, Romania.
- [127] "Doppler based aerial target tracking – A systemic approach", A. Șerbănescu, C. Ioana, F. Totir, J. Stopin, Paper published in Proc. of International Conf. on Communications-2008, June 5-7, București, Romania.
- [128] "FPGA implementation of cryptographic techniques based on dynamical systems" A. Mateescu, A. Șerbănescu, I. Rancu, paper published in Proc. of International Conf. on Communications-2008, June 5-7, București, Romania.



- [129] "Control Methods on Unstable Periodic orbits of a Chaotic Dynamical System" Paper published in Proc. of International Conf. OPTIM-2008, June 27, Brasov, Romania.
- [130] „Systemic Approach in Aerial Target Tracking: Hardware and Software Implementation”, Paper published in Proc. of International Conf. Communications-2008, June 5-7, București, Romania.
- [131] “On UWB-IR Chip Period Blind Estimation through Minimization of a Multimodal Cost Function”, Stanciu, M., Azou, S., Șerbănescu A., Paper published in Proc. of International Symposium of Signal Processing -2009.
- [132] “New Approaches in Nonlinear Dynamics Analysis of Complex Systems and processes” Șerbănescu, A., paper published in Proc. of International Symposium ECAI, Pitesti, iun. 2009.
- [133] “Time-frequency-phase tracking approach: Application to underwater signals in a passive context”, Cornel Ioana, Jerome Mars, Alexandru Serbanescu, Srdjan Stankovic,, Paper presented to ICASSP 2010, Dallas, 2010.
- [134] “Chapter 3 - *New approaches in nonlinear dynamics analysis of complex systems and processes*, pp. 67-94, in Nicu BIZON(editor). *Complex Behaviour of the Distributed Generation System. Intelligent Management of the Renewable Energy Resources for assuring the DG System Power Quality and a Sustainable Development*, ISBN - 978 - 606 - 560 - 128 - 4, Publishing House of University of Pitesti, Pitesti, Romania, 2010, A. Serbanescu, F.-M. Birleanu.
- [135] „Estimation of thermo-hydrodynamic parameters in energy production systems using nonstationary signal processing in Proceedings of the "Forty-Fourth Asilomar Conference on Signals, Systems and Computers", (November 7-10, 2010, Monterey, CA, USA), pp. 1353-1356.”, F.-M. Birleanu, C. Ioana, A. Serbanescu, G. Serban, E. Sofron.
- [136] „A time distributed phase space histogram for detecting transient signals”, Proc. IEEE International Conf. On Acoustic, Speech and Signal Processing ICASSP 2011, May 22-27, Prague, Czech Republic, pp. 3844-3847, IEEE Catalog Number:CFP11ICA-USB, ISBN:978-1-4577-0537-3, F. M. Birleanu, C. Ioana, A. Serbanescu, J. Chanusot,
- [137] „On the Recurrence Plot analysis method behaviour under scaling transform” in Proc. Of the 2011 IEEE Statistical signal Processing workshop SSP 2011, June 28-30, Nice, France, pp. 793-796, F. M. Birleanu, C. Ioana, C. Gervaise, J. Chanusot, A. Serban
- [138] „Caracterisation des signaux transitoires par l’analyse des recurrence des phase”, GRETSI 2011 sept. 5-8, Bordeaux, France, F. M. Birleanu, C. Ioana, C. Gervaise, J. Chanusot, A. Serbanescu, G. Serban
- [139] “ On Time hopping Signals Chip Time Blind Estimation through Minimization of a Multimodal Cost Function”. IEEE, Transaction on Signal Processing, M. Stanciu, S. Azou, A. Serbanescu, no. 2, 2011
- [136] “Time-frequency-phase tracking approach: Application to underwater signals in a passive context”, Cornel Ioana, Jerome Mars, Alexandru Serbanescu, Srdjan Stankovic,, Paper presented to ICASSP 2010, Dallas, March , 2010.
- [137] “Chapter 3 – *New approaches in nonlinear dynamics analysis of complex systems and processes*, pp. 67-94, in Nicu BIZON (editor). *Complex Behaviour of the Distributed Generation System. Intelligent Management of the Renewable Energy Resources for assuring the DG System Power Quality and a Sustainable Development*, ISBN – 978 – 606 – 560 – 128 – 4, Publishing House of University of Pitesti, Pitesti, Romania, 2010, A. Serbanescu, F.-M. Birleanu.
- [135] „Estimation of thermo-hydrodynamic parameters in energy production systems using Non-stationary signal processing, in roc. of the “Forty-Fourth Asilomar Conference on Signals, Systems and Computers”, (November 7-10, 2010, Monterey, CA, USA), pp. 1353-1356.”, F.-M. Birleanu, C. Ioana, A. Serbanescu, G. Serban, E. Sofron.
- [136] „Transient signal detection using recurrence plot analysis”, F.M. Birleanu, C. Ioana, A. Serbanescu, Bertrand Gottin, G. Serban, Proc. IEEE International Conf. on Acoustic, Speech and Signal Processing ICASSP 2010
- [138] “Systemic approach explored in the context of passive target tracking”, F. Totir, C. Ioana, A. Serbanescu, J. Stopin, A. Lucian, S. Stancovic, IET Signal Processing, Vol 4, No. 3, pp. 314-323, June, 2010
- [139] „A time distributed phase space histogram for detecting transient signals”, F. M. Birleanu, C. Ioana, A. Serbanescu, J. Chanusot, Proc. IEEE International Conf. on Acoustic, Speech and Signal Processing ICASSP 2011, May 22-27, Prague, Czech Republic, pp. 3844-3847, IEEE Catalog Number:CFP11ICA-USB, ISBN:978-1-4577-0537-3,
- [140] „On the Recurrence Plot analysis method behavior under scaling transform”, F. M. Birleanu, C. Ioana, C. Gervaise, J. Chanusot, A. Serbanescu, G. Serban in Proc. of the 2011 IEEE Statistical Signal Processing workshop SSP 2011, pp. 793-796, June 28-30, Nice, France.
- [141] „Caracterisation des signaux transitoires par l’analyse des recurrence des phase”, GRETSI 2011 sept. 5-8, Bordeaux, France, F. M. Birleanu, C. Ioana, C. Gervaise, J. Chanusot, A. Serbanescu, G. Serban,
- [142] “On Time hopping Signals Chip Time Blind Estimation through Minimization of a Multimodal Cost Function”, IEEE Transaction on Signal Processing, M. Stanciu, S. Azou, A. Serbanescu, no. 2, 2011;
- [143] „On transient signal characterization using phase space trajectory dynamics”, F. M. Birleanu, C. Ioana, C. Gervaise, A. Serbanescu, G. Serban, Paper published in Proc. of ICASSP, mar. 2012, Kyoto, Japan.
- [144] “A vector approach to transient signal processing”, F. M. Birleanu, C. Ioana, C. Gervaise, A. Serbanescu, G. Serban, Paper for Special Sessions in ISSPA 2012.
- [145] „Optimization of partial discharge detection in high voltage cables based on advanced signal processing techniques”, I. Candel, A. Digulescu, C. Ioana, A. Serbanescu, E. Sofron, paper for 11th International Conference on Information Sciences, Signal Processing and their Applications, Montreal (Quebec), Canada, Special Sessions in ISSPA 2012
- [146] „Partial discharge detection in high voltage cables using poly-spectra and Recurrence Plot Analysis”, I. Candel, A. Digulescu, C. Ioana, A. Serbanescu, E. Sofron, Paper for International Conference on Communications, 2012, Bucharest, Romania.
- [147] “A Statistical Analysis of multipath Interference for Impulse Radio” M. I. Stanciu, E. Radoi, A. Serbanescu, Paper presented at International Conference on Communications, 2012, Bucharest, Romania
- [148] “Applications of Transient Signals Detection Using Recurrence Analysis”, Elif Tuba Celik, Alexandru Serbanescu, in “Chaos and Complex Systems-Proceedings of the 4th International Interdisciplinary Chaos Symposium, Stavrinides, S.G.; Banerjee, S.; Caglar, S.H.; Ozer, M. (Eds.), Springer, pag. 201, ISBN 978-3-642-33913-4, 2013.
- [149] “Modulation Detection in Wireless Sensor Networks using Recurrence Plot Analysis”, A. Digulescu, E.T.Celik, A. Serbanescu, O. Fratu, S. Halunga, published in: international Symposium on Wireless Personal Multimedia Communications (WPMC), 24-27 June, 2013
- [150] “Overview of our recent results in signal analysis using recurrence plots”, Alexandru Serbanescu, Florin, Barleanu, Angela Digulescu, ECAI 2013, 27- 29 June 2013, Pitesti, Romania
- [151] “Recent advances in non-stationary signal processing based on Recurrence Plot Analysis,” Cornel Ioana, Angela Digulescu, Alexandru Serbanescu, Ion Candel and Florin-Marian Birleanu on 5-th International Symposium on Recurrence Plots Chicago, august 14-16 aug 2013. Lucrare extinsa publicata intr-un capitol dintr-o carte Ed. Springer 2014 cu titlul “TRANSLATIONAL RECURRENCES- From mathematical Theory to Real World

Applications” ISSN 2194-1009. *Translational Recurrences. From Mathematical Theory to Real-World Applications*, Springer Proceedings in Mathematics & Statistics, 2014.

- [152] “Fetal heart rate variability study with recurrence plot analysis”, Digulescu Angela, Costin Hariton, Serbanescu Alexandru, Strungaru Rodica, published in E-Health and Bioengineering Conference, EIIB, Iasi, Romania, 10-11 9 2013, 21-23 Nov.2013
- [153] “Advanced signal processing techniques for detection and localization of electrical arcs”, Digulescu A., Candel I, Ioana C., Serbanescu A., Intern. Conf. on *Communications*, Bucharest, Romania, jun., 2014
- [154] “Modulation Detection in Wireless Sensor Networks using Recurrence Plot Analysis”, A. Digulescu, E.T.Celik, A. Serbanescu, O. Fratu, S. Halunga, published in: international Symposium on Wireless Personal Multimedia, Communications (WPMC), 24-27 June, 2013
- [155] “Overview of our recent results in signal analysis using recurrence plots”, Alexandru Serbanescu, Florin, Barleanu, Angela Digulescu, 2013 International Conference on Electronics, Computers and Artificial intelligence, ECAI 2013, 27-29 June 2013, Pitesti, Romania
- [156] “Recent advances in non-stationary signal processing based on Recurrence Plot Analysis”, Cornel Ioana, Angela Digulescu, Alexandru Serbanescu, Ion Candel and Florin-Marian Birleanu on 5-th International Symposium on Recurrence Plots, Chicago, 14-16 aug., 2013.
- [157] “Recent advances in non-stationary signal processing based on Recurrence Plot Analysis”, Cornel Ioana, Angela Digulescu, Alexandru Serbanescu, Ion Candel and Florin-Marian Birleanu, 5-th International Symposium on Recurrence Plots Chicago, august 14-16 aug., 2013. Published in Ed. Springer 2014: *Translational Recurrences. From Mathematical Theory Real-World Applications*, Springer Proceedings in Mathematics & Statistics, 2014.
- [158] “Fetal heart rate variability study with recurrence plot analysis”, Digulescu Angela, Costin Hariton, Serbanescu Alexandru, Strungaru Rodica, published in E-Health and Bioengineering Conference, EHB 10-11 09 2013, 21-23 Nov 2014
- [159] “Overview of our recent results in signal analysis using recurrence plots”, Alexandru Serbanescu, Florin, Barleanu, Angela Digulescu, ECAI 2014, Bucharest, Romania.
- [160] “On the vortex parameter estimation using wide-band signals in active acoustic system”, Angela Digulescu, Teodor Petrut, Ion Candel, Florentina Bunea, Georgiana Dunca, Diana Maria Bucur, Cornel Ioana, Alexandru Serbanescu, *OCEANS’14 MTS/IEEE Conference*, Taipei, Taiwan, 2014.
- [161] “Advanced signal processing techniques for detection and localization of electrical arcs”, Angela Digulescu, Teodor Petrut, Cindy Bertrand, Ion Candel, Cornel Ioana, Alexandru Serbanescu, , *The 10th International Conference on Communications*, Bucharest, Romania, 2014.
- [162] “Rotational Vortex Rope detection using Recurrence Plot Analysis”, Angela Digulescu, Teodor Petrut, Ion Candel, Florentina Bunea, Georgiana Dunca, Diana Maria Bucur, Cornel Ioana, Alexandru Serbanescu, *MTA Review, Romania, Vol. XXV, No.1, Mar. 2015*, pp. 5-16, ISSN 1843-3391.
- [163] “Water hammer effect characterization using an acoustic signal processing approach”, Angela Digulescu, Ion Candel, Cornel Ioana, Gabriel Vasile, Georgiana Dunca, Diana Maria Bucur, Alexandru Serbanescu, , *The 9th International Symposium on Advanced Topics in Electrical Engineering*, May 7-9, 2015, Bucharest, Romania.
- [164] “Rotational vortex rope detection using recurrence plot analysis”, Angela Digulescu, Alexandru Serbanescu, Cornel Ioana, Teodor Petrut, Ion Candel, *MTA Review, Vol XXV, No.1, Mar. 2015*, pp. 5-16, ISSN 1843-3391, Bucharest, Romania.
- [165] “Between two engineering ages: of information and complex systems, professional research is based on a team work!”, Alexandru Serbanescu, Cornel Ioana, Adrian Diconu, Angela Digulescu, ECAI 25-27 June, 2015, Bucharest, Romania.
- [166] “New applications of transient signal processing techniques using the recurrence plot analysis”, Angela Digulescu, Ion Candel, Guy D’Urso, Cornel Ioana, Alexandru Serbanescu, 6-th International Symposium on Recurrence Plots, 17-19 june, 2015, Grenoble, France.
- [167] “A statistical analysis of multipath interference for impulse radio UWB systems”, Mihai I. Stanciu, Stéphane Azou, Emanuel Rădoi, Alexandru Serbănescu, *ELSEVIER, Journal of the Franklin Institute* 352 (2015), pp. 5952–5967
- [168] “Between two engineering ages: of information and complex systems, professional research is based on a team work!”, Alexandru Serbanescu, Cornel Ioana, Adrian Diconu, Angela Digulescu,, *7th International Conference on Electronics, Computers and Artificial Intelligence (ECAI)*, 25-27 June 2015, Bucharest, Romania.
- [169] “Applications of Transient Signal Analysis using the concept of recurrence plot analysis”, *Recurrence Plots and Their Quantifications: Expanding Horizons*, Angela Digulescu, Irina Murgan, Cornel Ioana, Ion Candel, Alexandru Serbanescu, *Springer Proceedings in Physics*, 2016.
- [170] “Cavitating vortex characterization based on acoustic signal detection”, Angela Digulescu, Irina Murgan, Ion Candel, Florentina Bunea, Gabriel Ciocan, Diana Maria Bucur, Georgiana Dunca, Cornel Ioana, Gabriel Vasile, Alexandru Serbanescu, *28th IAHR Symposium on Hydraulic Machinery and Systems, IAHR Grenoble* July 48th, 20 16.
- [171] “Cavitation characterization using wide band signals in an acoustic active sensing system”, Angela Digulescu, Cornel Ioana, Florentina Bunea, Adrian Nedelcu, Ion Candel, Gabriel Vasile and Alexandru Serbanescu, *Oceans 16 MTS IEEE Monterey*, California, USA, September 19-23th, 2016
- [172] invited paper] “Instantaneous Frequency Law tracking using signal’s representation in phase diagram domain”, Angela Digulescu, Costin Vasile, Cornel Ioana, Alexandru Șerbănescu, Gabriel Vasile, Jérôme Mars, *22nd International Conference on Digital Signal Processing (DSP 2017)*, London, UK, 2017.
- [173] “Underwater acoustic object imaging using spatial matched filtering”, Alexandru Sandu, Angela Digulescu, Cornel Ioana, Ion Candel, Alexandru Șerbănescu, Petrica Ciotirnae, *IEEE OCEANS 17 ANCHORAGE* September 18-21, 2017, Anchorage, Alaska, U.S.A
- [174] “Multimodal Sensing of Erosive Cavitation Phenomena”, Irina Murgan Angela Digulescu, Ion Candel, Cornel Ioana, Ion Candel, Anisia-Luiza Culea-Florescu Alexandru Șerbănescu, *IEEE OCEANS 17 ANCHORAGE* September 18-21, 2017, Anchorage, Alaska, U.S.A.
- [175] “Exploring the properties of the phase diagram domain for the Instantaneous Frequency Law estimation”, Angela Digulescu, Cornel Ioana, Ion Candel and Alexandru Serbanescu, *41st International Conference on Telecommunications and Signal Processing (TSP)*, June 4-6, Athens, Greece, 2018.

- [176] “On the use of the phase diagram domain properties for the Adaptive Waveform Design and the recurrence states quantification for the Instantaneous Frequency Law tracking”, Angela Digulescu, Cornel Ioana , Alexandru Serbanescu, Ion Candel
- [177 invited paper] “Analysis in phase diagram domain for the characterization of non-stationary signals”, Kevin Dayet, Angela Digulescu, Cornel Ioana, Ion Candel and Alexandru Serbanescu, Second International Balkan Conference on Communications and Networking, Podgorica, Montenegro, June 6-8, 2018.
- [178] “The MCG filtering based on the Phase Diagram representation domain”, Georgiana Rosu, Angela Digulescu, Ion Candel, Alexandru Serbanescu, Anisia Culea-Florescu, Miuta Carmina Rau, Octavian Baltag, The 12<sup>th</sup> International Conference on Communications 2018, Comm 2018, Bucharest, Romania
- [179] “On the Recognitions Capabilities of Modulated Signals in Phase Diagram Domain”, Angela Digulescu, Cornel Ioana, Ion Candel, Alexandru Serbanescu, The 12<sup>th</sup> International Conference on Communications 2018, Comm 2018, Bucharest, Romania
- [180] “Overview of Our Recent Results in Signal Analysis using Recurrence Plots”, Serbanescu Alexandru, Ioana Cornel, Digulescu Angela, REVUE ROUMAINE DES SCIENCES TECHNIQUES-SERIE ELECTROTECHNIQUE ET ENERGETIQUE Volume: 63 Issue: 2 Pages: 172-177, APR-JUN 2018

## Thèses en cotutelle en France

1. Thèse en cotutelle de Monsieur *Bogdan Cristea* encadrée par: M. Roviras Daniel – Directeur de thèse de l’Institute National Polytechnique, Toulouse, France, Ecole doctorale: Informatique et Télécommunications et M. Serbănescu Alexandru – Directeur de thèse de l’Académie Technique Militaire, Bucarest, Roumanie Sujet de la thèse : «Techniques d’accès multiple avec changements d’horloge périodiques» Date de soutenance : 25 octobre 2002

2. Thèse en cotutelle de Monsieur *Alexandru Takacs* encadre par: M. Herve Aubert – Directeur de thèse de l’Institute National Polytechnique, Toulouse, France, *Laboratoire Electronique (LENT) de l’Ecole Nationale d’Electronique, d’Electrotechnique d’Informatique et d’Hydrotechnique de Toulouse (ENSEEIH)* et : M. Serbănescu Alexandru – Directeur de thèse de l’Académie Technique Militaire, Bucarest, Roumanie. Sujet de la thèse : «Modélisation multi-échelles des circuits hyperfréquences» Date de soutenance : 15 septembre 2004

3. Thèse en cotutelle de Monsieur *Mihai Bogdan Luca* encadre par: M.Stephane Azou – Directeur de thèse de l’Université de Bretagne Occidentale, Brest, France et : M. Serbănescu Alexandru – Directeur de thèse de l’Académie Technique Militaire, Bucarest, Roumanie Sujet de la thèse : «Apports du chaos et des estimateurs d’états pour la transmission sécurisée de l’information» Date de soutenance : 31 octobre 2006

3. Thèse en cotutelle de Monsieur *Mihai Stanciu* encadre par:M.Stephane Azou – co-directeur de thèse de l’Université de Bretagne Occidentale, Brest, France et : M. Serbănescu Alexandru – co-directeur de thèse de l’Académie Technique Militaire, Bucarest, Roumanie Sujet de la thèse : “Sur l’estimation aveugle de signaux UWB impulsions dans un contexte de radio intelligente” Date de soutenance 31 oct. 2011

4. Thèse en cotutelle de Madame *Angela Digulescu*, encadre par: M. Serbănescu Alexandru – Directeur de thèse de l’Académie Technique Militaire, Bucarest, Roumanie et : M. Ioana Cornel – Directeur de thèse de l’Institut Polytechnique du Grenoble Pôle de Recherche et d’Enseignement Supérieur, 1025, avenue centrale – Domaine Universitaire, 38400 SAINT MARTIN D’HERES FranceSujet de la thèse : „Caractérisation des phénomènes physiques à l’aide de l’analyse de la loi de phase instantanée”. Date de soutenance 31 oct. 2017



## Membre en jury de thèses en France

1. RAPPORT sur le mémoire de thèse de Monsieur Ryszard Wozniak intitulé: "Simulateur pour modélisation et l'optimisation des systèmes dynamiques contrôlés" pour l'obtention du doctorat de l'Université Evry, dans la spécialisation Automatique, Robotique. Date de soutenance: 06 Octobre 1997
2. RAPPORT sur le mémoire de thèse de Monsieur Razvan Ionescu intitulé: "Détection et rehaussement des informations par réaligement et interpolation en imagerie médicale. Application pour des séquences d'images cérébrales vasculaires en IRM" pour l'obtention du doctorat de l'Université de Technologie-Compiègne, France. Date de soutenance: 26 août 2002
3. RAPPORT sur le mémoire de thèse de Monsieur Valeriu VRABIE intitulé: "Statistique d'ordre supérieur : Applications en géophysique et électrotechnique" pour l'obtention du doctorat de l'Institut National Polytechnique de Grenoble, France et de l'Université «POLITEHNICA» de Bucarest, Roumanie. Date de soutenance: 17 septembre 2003
4. RAPPORT sur le mémoire de thèse de Monsieur Florentin BUJOR intitulé: "Extraction – fusion d'informations en imagerie radar multi-temporelle" pour l'obtention du doctorat de l'Institut National Polytechnique de Grenoble, France et de l'Université «POLITEHNICA» de Bucarest, Roumanie. Date de soutenance: 9 Juillet 2004
5. RAPPORT sur le mémoire de thèse de Monsieur Charbel SABER intitulé : "Ultra large bande radio par impulsions. Contributions à la définition du récepteur TDSC. Relation à la filière technologique" pour l'obtention du doctorat de l'Université Paris Sud 11, France. Date de soutenance: 29 septembre 2008
6. RAPPORT sur le mémoire de thèse de Monsieur Jean MOTSCH intitulé : «Archivage sécurisé d'images» pour obtenir le grade du doctorat de l'Institut National des Sciences Appliquées de Rennes, France. Date de soutenance: 27 novembre 2008
7. RAPPORT sur le mémoire de thèse de Monsieur Bertrand GOTTIN intitulé: Analyse multi-capteurs de signaux transitoires issus de systèmes électriques pour obtenir le grade du doctorat de l'Institut Polytechnique de Grenoble. Date de soutenance: Aout 2010
8. RAPPORT sur le mémoire de thèse de Monsieur Florin-Marian BIRLEANU intitulé: Construction des espaces de représentation adéquats pour l'analyse des signaux transitoires pour obtenir le grade du doctorat de l'Institut Polytechnique de Grenoble. Date de soutenance: Sept. 2012
9. RAPPORT sur le mémoire de thèse de Monsieur Jorge Arturo PARDIÑAS MIR intitulé: "*Contribution à l'étude de la détection des signaux UWB. Etude et implémentation d'un récepteur ad hoc multicapteurs. Applications indoor de localisation.*" pour obtenir le grade du doctorat de l' Ecole doctorale: Informatique, Télécommunications et Electronique (EDITE de Paris) Date de soutenance: Nov.. 2012
10. RAPPORT sur le mémoire de thèse de Monsieur Ion CANDEL intitulé: Mesure de débit par scintillation de l'amélioration basée sur des outils de traitement du signal nonstationnaire pour obtenir le grade du doctorat de l'Institut Polytechnique de Grenoble Date de soutenance: Sept. 2014
11. RAPPORT sur le mémoire de thèse de Monsieur Olivier LeBot intitulé: "Détection, localisation, caractérisation de transitoires acoustiques sous-marins" pour obtenir le grade du doctorat de l'Institut Polytechnique de Grenoble. laboratoires: Grenoble, Image, Parole, Signal, Automatique (Gipsa-lab) et Sciences et Technologies de l'Information et de la Communication – ENSTA Bretagne (STIC) dans l'école doctorale : Terre Univers Environnement (TUE) Date de soutenance: Oct. 2014

## Participation dans Commissions HDR en France

2014 Membre du Jury de soutenance du diplôme d'habilitation a diriger des recherches de Monsieur Stéphane Azou.

2016 Membre du Jury de soutenance du diplôme d'habilitation a diriger des recherches de Monsieur Cornel Ioana.

Prof.dr.ing.

Alexandru Serbanescu