TECHNICAL UNIVERSITY OF CLUJ-NAPOCA FACULTY OF ELECTRONICS, TELECOMMUNICATIONS AND INFORMATION TECHNOLOGY

Name	**CRIŞAN, NICOLAE**
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ENGAGED ON ACTIVITIES

• Date	From 1996 to present
• Location	Communications departament; Electronics, Telecommunications and Information Technology
• Speciality	Engineear in Electronics and Telecommunications
• Position	Associate professor
• Main activity	Research and teaching
• PhD	Yes

Domains of competence:

Antenna, microwaves, radio communications, micro and nano-technologies (MEME, NEMS), computer assisted design (CAD-EM, ADS, HFSS) for electromagnetic fields, high-frequency radio circuits, high-frequency measurements, SDR – software defined radios, C++/C# programming, embedded systems programming, image processing, medical image processing.

Significant results:

▪ Ph.D. received from University of Cluj-Napoca, with the subject "*Theoretical and Experimental Studies for Three Dimensional Images Rendering*," in 2003.

The same idea of 3D representation was used for describing the electromagnetic fields in a research project. The project manager has an important experience in electromagnetic field representation and antennas that were materialized in some scientific publications such as:

-A. Vlaicu, **Nicolae CRISAN**, Lungu Serban, Stelian Persa, "New Compression techniques for storage and transmission of 2D and 3D images" -
 Europ. Symp. on Adv. Networks and Services , Amsterdam , 20-24 mars, 1995

-A. Vlaicu , **Nicolae CRISAN** , Stelian Persa "New Knowlege - based Method for 2D and 3D Representation of Medical Images" - Internat. Conf. on Image Proc. Washinton DC , Oct.1995.

Other significant results are:

▪ Microsoft prize for coordinating a project with a team of students,
▪ Three papers published by Springer Verlag in 2007-2008, in international conferences.

Significant publications (more than 60 papers published since 1996 to prezent):

2016

[1] **N. Crisan**, "*Impact evaluation of the polarisation diversity over the LTE transmission mode one*",International Journal of RF and Microwave Computer-Aided Engineering ,Vol. 26, Issue 6, pages 547-558, August 2016, DOI: 10.1002/mmce.21002, ISSN 1099-047X, ISI-Journal

2015

[1] R. Gheletus, **N. Crisan**, "*Side Lobes Suppressing Algorithms for Eight Elements Linear Uniform Array Antenna*", JOURNAL OF ELECTRICAL AND ELECTRONICS ENGINEERING - Vol. 8, nr. 2, pp. 9-14, P-ISSN: 1844-6035, October 2015
http://electroinf.uoradea.ro/index.php/jeee/13-cercetare/reviste/jeee/161-vol-8-nr-2-oct-2015.html
[2] **N. Crisan**, L. C. Cremene, "*Rewriting MIMO Channel Capacity for Antenna Configuration Comparison*", Carpathian Journal of Electronic and Computer Engineering, Vol. 8. No. 1,pp. 31-34, ISSN 1844 - 9689, November, 2015, http://cjece.ubm.ro/vol/8-2015/

2014

[1] D. Pantis, **N. Crisan**, G. Mihai, M. Borda, "*Measurement of the Strong EM Near-Field and its Effect Over the Carbon Nanotubes in the Proximity of the Multi Turns Inductive Solenoid*", Global Journal for Research Analysis, Volume 3, Issue 7, July, pg 14-17, 2014
[2] **N. Crisan**, "*High Linearity Analog Optocouplers - Applications Inside the RF Shielded Enclosures*", Journal ACTA Technica Napocensis Electronics and Telecommunications , Vol. 55, Number 1, pg 10-15 , 2014

2013

[1] D. Pantis, **N. Crisan**, C. Braicu, M. Borda, "The Radio Frequency System dedicated to the Study of Carbon Nanotubes Behaviour in RF Field", Scientific Buletin of the Politehnica University of Timisoara Transactions on ELECTRONICS and COMMUNICATIONS, ISSN 1583-3380, pp 15-18, 2013,
shannon.etc.upt.ro/bulletin/2013/vol58_1.html
[2] **N. Crisan**, Ligia Cremene, „NOAA Signal Decoding and Image Processing using GNU-radio" Journal ACTA Technica Napocensis Electronics and Telecommunications , Vol. 54, Number 2, pg 36-39 , 2013

2012
[1] **N. Crisan**, „*An Affordable Approach for Extending the SDR Concept Over the X Radio Band*" Journal ACTA Technica Napocensis Electronics and Telecommunications , Vol. 53, Number 4, pg 41-46 , 2012
[2] **N. Crisan**, Ligia Cremene, „*Simulation of a handset MIMO Antenna Integration in a LTE Tx-Rx chain*", IEEE, IET International Symposium on Communication Systems, Networks and Digital Signal Processing - CSNDSP 2012, Poznan, Poland 2012 (IEEE Xplore)
[3] Ferrero, F.; Diallo, A.; Le Thuc, P; Staraj, R.;**Crisan, N**.; Cremene, L.; Luxey, C., " *Design of multi-antenna diversity system dedicated to sensor interrogation in multi-path environments*" Antenna and Technology and Applied Electromagnetics (ANTEM) , 2012, pp 1-4, 15th International Symposium 25-28 June,
http://ieeexplore.ieee.org/xpl/articleDetails.jsp?reload=true&arnumber=6262341

2011

[1] **N. Crişan**, Ligia C. Cremene, „*Design and Simulation of a Flexible Beamforming Interface for MIMO Receivers using a Butler Labyrinth*" International Journal of RF and Microwave Computer-Aided Engineering (RFMiCAE), John Wiley & Sons, Online ISSN: 1099-047X, 2011, ISI-Journal

[2] **N. Crişan**, Ligia C. Cremene, M. Cremene, „Software Components for Signal Fishing based on GA Element Position Optimizer", *International Journal of Computers, Communications & Control (IJCCC)*, vol. VI, no. 1, pp. 63-71, ISSN 1841-9836, CCC Publications, Oradea, Romania, 2011, ISI-Journal

2010

[1] Ligia Chira CREMENE, **Nicolae CRISAN**, Marcel CREMENE, "*An Adaptive Combiner-Equalizer for Multiple-Input Receivers*", Novel Algorithms and Techniques in Telecommunications and Networking, Editors Tarek Sobh , Khaled Elleithy , Ausif Mahmood , Ed. SPRINGER Dordrecht Heidelberg London New York ISBN 978-90-481-3662-9 , 2010

[2] **Nicolae CRISAN**, Ligia Chira CREMENE, "*Enhanced Reconfigurability for MIMO Systems Using Parametric Arrays*", Novel Algorithms and Techniques in Telecommunications and Networking, Editors Tarek Sobh , Khaled Elleithy , Ausif Mahmood , Ed. SPRINGER Dordrecht Heidelberg London New York ISBN 978-90-481-3662-9 , 2010

2009

[1] **Ligia C. CREMENE**, Nicolae CRISAN, "*Towards Cognitive Antenna Systems based on Antenna-Channel Co-evolution*" 3rd International Workshop on Soft Computing Applications - SOFA2009, ISBN 978-1-4244-5054-1 , pp.165-169, Szeged (Hungary) – Arad (Romania), 2009 (IEEE Xplore),
[2] **Nicolae CRISAN**, Ligia Chira CREMENE, "*Antenna-based Signal Fishing*", The Fifth International Conference on Wireless and Mobile Communications - ICWMC 2009, 23-29 August 2009, Cannes/La Bocca,French Riviera, France,ISBN 978-0-7695-3750-4, (IEEE Xplore),

2008

[1] **Nicolae CRISAN**, Ligia Chira CREMENE,"*Enhanced reconfigurability for MIMO systems using parametric arrays*", online CISEE 2008 - TeNe International Conference on Telecommunications and Networking, International Joint Conferences on Computer,Univesity of Bridgeport, USA, IEEE Computer, Communication, Education Societies, Information, Systems Sciences, and Engineering, http://cisse2008.org/schedule.aspx,
[2] Ligia Chira CREMENE, **Nicolae CRISAN**, s. a., "*Cognitive antenna systems*", The 8'th International Conference on Evolvable System: From Biology to Hardware - ICES 2008, Prague, Czech Republic, Late Breaking Paper, September 21-24, 2008,
[3] **Nicolae CRISAN**, Ligia Chira CREMENE, "*The Impact of Novel RF MEMS and SDCs on Smart Antenna Technologies*", The Fourth International Conference on Wireless and Mobile Communications - ICWMC 2008, ISBN 979-0-7695-3274-5, Library of Congress Number 2008926138, July 27-August 1, 2008, Athens, Greece, IEEE,Digital Object Identifier 10.1109/ICWMC.2008.76,
[4] **Nicolae CRISAN**, Ligia Chira CREMENE, Emanuel PUSCHITA, s. a., "*Spectral Efficiency Improvement for the under-11GHz Broadband Wireless Access*", 15th ICT- International Conference on Telecommunications, St. Petersburg, Russia,16-19 June 2008, http://ict08.org/program.html, IEEE, Digital Object Identifier 10.1109/ICTEL.2008.4652707 ,
[5] **Nicolae CRISAN**, Ligia CHIRA CREMENE, Emanuel PUSCHITA, s. a., "*Evaluation of Adaptive Radio Techniques for the under-11GHz Broadband Wireless Access*", INTERNATIONAL JOURNAL of COMPUTERS, COMMUNICATIONS & CONTROL, Vol. III, Supplementary Issue-Proceedings of ICCCC 2008, ISSN-1841-9836, E-ISSN 1841-9844, Oradea, Romania, European Union, 2008, 548 p. (indexed in ISI Thomson Reuters (Web of Science), ISI-Journal

2007
[1] **Nicolae CRISAN**, Ligia CHIRA, Emanuel PUSCHITA, "*FEC Performance Analysis for the under-11GHz 802.16 SC Specifications*", Mobile and Wireless Communications Summit, 16th IST, 1-5 July 2007 Page(s):1 - 5, Budapest 2007,
[2] Ligia CHIRA, **Nicolae CRISAN**, "*The Adaptive Potential of Reconfigurable MEMS in MIMO Antenna Technology*", CISSE 2007, IEEE Conference, International Joint Conferences on Computer, Information, and Systems Sciences, and Engineering, December 3 -12, 2007, University of Bridgeport, USA,
[3] **Nicolae CRISAN**, "*Using Advanced EM_CAD Programs to Estimate Specific Absorption Rate of Human Body*" , Acta Technica Napocensis, Vol. 48, No. 2, 2007 , pp.20-23.
[4] Ligia CHIRA, **Nicolae CRISAN**, s. a., "*5GHz Indoor and Outdoor Measurements*", Acta Technica Napocensis, Vol. 48, No. 2, 2007 , pp.14-19.
[5] **Nicolae CRISAN**, Ligia CHIRA, "*Analysis of High Power MEMS Varactors for RF and Microwaves Integrated Circuits*", Acta Technica Napocensis, Vol. 49, No. 4 , pp. 27-31, 2007.

All papers and contributions are available at: http://users.utcluj.ro/~crisan

Books:
2008
Nicolae CRISAN, "*Antenna and circuits for microwaves*" , Ed. Risoprint Cluj-Napoca, ISBN 978-973-7725-79-9, 301 pag., 2008 (in the Romanian language)

Nicolae Crisan, Ligia Cremene, "*Adaptive Antennas*" , Ed. Casa cartii de stiinta , ISBN 978-606-17-0051-6 ,Cluj-Napoca, 2011 (in the Romanian language)

Products and applications:
MAGGIC - Mobile Advanced GPS-guided Intelligent Chair
-    Prize II at students conference SSET 2007, as project coordinator,

- Qualified in the firs 100 teams in the world, *Microsoft*, Imagine Cup, in 2008.

MUNPIS - Mobile Urban Noise Pollution Investigator System
- Prize I, at students conference SSET 2006, as project coordinater,
- Qualified in the first 100 teams in the world, *Microsoft*, Imagine Cup, in 2007.

TIME – Traffic Intensity Monitor and Evaluator – in evaluation by *Microsoft*, Imagine Cup 2008.

Member the editorial journal committee:

Member in the editorial committee of the journal ACTA TECHNICA NAPOCENSIS, Electronics and Telecommunications - ISSN: 1221-6542, indexed in ProQuest CSA's Technology Research Database (TRD), Scirus , ArXiv , getCITED and GoogleScholar, CNCSIS B+, http://users.utcluj.ro/~atn/short_presentation.htm

Scientific committee member ICWMC 2009,
 http://www.iaria.org/conferences2009/ComICWMC09.html
Scientific committee member and liaison chair ICWMC 2010,
Since 2009 to present.

Editorial board member at Interrnational Journal of Engineering & Technology
http://www.sciencepubco.com/index.php/ijet/about/editorialTeam
Since 2013 to present.

Grants:

TEMPUS grant at National Technical University of Athens