

Curriculum Vitae

2011

First Name:	Maria Simina
Last name:	EMERICH
Date of Birth:	August 16, 1979
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Education:

2003–2004	Master of Science degree , <i>Technical University of Cluj-Napoca</i> , Faculty of Electronics and Telecommunications. Design Techniques for Complex Electronic Circuits
1998–2003	Graduated Electronics Engineering , <i>Technical University of Cluj-Napoca</i> , Faculty of Electronics and Telecommunications. Communications

Professional Activity

2006–present	Assistant , <i>Technical University of Cluj-Napoca</i> , Faculty of Electronics and Telecommunications, Communication Department.
2003–2006	PhD Student , <i>Technical University of Cluj-Napoca</i> , Faculty of Electronics and Telecommunications.

Scientific Activity

Research Grants

Director, CNCSIS grant, TD-502/2007, *The Improvement of the Wavelet Analysis Techniques by using B-spline Functions Family*

Member, CNCSIS grant, PN II-ID 904/2007, *Multimodal Biometrics Authentication System*, director Prof. Dr. Eng. Eugen Lupu

Member, CNCSIS grant, A-1027/2005, *Biometrical Systems for Access Control using Vocal Print*, director Prof. Dr. Eng. Eugen Lupu

Member, CNCSIS grant, AC-10/2005, *Molecular Mechanisms for Cellular Adhesion and Recognition Mediated by Glican-Glican Interactions*, director Prof. Dr. Octavian Popescu

Member, CNCSIS grant, PNCDI, CEx-050D11-52/2005, *Genic Sequences Bioinformatics Implied for Procaryotes Cellular Division*, director Conf. Dr. Petre Pop

Reviewer of two international journals:

IEEE Transactions on Signal Processing

Signal Processing Applications in Human Computer Interaction, Springer, Verlag

Organizing Committee Member

2007 **Recent Trends in Signal Processing**, *Workshop*, Cluj-Napoca, <http://sp.utcluj.ro/html/rtsp2k7.html>, CNCSIS-PNCDI-WE grant.

2008 **Signal Processing Systems for Wireless Communications**, *Workshop*, Cluj-Napoca, <http://sp.utcluj.ro/html/spswc2k8.html>, CNCSIS-PNCDI-WE grant.

Awards

Best Poster Award, IEEE Region 8 Eurocon 2007 Conference Computer as a Tool, 2007

Interests Domain

Digital Signal Processing, Microprocessors Systems, Pattern Recognition, Biometry

Foreign Languages

English, French, Italian

Publications

1. **Moldovan S.**, "*Computing Wavelet Transform from Short Time Fourier Transform*", Scientific Bulletin of the Politehnica University of Timisoara - Transactions on Electronics and Communications, Romania, 2004, Tom 48(62), Fascicola 2, ISSN 1583-3380
2. **Moldovan S.**, "*B-splines Based STFT and Wavelet Transform for Biosignal Processing*", Central and East European Conference in Business Information Systems, Cluj-Napoca, Romania, 2004
3. **Moldovan S.**, "*Biosignal Energetic Analysis Using Fractional B-spline Wavelets*", BIOSIGNAL 2006, The 18th International EURASIP Conference, Brno, Czech Republic, 2006
4. Mesaros A., **Moldovan S.**, Lupu E., "*Band Decomposition of Voice Signals Using Wavelets Defined from Fractional B-spline Functions*", 48th International Symposium ELMAR, Croatia, 2006
5. Mesaros A., **Moldovan S.**, "*Methods for Singing Voice Identification using Energy Coefficients as Features*", International Conference on Automation, Quality and Testing, Robotics AQTR, 2006.

6. Discant A., **Emerich S.**, Lupu E., Demea S., "*Healthy and Cardiac People Iris Classification by use of B-spline Wavelet Decomposition*", International Conference on Advancements of Medicine and Health Care through Technology, MEDITECH, 2007, Cluj-Napoca, Romania
7. **Emerich S.**, Discant A., Lupu E., Demea S., "*Iris Classification Using Fractional and Generalized B-Spline Functions*", Proceedings of the 8th edition of the International Workshop on Nonlinear Signal and Image Processing NSIP 2007, September 10-12, Bucharest, Romania
8. **Emerich S.**, Lupu E., Discant A., "*Conformational Energy Search using Simulated Annealing*", 1st International Conference on Advancements of Medicine and Health Care through Technology, MediTech2007, 27-29th September, 2007, Cluj-Napoca, ROMANIA, 2007
9. **Emerich S.**, Discant A., Lupu E., Demea S., "*B-spline and Wavelet Based Techniques for Iris Recognition*", Proceedings of The IEEE International Symposium on Signals, Circuits and Systems ISSCS 2007, 13-14 July 2007, Iasi, Romania, ISBN: 1-4244-0969-1
10. Discant A., **Emerich S.**, Lupu E., Rogozan A., Bensrhair A., "*Ruttier Obstacle Classification by use of Fractional B-spline Wavelets and Moments*", Proceedings of The IEEE Region 8 EUROCON 2007 Conference Computer as a Tool, Warsaw, Poland, 2007 - Best Poster Award for this article.
11. Apatean A., **Emerich S.**, Lupu E., Rogozan A., Bensrhair A., "*Wavelets and Moments for Obstacle Classification*", International Symposium on Communications, Control and Signal Processing, ISSCS, 2008, Malta, pg 882-887, ISBN 978-1-4244-1688-2
12. Apatean A., Rogozan A., **Emerich S.**, Bensrhair A., "*Wavelets as Features for Objects Recognition*", Acta Tehnica Napocensis, vol 49 no. 2, 2008, ISSN: 1221-6542
13. **Emerich S.**, "*The Improvement of the Wavelet Analysis Techniques by using B-spline Functions Family*", Acta Tehnica Napocensis, vol 49 no. 4, 2008
14. **Emerich S.**, Lupu E., Apatean A., "*The Estimation of Glottal Closure Instants in Voiced Speech using Fractional B-spline Wavelets*", International EURASIP Conference BIOSIGNAL 2008, Brno
15. **Emerich S.**, Lupu E., Apatean A., "*An Approach on Emotion Recognition by Using Speech Signals*", International Conference on Speech and Computer, SPECOM 2009, St Petersburg
16. Lupu E., **Emerich S.**, Beaufort F., "*On-line Signature Recognition using a Global Features Fusion Approach*", Acta Tehnica Napocensis Electronics and Telecommunications Vol. 50, nr. 3/2009
17. **Emerich S.**, Lupu E., Apatean A., "*Bimodal Approach in Emotion Recognition using Speech and Facial Expressions*", IEEE International Symposium on Signals, Circuits and Systems, ISSCS' 2009, Iasi
18. **Emerich S.**, Lupu E., Apatean A., "*Emotions Recognition by Speech and Facial Expressions Analysis*", 17th European Signal Processing, EUSIPCO'2009, Glasgow, pp.1617-1621
19. **Emerich S.**, "*An Approach on Vowel Recognition*", Carpathian Journal of Electronic and Computer Engineering, Volume 3, Number 1 – 2010
20. Lupu E., Ghiurcau M., Hodor V., **Emerich S.**, "*Combustion Sound Classification Employing Gaussian Mixture Models*", IEEE International Conference on Automation Quality and Testing Robotics (AQTR), 2010, ISBN: 978-1-4244-6724-2
21. Lupu E., **Emerich S.**, "*Speaker Identification Approach Based On Time Domain Extracted Features*", 52nd IEEE International Symposium ELMAR-2010, Zadar, Croatia
22. **Emerich S.**, Lupu E., Rusu C., "*Online signature recognition approach based on wavelets and SVM*", IEEE International Conference on Automation Quality and Testing Robotics (AQTR), 2010.

Contributions to books

Lupu E., **Emerich S.**, Apătean A., *Programming in x86 Assembly Language (in romanian)*, Galaxia Gutenberg Publishing, 2009