

Anca APĂTEAN (DISCANT)

Date of birth: June 28,1980

Place of birth: Cluj-Napoca, Romania

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Education

February 25, 2008 – to date

Assistant

Microprocessors Systems Design, Signal Processors, Speech Analysis and Synthesis Group

Communications Department

Faculty of Electronics, Telecommunications and Information Technology

Technical University of Cluj-Napoca, Cluj-Napoca, Romania

2006-2010

PhD Student - INSA de Rouen

LITIS - Laboratoire Informatique, Traitement de l'Information et des Systèmes,

L'Institut National des Sciences Appliquées, Rouen, France

Ph.D. Thesis: Contributions to the information fusion.

Application to obstacle detection and recognition in visible and infrared images

Ph.D. Advisors: prof. *Abdelaziz Bensrhair and Alexandrina Rogozan*

October 2004-2010

PhD Student - Electronic and Telecommunication Engineering

Basis of Electronics Department,

Faculty of Electronics, Telecommunications and Information Technology

Technical University of Cluj-Napoca, Cluj-Napoca, Romania

Ph.D. Thesis: Contributions to the information fusion.

Application to obstacle detection and recognition in visible and infrared images

Ph.D. Advisor: prof. *Corneliu Rusu*

2004-2005 Master's Degree

M.Sc. in Design Techniques of the Complex Electronic Circuits

Communications Department,
Faculty of Electronics, Telecommunications and Information Technology
Technical University of Cluj-Napoca, Cluj-Napoca, Romania
M.Sc. thesis: Fresnelets for Digital Holography
Scientific advisor: prof. *Corneliu Rusu*

1999-2004 Bachelor's Degree

B.Sc. in Telecommunications,

Faculty of Electronics, Telecommunications and Information Technology
Technical University of Cluj-Napoca, Cluj-Napoca, Romania
B.Sc. thesis: Fresnelets
Scientific advisor: prof. *Corneliu Rusu*

Research Interests

Digital Signal and Image Processing, Data mining, Automatic learning and classification systems, Biometrics,
Programming in Assembly Language, Systems with Microprocessors, Digital Signal Processors (DSP)

Scholarships and Grants

INSA Scholarship, Rouen, France, June, 2010
INSA Scholarship, Rouen, France, February, 2010
INSA Scholarship, Rouen, France, January, 2009
INSA Scholarship, Rouen, France, June-July, 2008
INSA Scholarship, Rouen, France, January-February, 2008
INSA Scholarship, Rouen, France, January - February, 2007
INSA Scholarship, Rouen, France, September - December, 2006
Erasmus Scholarship, Rouen, France, March - May, 2006

Awards

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

Research Grants

Principal Investigator

CNCSIS TD grant (Romania), 2007-2008

Researches in Processing and Fusioning Data Provided By Multiple Optical Sensors.

Applications for Objects Detection and Classification

Cercetari privind Prelucrarea si Fuziunea Datelor Provenite de la Senzori Optici Multipli.

Aplicatii pentru Detectia si Clasificarea Obiectelor

(Director: Anca Ioana Apatean (Discant))

Co-Investigator

CNCSIS grant (Romania),2007-2010

Title: *Sistem Biometric Multimodal de Autentificare*, CNCSIS 904/2007, 2007

(Director: prof. Eugen Lupu)

Co-Investigator

CNCSIS grant (Romania), 2007

Prelucrarea genomurilor prin tehnici de data mining, CNCSIS, 2007,

(Director: prof. Petre G. Pop)

Co-Investigator

CNCSIS grant (Romania), 2005

Title: *Bioinformatica secvențelor genice implicate in diviziunea celulară la procarote*,

CNCSIS (Contract nr. CEx-05-D11-52), 2005,

(Director: prof. Petre G. Pop)

Co-Investigator

CNCSIS grant (Romania), 2002-2003

Filtre adaptive cu structura variabila, CNCSIS (Contract nr. 33531 si Contract nr. 33532),

(Director: prof. Corneliu Rusu)

Member of the editorial board of the journal „Novice Insights in Electronics, Communications and Information Technology”,

Faculty of Electronics, Telecommunications and Information Technology, Technical University of Cluj-Napoca,

<http://www.bel.utcluj.ro/novice/index.html>

Spoken languages

English, French

List of Publications

International Conferences

2010

Besbes, B., **Apatean, A.**, Rogozan, A., Bensrhair, A., "Combining SURF-based Local and Global features for Road Obstacle Recognition in Far Infrared Images", accepted for publication at the 13th International IEEE Conference on Intelligent Transportation Systems - **ITSC 2010**, to be held during September 19 - 22, 2010 at Madeira Island, Portugal

Apatean (Discant), A., Rusu, C., Rogozan, A., Bensrhair, A. "Visible-Infrared fusion in the frame of an obstacle recognition system", IEEE International Conference on Automation, Quality and Testing Robotics, **AQTR2010**, Cluj-Napoca, Romania, 28-30 May 2010

2009

Apatean (Discant), A., Rogozan, A., Bensrhair, A., "SVM-based obstacle classification in visible and infrared images", 17th European Signal Processing Conference, (**EUSIPCO 2009**), August 24-28, 2009, Glasgow, Scotland, accepted for publication, <http://www.eusipco2009.org/index.asp>

Apatean (Discant), A., Rogozan, A., Bensrhair, A., "Information Fusion for Obstacle Recognition in Visible and Infrared Images", International Symposium on Signals, Circuits and Systems (**ISSCS2009**), July 09-10, 2009, Iasi, Romania, <http://scs.etc.tuiasi.ro/isscs2009/index.html>

Apatean (Discant), A., Rogozan, A., Bensrhair, A., "Obstacle recognition using multiple kernel in visible and infrared images " 2009 IEEE Intelligent Vehicle Symposium (**IV 2009**), June 03-05, 2009, Xi'an, China, <http://www.ieceiv.net/>

Emerich, S., Lupu E., **Apatean A.**, "Recognising Human Emotions from Speech and Facial Expressions", 17th European Signal Processing Conference, (**EUSIPCO 2009**), August 24-28, 2009, Glasgow, Scotland, <http://www.eusipco2009.org/index.asp>

Emerich, S., Lupu E., **Apatean A.**, "Bimodal Approach in Emotion Recognition using Speech and Facial Expressions", International Symposium on Signals, Circuits and Systems (**ISSCS 2009**), July 09-10, 2009, Iasi, Romania, <http://scs.etc.tuiasi.ro/isscs2009/index.html>

Emerich, S., Lupu E., **Apatean A.**, "An Approach on Emotion Recognition using Speech Signals", 13-th International Conference on Speech and Computer (**SPECOM 2009**), St. Petersburg, Russia, June 25-29, 2009, http://www.specom.nw.ru/specom_e.html

2008

Apatean (Discant), A., Rogozan, A., Bensrhair, A., "Kernel and Feature Selection for Visible and Infrared based Obstacle Recognition", 11th International IEEE Conference on Intelligent Transportation Systems (**ITSC2008**), pp. 1130-1135, 12-15 Oct. 2008, Beijing, China, ISBN: 978-1-4244-2111-4

Apatean (Discant), A., Rogozan, A., Bensrhair, A., "Objects recognition in visible and infrared images from the road scene", IEEE International Conference on Automation, Quality and Testing, Robotics (**AQTR 2008**), Volume: 3, pp. 327-332, 22-25 May 2008, Cluj-Napoca, Romania, ISBN: 978-1-4244-2576-1AQTR

Apatean (Discant), A., Emerich, S., Lupu, E., Rogozan, A., Bensrhair, A., "Wavelets and Moments for Obstacle Classification", The Third International Symposium on Communications, Control and Signal Processing **ISSCSP2008**, 12-14 March, 2008, St. Julians, Malta

2007

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, **MEDITECH2007**, September 27-29, 2007, Cluj-Napoca, Romania

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 **Eurocon2007** Conference Computer as a Tool, September 2007, Warsaw, Poland, Best Poster Award for this article.

Emerich, S., **Discant, A.**, Lupu, E., Demea, S., "Iris Classification using Fractional and Generalized B-spline Functions", International Workshop on Nonlinear Signal and Image Processing, **NSIP2007**, September 10-12, 2007, Bucharest, Romania

Emerich, S., **Discant, A.**, Lupu, E., Demea, S., "B-spline and Wavelet Based Techniques for Iris Recognition", International Symposium on Signals, Circuits & Systems, **ISSCS2007**, July 12-13, 2007, Iasi, Romania.

Discant, A., Rogozan, A., Rusu, C., Bensrhair, A., "Sensors for Obstacle Detection - A Survey", Proceedings of the 30th International Spring Seminar on Electronics Technology **ISSE2007**, May 9-13, 2007, Cluj-Napoca, Romania, ISBN 978-973-713-174-4

2006

Discant, A., Demea, S., "An algorithm for extraction of iris information", International Conference on Automation, Quality and Testing, Robotics, work published in vol. "**AQTR2006** Theta 15", Cluj-Napoca, Romania, May 25-28, 2006, pp. 445-450, ISBN 1-4244-0360-X

Discant, A., Demea, S. , Rus, C., "*Extraction of relevant information for iris classification*", Proceedings of the 18th Biennial International EURASIP Conference **Biosignal2006**, Medical imaging and image analysis section, Brno, Czech Republic, June 28-30, 2006, pp. 284-286, ISSN 1211- 412X, ISBN 80-214-3152-0

Rus, C., Demea, S., **Discant, A.**, "*A Matlab MEX-file based implementation for automatic iris classification*", Proceedings of the 18th Biennial International EURASIP Conference **Biosignal2006**, Medical imaging and image analysis section, Brno, Czech Republic, June 28-30, 2006, pp. 248-250, ISSN 1211- 412X, ISBN 80-214-3152-0

Discant, A. , Rus, C. , Demea, S., "*Extraction of relevant coloured information for iris classification*", Proceedings in the 6th IEEE International Conference on Communications, Signal Processing Section, **COMM2006** Bucharest, Romania, June 08-10, 2006, ISBN 973-718-479-3

2005

Discant, A., "*Digital image processing*", Proceedings of the International Conference The Impact of European Integration on the National Economy, Business Information Systems section, Cluj-Napoca, Romania, October 2005, pp.196-204, ISBN973-651-007-0

National Workshop

Discant, A., "*Holography – an authentication process (Holografia – un procedeu de autentificare)*", Proceedings of Biometrics (Verificatori Biometrici) Workshop, Cluj-Napoca, Romania, 26-27 May 2005, pp. 199-206, ISBN 973-656-918-7

National Journals

Apatean (Discant), A., Rogozan, A., Emerich, S., Bensrhair, A., "*Wavelets as Features for Objects Recognition*", **Acta Tehnica Napocensis**, vol 49 no. 2/2008, pp. 23-26, ISSN1221-6542

Discant, A., Rusu, C., Bensrhair, A., "*Sensors for Obstacle Detection in Traffic Scene Situation*", **Acta Tehnica Napocensis**, vol 48 no. 1/2007, pp. 29-34, ISSN1221-6542

Kovacs, L. , **Discant, A.** , Rus, C., Demea, S., "*Comparing methods for extraction of relevant information of iris*", **Acta Tehnica Napocensis**, vol 47 no. 2/2006, pp. 30-33, ISSN: 1221-6542

Other publications

Apatean (Discant), A., Emerich, S., "Obstacle Recognition by the use of different wavelet families in Visible and Infrared Images", Proceedings of the Embedded Systems Design and Applications Summer School, paper presented in the special student presentation session, Baia Mare, Romania, May 10 – 12, 2008

Apatean (Discant), A., "Obstacle Recognition in the Ruttier Scene", in Proceedings of the Embedded Systems Design and Applications Summer School, paper presented in the special student presentation session, Baia Mare, Romania, September 17 – 21, 2007, pp. 1-4