PERSONAL INFORMATION

Mihai IVANOVICI

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 Str. Institutului nr. 10, Brasov 500000, România

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 http://miv.unitbv.ro

POSITION
IOSUD UTBv

PhD coordinator
Doctoral studies domain: **Electronics engineering, telecommunications and information technologies**
Since: 2016

EXPERTISE FIELD AND RESEARCH INTEREST AREAS

Image and multidimensional signal acquisition, processing and analysis (including color, multisperctral and hyperspectral remotely-sensed images)
Data acquisition and processing real-time electronic systems for the ATLAS Experiment at CERN, Geneva

WORK EXPERIENCE

October 2006 - present

Full Professor (2017), assistant professor (2012), lecturer (2006)

Department of Electronics and Computers, Faculty of Electrical Engineering and Computer Science, Transilvania University of Brașov, Romania

▪ Courses: Signal Processing, Signals and Systems I, Image Processing and Analysis, Packet Processors, Research Project Management

October 2015 – present

Coordinator of the research center C13 „Advanced communications and integrated electronic systems" within the CDI Institute of Transilvania University

April 2012 – present

Vice-dean responsible for scientific research

Faculty of Electrical Engineering and Computer Science, Transilvania University of Brașov

▪ Coordination of research in the faculty and reporting

Business or sector Public institution

November 2010 – present

"Multispectral Imaging and Vision" laboratory research coordinator

Department of Electronics and Computers, Faculty of Electrical Engineering and Computer Science, Transilvania University of Brașov

▪ Scientific research, coordinating research activities, project management
▪ http://miv.unitbv.ro

Business or sector Public institution

February 2002 – present

CERN user

European Organization for Nuclear Research (CERN), Geneva, Switzerland

▪ Scientific research in the field of electronic data acquisition systems

Business or sector International institution

September 2001 – October 2006	**Research Assistant**

Department of Applied Electronics and Information Engineering, Faculty of Electronics, Telecommunications and Information Technology, Politehnica University of Bucharest

▪ Research activities

Business or sector Public institution

EDUCATION AND TRAINING

March 2016	**Habilitation in Electronics and Telecommunications Engineering**

▪ Titlle of the habilitation thesis: Color and Multispectral Texture Image Analysis. Models, Features and Applications
▪ Jury: prof. C. Burileanu (UPB), prof. C. Rusu (UTCN) și prof. G. Toacșe (UTBv)
▪ Atestation **OM nr. 3270 / 02.03.2016**
▪ Defended on: 18 January 2016

october 2001 - january 2006	**PhD in Electronic Engineering and Telecommunications**

Politehnica University of Bucharest, Romania

▪ Title: Emulating quality degradation in computer networks - a perspective on performance measurement applications using FPGAs
▪ Mentor and scientific coordinator: Vasile Buzuloiu
▪ PhD in electronic engineering and telecommunications: **OM nr. 3824 / 03.05.2006**
▪ Thesis defense date: January 26th, 2006

october 2001 – july 2002	**Postgraduate studies**

Politehnica University of Bucharest, Romania

▪ Programme: Images, shapes and artificial intelligence

october 1996 – july 2001	**Bachelor degree studies**

Transilvania University of Brașov, Romania

▪ Programme: Applied Electronics
▪ Engineer in Digital Electronics and Software Techniques

PERSONAL SKILLS

Mother tongue	Romanian

Other languages

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

Communication skills	▪ Good communication skills gained due to work experience as vice-dean, research laboratory coordinator, project director, manager and professor

Organisational / managerial skills	▪ leadership (currently coordinating a team of 8 members in the research laboratory MIV and director of the research center of the C13 CDI Institute of Transilvania University of Brașov with a staff of 27 members)

Job-related skills	▪ good management skills for didactic and research projects
	▪ good organizational skills - conferences, summer schools, events
	▪ good skills of drafting project proposals and implementing research projects
	▪ good administrative skills
	▪ good programming skills - MATLAB, C/C++
Digital competence	▪ good knowledge of LaTeX
	▪ good command of Microsoft Office ™ tools

ADDITIONAL INFORMATION

Representative Projects (as project manager or assistant)	▪ 2016-2019 – The ATLAS Experiment at LHC – PNIII CERN-RO Module, coordinated by IFIN-HH Măgurele, responsible Partner no.5 Universitatea Transilvania din Brașov, contract no. 6/2016 (budget: 1.238.490,60 lei)
	▪ 2014-2015 – The ATLAS Experiment at LHC – PNII Modul Capacități, coordinated by IFIN-HH Măgurele, responsible Partener no .5 Universitatea Transilvania din Brașov, contract nr. 7/2012 (budget: 124.979,94 lei)
	▪ 2014 – 2015 Burse doctorale pentru cercetarea de excelenta, coordonator Universitatea Transilvania din Brașov, proiect POSDRU/159/1.5/S/134378, Responsabil grup țintă
	▪ 2014 – 2015 - Cresterea atractivitatii si performantei programelor de formare doctorala si postdoctorala pentru cercetatori in stiinte ingineresti - ATRACTING, coordonator Universitatea Politehnica din Timișoara, POSDRU/159/1.5/S/137070, Asistent implementare proiect la partener UTBv
	▪ 2014 - IEEE SPS Summer School on Intensive Program on Computer Vision (IPCV 2014), competitie SPS seasonal schools, finantator:IEEE International LLC NrContract: 5860/21.05.2014
	▪ 2010 – 2013, *ITEMS – Analysis, Modeling and Simulation Techniques for Imagery, Bioinformatics and Complex Systems (ITEMS)* contract POS-DRU/86/1.2/S/61756, 2010-2013
	▪ 2012 – SAPAI – International School on Image Processing - Scoala de Studii Aprofundate (UEFISCDI IDEI SSA) *Studii Aprofundate de Prelucrarea si Analiza Imaginilor (SAPAI 2012)* contract 9/2012
	▪ 2011, Indoor and Outdoor Monocular Video Odometry Assisted by the Available Sensors on Mobile Devices (contract with S.C. ROUTE 66 S.R.L. no. 4878 / 04.04.2011)
	▪ 2008 - 2009, *System and methodology for video signal quality assessment* for MPEG-4 video streaming applications (contract with S.C. Infinity Design S.R.L. Brașov no. 17486 / 19.11.2008)

Relevant publications	▪ Ș. Popa, S. Martoiu, **M. Ivanovici**, „ The Quality-Control Test of the ATLAS New Small Wheel Read-Out Controller ASIC: Part I - Digital logic", JOURNAL OF INSTRUMENTATION, March 2020 accepted for publication
	▪ **M. Ivanovici**, R.M. Coliban, C. Hatfaludi, I.E. Nicolae, „Color Image Complexity versus Over-segmentation. A Preliminary Study on the Correlation between Complexity Measures and Number of Segments", MDPI JOURNAL OF IMAGING, March 2020 – accepted for publication
	▪ R.M. Coliban, **M. Ivanovici**, "Reducing the oversegmentation induced by quasi-flat zone for color images", JOURNAL OF VISUAL COMMUNICATION AND IMAGE REPRESENTATION, vol. 53, pp. 281-293, May 2018 https://doi.org/10.1016/j.jvcir.2018.04.003
	▪ O.M. Machidon, M. Ivanovici, "Digital color restoration for the preservation of reversal film heritage", JOURNAL OF CULTURAL HERITAGE, vol. 33, pp. 181-190, October 2018 https://doi.org/10.1016/j.culher.2018.01.021
	▪ R. Coliban, **M. Ivanovici**, N. Richard, "Improved probabilistic pseudo-morphology for noise reduction in color images", IET IMAGE PROCESSING, DOI 10.1049/iet-ipr.2015.0741
	▪ R. Coliban, S. Popa, T. Tulbure, D. Nicula, **M. Ivanovici**, S. Martoiu, L. Levinson, J. Vermeulen, The Read Out Controller for the ATLAS New Small Wheel, JOURNAL OF INSTRUMENTATION, volume 11, February 2016
	▪ M. Ivanovici, "Color and Multispectral Texture Image Analysis – Models, Features and Applications", Transilvania University Press, ISBN 978-606-19-0587-4, September 2015
	▪ A. Căliman, **M. Ivanovici**, N. Richard, „Probabilistic pseudo-morphology for grayscale and color images", PATTERN RECOGNITION, vol. 47, no. 2, pag. 721-735, 2014
	▪ **M. Ivanovici**, N. Richard, D. Paulus, *"Color Image Segmentation",* in *"Advanced Color Image Processing and Analysis",* Editor: Christine Fernandez-Maloigne, Springer, 2012
	▪ **M. Ivanovici**, N. Richard, *"Colour Fractal Dimension of Colour Fractal Images",* IEEE TRANSACTIONS ON IMAGE PROCESSING, vol. 20, issue 1, pp. 227–235, 2011

Projects (researcher, implementation team member)	▪ 2014 – 2016 - Sistem inteligent de asistare automata a diagnosticului in cancerul cervical - PN-II-PT-PCCA-2013-4-0202, Universitatea Politehnica din București, contract no. 7/2014, financed by UEFISCDI

- 2014 – 2016 - Sistem inteligent de asistare automata a diagnosticului in cancerul cervical - PN-II-PT-PCCA-2013-4-0202, Universitatea Politehnica din București, contract no. 7/2014, financed by UEFISCDI
- 2010 – 2013 - Program multi-regional de studii masterale in domeniul eActivitati - eSTART, ID 54956, POSDRU/86/1.2/S/54956 (short-term expert)
- 2010 – 2012 – MorFISM: morphologie et fractales pour l'image specialisee et multimedia (project FEDER no. 33073-2010, France)
- 2008 – Modele de connaissances pour la valorisation des bases des donnees multimedia (DLES/ESRS/MV/AE-projet regional Poitou-Charentes, Lab. SIC, Universite de Poitiers, France)
- 2007 – 2009 Integrated System for Medical Information Management using the HL7 Standard– SIMIMED (PN2, D1-1-019/14.09.2007)
- 2007 - MOB-URBIS – Traffic Management of the Urban Mobility Increase (CEEX Cod MEC 1589, nr. X2C34, AMTRANS, conf. MEC-ANCS nr. 10909/19.09.2006)
- 2006 - The research, design and testing of software tools for the mapping of installed network configurations and correlation of the achieved map with existing equipment data-bases UPB-CERN 2006 I10.06.01
- 2005 – Development of an Integrated System of Mathematical Models for the Network Devices UPB-Liamis & Heb, 17-03-05
- 2004 - Research Agreement for characterization of a network of processors for ATLAS Trigger Data Collection UPB-CERN 2004 I10.04.01
- 2004 – Contributions to the Design, Testing and Evaluation of the Investigation Potential of the ATLAS Detector – PM-01-RIA UPB-IFIN
- 2004 – New Mathematical Models for the Network Devices - UPB-Liamis & Heb EL400410
- 2003 – 2005 - FPGA-based Network Emulator PPARC (Particle Physics and Astronomy Research Council) UK CERN-EU4A- PPARC PIPSS Project No: PPA/I/S/2002/00653
- 2003 - Software tools for the ATLAS data acquisition system (Research Agreement) UPB-CERN 2005 I10.05.01
- 2002 – Ethernet Traffic Generation Software for the CERN Network UPB- 17-02-05

Lectures delivered as guest

- 2019, October 9, A theory of information perspective on hyperspectral images, NTNU, Gjøvik, Norway
- 2019, July 5, A theory of information perspective on hyperspectral images, UPS, IRIT, Toulouse, France
- 2018, July 6, Non-linear approaches based on the maximum distance — a pseudo morphology and PCA approximation for color, multispectral and hyperspectral data/image analysis, IRIT, Toulouse, France
- 2010, September 29, Multi-scale Variance-driven Active Contours for CT Image Segmentation with Application to Hepatic Volumetry, Laboratoire des signaux et systèmes (L2S), SUPELEC, France
- 2010, June 25, Fractal Analysis for Colour Images, Laboratoire des signaux et systèmes (L2S), SUPELEC, France
- 2010, May 27, Colour Fractal Analysis for Video Quality Assessment, University of Konstanz, Germany
- 2007, December 2th, Quality of Service in computer networks, European Organization for Nuclear Research, CERN, Geneva, Switzerland

H indexes

Google Scholar: 12; Scopus: 5; Web of Science Clarivate Analytics: 4

Other information

summary of key achievements:
- 2 book chapters published by international publishers
- 5 books published by national publishers
- 4 book chapters published by national publishers
- 25 Web of Science indexed papers

Membership in professional societies

- IEEE Signal Processing, IEEE Geoscience and Remote Sensing
- European Organization for Nuclear Research, Geneva, Switzerland
- CIE – International Commission on Illumination