

## PERSONAL INFORMATION

**IOAN BUCIU**

 Universitatii 1, Oradea, ROMANIA +



 [ibuciu@uoradea.ro](mailto:ibuciu@uoradea.ro)

 <https://prof.uoradea.ro/ibuciu/>

## WORK EXPERIENCE

2024 – present

**Full Professor**

University of Oradea, Faculty of Electrical Engineering and Information Technology, Dept. of Electronics and Telecommunications ( <http://iet-etc.univoradea.ro/> )

2013 – 2024

**Associate Professor**

University of Oradea, Faculty of Electrical Engineering and Information Technology, Dept. of Electronics and Telecommunications ( <http://iet-etc.univoradea.ro/> )

- Teaching and research activity in the following areas: *Image Processing, Data Compression, Human – Computer Interfaces, Human Face Analysis, Biometrics, Security, Pattern Recognition, Machine Learning, Computer Vision, Medical Informatics, Internet of Things.*

Head of the Research Center for Information Technology, Electronics, and Automation, University of Oradea

2008 – 2013

**Assistant Professor**

University of Oradea, Faculty of Electrical Engineering and Information Technology, Dept. of Electronics and Telecommunications ( <http://iet-etc.univoradea.ro/> )

- Teaching and research activity in the following areas: *Image Processing, Data Compression, Human – Computer Interfaces, Image Analysis, Pattern Recognition*

1998 – 2008

**Assistant Lecturer**

University of Oradea, Faculty of Electrical Engineering and Information Technology, Dept. of Electronics and Telecommunications ( <http://iet-etc.univoradea.ro/> )

- Teaching and research activity in the following areas: *Signal, Circuits and Systems, Digital Signal Processing*

2000 – 2006

**Researcher**

Aristotle University of Thessaloniki, Computer Vision and Image Processing Group, Department of Informatics , Artificial Intelligence and Image Analysis Laboratory

( <http://www.aiia.csd.auth.gr/EN/> )

- Research activity in the following areas: *Human – Computer Interaction, Image Processing, Face Detection, Facial Expression Analysis, Pattern Recognition.*

## EDUCATION AND TRAINING

2006 – 2008

**PhD in Electronic Engineering and Telecommunications**

“Politechnica” University of Timisoara, Romania

▪ Thesis Theme: Human Face Analysis

12 / 02 / 2008 – 27 / 02 / 2008 Visiting Professor, Institut National des Sciences Appliquées de Lyon (INSA), CREATIS Lab, France

Visiting Researcher, Laboratoire des Images et des Signaux (LIS), Institut National Polytechnique de Grenoble, France

14 / 11 / 2005 – 14 / 12 / 2005

1996 –1997 **Master Diploma in Microwaves**  
University of Oradea, Romania

1991 –1996 **B.Sc. Diploma in Electronics**  
University of Oradea, Romania

**PERSONAL SKILLS**

Mother tongue(s) Romanian

Other language(s)	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C2	C2
	Replace with name of language certificate. Enter level if known.				
Greek	A1	A2	A1	A2	A1
	Replace with name of language certificate. Enter level if known.				

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user  
Common European Framework of Reference for Languages

**Communication skills** Communication and feedback, teamwork competences acquired in execution positions during the whole activity;  
Communication and teamwork competences acquired during leadership positions.

**Organisational / managerial skills**

Coordination of research and academic activities

Member in organizing committee of national and international conferences.

Associate editor - International Journal of Computers, Communications & Control (<https://univagora.ro/jour/index.php/ijccc/about/editorialTeam>);

Associate Editor for Image and Vision Computing (<http://www.journals.elsevier.com/image-and-vision-computing/editorial-board/>)

FP 7 projects - expert evaluator for Cooperation FP7 Activity (Information and Communication Technologies Section)

[http://ec.europa.eu/research/participants/data/ref/fp7/list\\_fp7\\_experts/cooperation/ict/ict\\_2012\\_en.xlsx](http://ec.europa.eu/research/participants/data/ref/fp7/list_fp7_experts/cooperation/ict/ict_2012_en.xlsx)

Horizon2020 projects - expert evaluator for Industrial Leadership (Information and Communication Technologies Section).

[http://ec.europa.eu/research/participants/data/ref/h2020/experts\\_lists/industrial/ict/h2020-expertslists-industrial-ict-2014\\_en.xlsx](http://ec.europa.eu/research/participants/data/ref/h2020/experts_lists/industrial/ict/h2020-expertslists-industrial-ict-2014_en.xlsx)

Program Committee member for the Fifth IEEE International Conference on Affective Computing and Intelligent Interaction - 2013, September 2 – 5, Geneva, Switzerland (ACII 2013) - <http://www.acii2013.org/index.php/program-committee/>

- Technical Committee (TC) member for the 22nd International Conference on Pattern Recognition, Stockholm, August 2014 (ICPR 2014) - <http://www.icpr2014.org>

Member of Romanian Scientific and Ethical Council in Artificial Intelligence:

<https://www.mcid.gov.ro/sistemul-de-cercetare/organisme-consultative/consiliul-stiintific-si-de-etica-in-inteligenta-artificiala/>

**Job-related skills**

- 1996 (3 months), “Erasmus-Socrates” scholarship, research on target tracking using Kalman filter and particle filtering, National Technical University of Athens, Greece.
- 2000 (3 months), “Erasmus-Socrates” scholarship, research on watermarking data protection, Aristotle University of Thessaloniki, Computer Vision and Image Processing Group, Department of Informatics, Greece.
- 2009 – 2011, Scientific and Technical Consultant for CTrue LTD (Biometrics Company).
- 2012 – 2018, Scientific and Technical Consultant for ISITYOU LTD (<https://www.isityou.biz/>).
- 2021 – 2022, Scientific and Technical Consultant for KEYLESS (<https://keyless.io/>).

**Computer skills**

- Matlab, OpenCV, C/C++ , Qt.

**ADDITIONAL INFORMATION**

Hirsch index - 13 (ISI Web of Science)

- 15 (Scopus)

Total number of citations: 754 (without self-citations) - ISI Web of Science,  
1237 (without self-citations) - Scopus.

**Publications**

More than 40 papers in national and international journals, conferences, workshops and symposium proceedings, authored 4 chapter books and 10 journal publications. He conducted or acting as active member for more than 5 research and development projects, grants and contracts in his field of interest, such as: Neural Network, Image Processing and Analysis with Applications in Biometrics, Human - Computer Interaction, Medical Imaging. Selected publications:

**I. Buciu**, S. Goldenberg, “Oscillating patterns based face antispoofing approach against video replay”, Biometrics in the Wild 2015 (B - Wild 2015) - in conjunction with the 11th IEEE International Conference on Automatic Face and Gesture Recognition - FG 2015.

**I. Buciu**, I. Nafornta, and C. Gordan, “Facial Expression Synthesis and Animation”, in Affective Computing and Interaction: Psychological, Cognitive and Neuroscientific Perspectives (Didem Gökçay and Gülsen Yildirim, Eds.), IGI Global Publishing House, 184 – 206, 2011.

**I. Buciu** and I. Nafornta, “Non-negative Matrix Factorization Methods and their Applications”, Zadeh L.A., Tufis D., Filip F.G., Dzitic I.(Eds.), From Natural Language to Soft Computing: New Paradigms in Artificial Intelligence , Editing House of Romanian Academy, Bucharest, ISBN 978-973-27-1678-6, pp. 32-50, 2008.

**I. Buciu** and I. Pitas, “Subspace image representation for facial expression analysis and face recognition and its relation to the human visual system”, Organic Computing, in the series "Understanding Complex Systems", Springer Verlag, pp. 303 – 320, March, 2008 (ISBN: 978-3-540-77656-7), 2008.

**I. Buciu** and I. Pitas, “Image representations based on discriminant non-negative matrix factorization with application to facial expression recognition”, Advances in Intelligent Information Processing: Tools and Applications, Advances in Intelligent Information Processing: Tools and Applications, B. Chanda and C.A. Murthy Eds., in ISI Platinum Jubilee Series on Statistical Science and Interdisciplinary Research, World Scientific Publishing, pp. 125 – 147, 2008,

**I. Buciu** and A. Gacsadi, “Directional Features for Automatic Tumor Classification of Mammogram Images”, Biomedical Signal Processing and Control (Elsevier), Volume 6, Issue 4, pp. 370 - 378, 2011.

**I. Buciu** and I. Nafornta, “Feature extraction through phase congruency for facial expression analysis”, International Journal of Pattern Recognition and Artificial Intelligence, Special Issue on Facial Image Processing and Analysis, Volume 23, Issue 3, pp. 617 - 635, 2009

**I. Buciu**, C. Kotropoulos, and I. Pitas, “Comparison of ICA approaches for facial expression recognition”, Signal, Video and Image Processing, Volume 3, Issue 3, pp. 345 – 361, 2009.

**I. Buciu** and I. Pitas, “Non-negative matrix factorization in polynomial feature space”, IEEE Transactions on Neural Networks, Volume 19, Issue 6, pp. 1090-1100, June 2008

S. Zafeiriou, A. Tefas, **I. Buciu**, and I. Pitas, “Exploiting discriminant information in nonnegative matrix factorization with application to frontal face verification”, IEEE Transactions on Neural Networks, ISSN: 1045-9227, vol. 17, no. 3, pp. 683 – 695, May, 2006

**Presentations**

9th Summer School In Image Processing, 12 – 21 July, 2001, Szeged, Hungary, talk on “Face detection algorithms”.

**Projects**

2000 – 2004 RTN - Multi-Modal Human Computer Interaction (MUHCI) – FP 6

2004 – 2006 NoE - The European taskforce creating human-machine interfaces SIMILAR to human-human communication (SIMILAR) – FP 6.

2009 – 2012 Approaches for Computer Tomography Images Processing using Cellular Neural Networks Technology and Integration in Assisted Diagnosis, PN II - Exploratory Research Projects, ID- 668/2008, Grant Nr. 645/19.01.2009, Romanian National University Research Council (CNCSIS).

2011 – 2012 Levy distributions for the study of predictability indicators with impact on regional development (LEDIRE), HURO/1001/293/2.2.3.

2012 – 2013 Joint development and implementation of an advanced training program in neurosciences, HURO/1001/295/2.3.1

2018 - Software application in medical imaging for automatic measurements and time-evolution of tumours in CT images (SAMACT) – PN III, Contract no. 239CI ([https://prof.uoradea.ro/ibuciu/SAMACT\\_Eng/](https://prof.uoradea.ro/ibuciu/SAMACT_Eng/))

2021 – 2023 – Tracking system for visual acuity measurement and reaction time of visually impaired people– Contract Nr. 316 / 21.12.2021

2021 – 2022 Tool for automatic measurement of colour pigments mixing – Contract nr. 16/ 17.12.2021

2022 – 2023 Interactive system for COVID affected pulmonary CT image analysis.