



Europass Curriculum Vitae



Personal information

First name(s) / Surname(s) **Hulea Mircea**
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E-mail mhulea@tuiasi.ro, mircea.hulea@yahoo.com
Nationality Romanian
Date of birth 24.04.1979
Gender Male

Occupational field **Substitute Lecturer**

Name of the current employers "Gheorghe Asachi" Technical University Iasi, Romania, Faculty of Automatic Control and Computer Science
"Alexandru Ioan Cuza" University of Iasi, Romania, Faculty of Computer Science
02.2013 – present

Education and training

Dates 11.2004 – 12.2008
Title of qualification awarded PhD in Automatic Control
Principal subjects/occupational skills covered Thesis Title: *Analysis and design of a speaker independent speech recognition system using neural networks*. The main research activities were aimed on:
- Studying the neural networks of biological inspiration from theory to hardware implementation
- Testing and developing methods suitable for implementation of speech recognition systems using networks of spiking neurons.
PhD Coordinator Prof. Mihail Voicu
Name and type of organisation providing education and training Technical University 'Gh. Asachi', Iasi, Faculty of Automatic Control and Computer Science
Level in national or international classification High Confidence Rating given by the Romanian Agency for Quality Assurance in Higher Education
Dates 10.2003 – 07.2004
Title of qualification awarded Master of Science in Applications of Advanced Computing Architectures
Principal subjects/occupational skills covered Dissertation title: *Development Board for Vocal Control of Digital Equipment*. This device was designed as a speech recognition module which can be interfaced with any hardware equipment.
Principal subjects: Neural Networks, Modern Concepts of Algorithms Designing and Implementation.
Name and type of organisation providing education and training Technical University 'Gh. Asachi', Iasi, Faculty of Automatic Control and Computer Science
Level in national or international classification High Confidence Rating given by the Romanian Agency for Quality Assurance in Higher Education
Dates 10.1998 – 07.2003
Title of qualification awarded Bachelor of Science in Computer Science

Principal subjects/occupational skills covered - Diploma thesis title: *Hardware Device for Vocal Command of the PC*
 - Principal subjects: Artificial intelligence, Digital Systems Designing, Algorithms Designing, Programming in Assembler

Name and type of organisation providing education and training Technical University 'Gh. Asachi', Iasi, Faculty of Automatic Control and Computer Science

Level in national or international classification High Confidence Rating given by the Romanian Agency for Quality Assurance in Higher Education

Work experience

Dates 06.2010 – 03.2013

Occupation or position held Postdoctoral Fellow

Main activities and responsibilities - Development of bioinspired cognitive - sensorial systems based on analogue neural networks;
 - Development of biomimetic sensorial systems based on chaotic circuits
 - Design of high performance time measuring systems using microcontrollers;
 - Design systems for analysis of neural networks behaviour and for chaotic circuits operation
 - Research assistant in two grants where Technical University of Iasi was one of the partners.

Coordinator Prof. Horia-Nicolai Teodorescu

Name and address of employer 'Gheorghe Asachi' Technical University of Iasi,
 Faculty of Electronics, Telecommunications and Information Technology
 Carol I street, no. 11, Iasi, 700506,
 Romania

Type of business or sector Research

Dates 02.2013 – present

Name of the current employer: "Gheorghe Asachi" Technical University Iasi, Romania, Faculty of Automatic Control and Computer Science

Occupation or position held: Substitute Lecturer

Main activities and responsibilities: Teaching the laboratory classes on *Reliability of distributed systems* – teaching language: English
 Teaching the laboratory classes on *Computing Architectures*

Name and address of employer: 'Gheorghe Asachi' Technical University of Iasi,
 Faculty of Automatic Control and Computer Science
 Dimitrie Mangeron street, no. 27, Iasi, 700050,
 Romania

Type of business or sector: Teaching

Dates 02.2013 – present

Name of the current employer: "Alexandru Ioan Cuza" University of Iasi, Romania, Faculty of Computer Science

Occupation or position held Substitute Lecturer

Main activities and responsibilities: Teaching the course on *Machine Learning* included in the master programme of the Faculty of Computer Science

Name and address of employer: 'Alexandru Ioan Cuza' University of Iasi, Faculty of Computer Science
 Carol I Boulevard, no. 22, Iasi, RO - 700505
 Romania

Type of business or sector: Teaching

Dates 10.2008 – 07.2010

Occupation or position held Lecturer

Main activities and responsibilities - Teaching the course and laboratory classes on *Neural Networks*
 - Teaching the course for *Applications of Artificial Intelligence*

Name and address of employer 'Gheorghe Asachi' Technical University of Iasi,
 Faculty of Automatic Control and Computer Science
 Dimitrie Mangeron street, no. 27, Iasi, 700050,
 Romania

Type of business or sector Teaching

Dates 10.2009 – 06.2011

Occupation or position held Teaching Assistant

Main activities and responsibilities - Teaching laboratory classes on *Informatics*

Name and address of employer University of Agricultural Science and Veterinary Medicine 'Ion Ionescu de la Brad' Mihail Sadoveanu alley, no. 3, Iasi, 700490, Romania

Type of business or sector Teaching

Dates 03.2009 – 05.2010

Occupation or position held System Engineer

Main activities and responsibilities - Computer Network administration
- 3D Advanced Visualisation Centre administration

Name and address of employer University of Agricultural Science and Veterinary Medicine 'Ion Ionescu de la Brad' Iasi, Romania

Type of business or sector Engineering

Personal skills and competences

Mother tongue(s) **Romanian**

Other language(s) **English, French**

Foreign languages certificates: Cambridge FCE, grade C, examination year 2003.

Self-assessment <i>European level</i> (*)	Understanding		Speaking		Writing	
	Listening	Reading	Spoken interaction	Spoken production		
English	C1 Proficient user	C2 Proficient user	C1 Proficient user	C1 Proficient user	C2 Proficient user	C2 Proficient user
French	A2 Basic user	B1 Independent User	A1 Basic user	A1 Basic user	A1 Basic user	A1 Basic user

(*) [Common European Framework of Reference for Languages](#)

Social skills and competences

- Team work:
 - As a postdoctoral fellow I participated to an external research stage at Northumbria University where I worked with a postdoctoral fellow and a PhD student from Northumbria University to develop and test new methods to compensate laser beam scattering due to air turbulence.
 - Also, during a research external stage at the IUT d'Angoulême, University of Poitiers, France I coordinated a team of one PhD student and one undergraduate student for developing a multidisciplinary research project.
 - I worked in various research teams at Faculty of Automatic Control and Computer Science and at Faculty of Electronics, Telecommunications and Information Technology,
 - I participated as the representative of Technical University "Gheorghe Asachi", Iasi at working meetings of NANOPROSPECT national grant;
 - I worked at the research department of the MyTronic-LEDON, GmbH multinational company from Germany.
- Multicultural environment adaptability:
 - During my postdoctoral research stages in United Kingdom and France I interacted and worked with Professors, Postdoctoral fellows and PhD students which brought me a lot of success in the experiments I performed.
 - I have participated at SOCORO 2010 summer school in the field of Social and Cognitive Robotics where I was involved in multinational research teams.
 - As PhD student I obtained a Socrates-Erasmus scholarship in the United Kingdom at The University of Sheffield, where I interacted with different people from academic environment.

- Organisational skills and competences
- Good experience in project management gained while working at different projects during my master studies. PhD and post-doctoral research.
 - Sense of organisation gained:
 - As project manager in a grant obtained from CNCSIS Romania through a research programme dedicated to PhD Students.
 - Helping in managing the national grant NANOPROSPECT financed by ANCS Romania;
 - Taking part in organizing committee of the 6th European Conference on intelligent Systems and Technologies.

- Technical skills and competences
- Good experience in research gained during my doctoral programme and during my dissertation preparation at the Technical University from Iasi, Romania.
 - Good experience in microcontroller programming and hardware design. Since I was preparing my diploma paper during last year of graduation studies, I developed many hardware projects independently or in a team.
 - Good experience in technical command of digital equipment gained as administrator of 3D Visual System at the University of Agricultural Science and Veterinary Medicine from Iasi, Romania.

- Computer skills and competences
- Very good experience in using Altium Designer for prototyping PCB boards
 - Good experience in programming languages Assembler, C, C++
 - Familiarised with Java, Visual C, MATLAB
 - Good experience in using Office Word, Excel, PowerPoint

Driving licence Category B

Additional information External research stages

- September 2011 – November 2011 – Postdoctoral research stage at the School of Computing, Engineering and Information Sciences from the Northumbria University, Newcastle, United Kingdom.
- Mars 2011 – April 2011 – Postdoctoral research stage at the University of Poitiers, IUT d' Angoulême, France.
- Mars 2006 – May 2006 – Erasmus –Socrates scholarship as PhD student at the University of Sheffield, United Kingdom.

Publications

Journal articles:

M.Hulea, *A new method to obtain non-volatile memory for networks of spiking neurons*, Memoirs of Scientific Sections, Tome XXXIII, pp. 129-146, 2010;

url: http://iit.iit.tuiasi.ro/Reviste/mem_sc_st_2010/mss_series_IV_tome_XXXIII_2010_129.pdf.

M.Hulea, *A model of silicon neurons suitable for speech recognition*, CEAI Journal, Vol. 10, No. 4, pp 32-41, 2008;

url: <http://ceai.srait.ro/index.php/ceai/article/viewFile/263/196>.

M.Hulea, *Electronic model of neurons for neural networks unsupervised learning*, Buletinul Institutului Politehnic, Iasi, 2006;

H.N.Teodorescu, L. Dascalescu, **M. Hulea**, M.C. Plopeanu, *Correlations between the optically determined structure and the charging properties of non-woven fabrics*, Journal of Electrostatics, **ISI Impact Factor 1.08**, aparuta online in forma *uncorrected proof (ISI)*

M. C. Plopeanu, L. Dascalescu, M. Yahiaoui, A. Antoniu, **M. Hulea**, P. V. Notinger, *Repartition of Electric Potential at the Surface of Non-woven Fabrics for Air Filtration*, IEEE Transactions on Industry Applications, **ISI Impact Factor 1.3**, vol. PP, issue: 99, Early Access Articles, 2012;

M.Hulea, *Development board for vocal control of digital equipment*, Buletinul Institutului Politehnic, Iasi, 2005;

Conferences:

M. Hulea *Using Spiking Neural Networks For Light Spot Tracking*, Proc. Of The 20th European Signal Processing Conference, Bucharest, Romania, 27-31 August, 2012, pp. 1708-1712 (**ISI Proceedings**).

M. Hulea *The Mathematical Model Of A Biologically Inspired Electronic Neuron For Ease The Design Of Spiking Neural Networks Topology*, Proceedings of the 15th International Conference on System Theory, Control and Computing, Sinaia, Romania, October, 2011, pp. 282-287 (**indexed: IEEEExplore**).

H.N. Teodorescu, M.Hulea, *Improving Time Measuring Precision in Embeedded Systems with a Hybrid Measuring Method*, Proc. of the 6th IEEE International Conference on Intelligent Data Acquisition and Advanced Computing Systems: Technology and Applications, Prague, Czech Republic, 15-17 September, 2011, pp. 59-64.

H.N. Teodorescu, M.Hulea, *Error Analysis of Measuring the Time Intervals with a Combined Measuring Method*, *Recent Researches in Communications, Automation, Signal Processing, Nanotechnology, Astronomy & Nuclear Physics*, Z. Bojkovic, et. al. Eds., WSEAS Publishing House, 2011, pp 265-270.

M. Hulea, L. Dascalescu, M.C.Plopeanu, H.N. Teodorescu, *Correlations between surface electrical potential distribution and optically characterized non-uniformity of non-woven fabrics for air-filters*, *Proceedings of the ECAI Conference*

M.Hulea, A. Untu, *Electronic Device for Parallel Preprocessing of Vocal Spectrum*, CONSILR 2010, Bucharest, Romania, 2010.

M.Hulea, *A biologically inspired model of spiking neurons suitable for analog IC design*” ICAI 2008 Proceedings, CSREA Press, Las Vegas Nevada, USA, pp 807-812, 2008;

M.Hulea, *A biologically inspired rule for electronic synapses plasticity* , Proceedings of SACCS 2007, Iasi, Romania, 2007;

M.Hulea, *An artificial network of spiking neurons for modelling the Pavlov reflex*, Proceedings of SACCS 2007, Iasi, Romania, 2007.

Patents

M.Hulea, *A Method for Phoneme Recognition Using a Biologically Inspired Neuron Model*, Patent application no. **A 2009 00531 (A2)**.

M. Hulea, H.N.Teodorescu, *Software Package For High Precision Time Measuring Using Microcontrollers*, registered to Romanian Copyright Office (O.R.D.A.); registration number: 14413/25.11.2011;

H.N.Teodorescu, M.Hulea, *Method and System for Time Measuring*, patent no. A/00157/2011, abstract published in RO-BOPI 08/2012.

Posters:

M. Hulea, H. N. Teodorescu, *Software Package For High-Precision Time Measuring Using Microcontrollers*, Euroinvent 2012, Iasi, Romania, May 2012,

Awards for this presentation:

SpECIAL Award given by Asia Invention Creativity Association, Korea

Gold medal awarded by EUROINVENT2012 organizers

M. Hulea, *Bioinspired Neural Networks and Applications*, Socoro 2010 – Social and Cognitive Robotics; international summer school, Iasi, Romania, July 2010.

H.N. Teodorescu, M. Hulea, *Method and System for Time Measuring*, Inventica 2011, Iasi, Romania, May 2011;

Gold medal award for this presentation.

Grants

Designing of a System for Speaker Independent Speech Recognition using Networks of Spiking Neurons; grant position: project manager; period: 2007 – 2008

url: <http://www.ac.tuiasi.ro/upload/48.pdf>

Nanotechnology in Romania – prospective study (NANOPROSPECT), grant position: research assistant; period: November 2010 – May 2011.

Innovative Methods for Echographic Visualization and Investigation for Medical Purposes (MIVIEM), grant position: research assistant; period: January 2012-November 2012.

