

**PERSONAL DATA**

Name and surname **MARCU, VASILE-COSMIN**  
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**OCCUPATION**

- Date 2010
- Working place Department of Automatics; Faculty of Automation and Computer Science
  - Profession Engineer, Specialization: *Industrial Robots and Flexible Manufacturing Systems*
  - Job name Teaching Assistant
- Main activity Didactic and research activities

**EDUCATION**

- Year 2003
- Organization name Technical University of Cluj-Napoca, Faculty of Machine Buildings
  - Obtained title Engineer
  - Specialization *Industrial Robots and Flexible Manufacturing Systems*
- Year 2005
- Organization name Technical University of Cluj-Napoca, D.E.C.I.D.
  - Obtained title Master of Science
  - Specialization *Programming and Applied Informatics*

**DIDACTIC ACTIVITIES**

**PROFESSIONAL EXPERIENCE**

Laboratory works	Specialization	Year of study
Computer Basics (in Romanian)	Automatics and Applied Informatics	I
Computer Basics (in English)	Automatics and Applied Informatics	I Eng.
Hydraulic and Pneumatic Control Equipments (in Romanian)	Automatics and Applied Informatics	III

**SCIENTIFIC ACTIVITIES**

**RESEARCH DOMAINS**

- Modeling and simulation of industrial robots

PUBLICATIONS  
(TOTAL 17)

17 scientific papers:

1. C. Marcu, Gh. Lazea, S. Herle, R. Robotin, L. Tamas, "3D Graphical Simulation of an Articulated Serial Manipulator based on Kinematic Models", IEEE 19th International Workshop on Robotics in Alpe-Adria-Danube Region – RAAD 2010, June 23–25, 2010, Budapest, Hungary, pp. 143-148, ISBN: 978-1-4244-6885-0
2. C. Marcu, S. Herle, R. Robotin, M. Dobra, Gh. Lazea, "Motion Algorithms for an Industrial Robot Graphical Simulator", IEEE International Conference on Automation, Quality and Testing, Robotics, AQTR 2010, Cluj-Napoca, Romania, 2010, ISBN: 978-1-4244-6722-8
3. S. Herle, S. Man, Gh. Lazea, R. Robotin, C. Marcu, "Myoelectrical signal classification for the hierarchical control of a human hand prosthesis", IEEE International Conference on Automation, Quality and Testing, Robotics, AQTR 2010, Cluj-Napoca, Romania, 2010, ISBN: 978-1-4244-6722-8
4. M. Manisor, C. Marcu, P. Raica, G. Tomoaia, L. Miclea, "Finite element modeling of the glenohumeral joint during external and internal rotation", IEEE International Conference on Automation, Quality and Testing, Robotics, AQTR 2010, Cluj-Napoca, Romania, 2010, ISBN: 978-1-4244-6722-8
5. S. Herle, S. Man, Gh. Lazea, C. Marcu, R. Robotin, "Exploiting parallel processing and optimal paths in a flexible manufacturing system", IEEE International Conference on Automation, Quality and Testing, Robotics, AQTR 2010, Cluj-Napoca, Romania, 2010, ISBN: 978-1-4244-6722-8
6. S. Herle, C. Marcu, H. Benea, L. Miclea, R. Robotin, "Simulation-based stress analysis for a 3D modeled humerus-prosthesis assembly", International Joint conference Computer, Information, and System Sciences, CISSE09, December 4-12, 2009, Bridgeport, USA
7. C. Marcu, R. Robotin, "Towards Simulation of Custom Industrial Robots", In: Robot Manipulators, Cap. 18, pp. 331-347, Editura In-Teh, Croatia, 2008, ISBN: 978-953-7619-03-9
8. C. Marcu, Gh. Lazea, R. Robotin, S. Herle, L. Tamas, "Industrial robot controller using miniature computers", IEEE International Conference on Automation, Quality and Testing, Robotics, AQTR 2008, Volume 2, Cluj-Napoca, Romania, 2008, pp. 341-344, ISBN: 978-1-4244-2576-1
9. L. Tamas, Gh. Lazea, R. Robotin, C. Marcu, A. Madjik, "Mobile Robot Position Estimation Based on Multi Sensor Fusion", The 19th International DAAAM Symposium, Trnava, Slovakia, 2008
10. L. Tamas, Gh. Lazea, R. Robotin, C. Marcu, S. Herle, Z. Szekely, "State estimation based on Kalman filtering techniques in navigation", IEEE International Conference on Automation, Quality and Testing, Robotics, AQTR 2008, Volume 2, Cluj-Napoca, Romania, 2008, pp. 147-152, ISBN: 978-1-4244-2576-1
11. Gh. Lazea, R. Robotin, S. Herle, C. Marcu, L. Tamas, "Mobile robots formation navigation with behavior based algorithms", IEEE International Conference on Automation, Quality and Testing, Robotics, AQTR 2008, Volume 2, Cluj-Napoca, Romania, 2008, pp. 388-391, ISBN: 978-1-4244-2576-1
12. S. Herle, P. Raica, Gh. Lazea, R. Robotin, C. Marcu, L. Tamas, "Classification of surface electromyographic signals for control of upper limb virtual prosthesis using time-domain features", IEEE International Conference on Automation, Quality and Testing, Robotics, AQTR 2008, Volume 3, Cluj-Napoca, Romania, 2008, pp. 160-165, ISBN: 978-1-4244-2576-1
13. Gh. Lazea, R. Robotin, C. Marcu, L. Tamas, "Autonomous System for Mobile Robot Navigation", The International Symposium SINTES13, Craiova, Romania, 2007, vol 1, pp. 250-254, ISBN 978-973-742-839-4
14. C. Marcu, Gh. Lazea, R. Robotin, "An OpenGL Application for Industrial Robots Simulation", IEEE-TTTC International Conference on Automation, Quality and Testing, Robotics AQTR 2006 (THETA 15), 25-28 May, Cluj-Napoca, Romania, 2006, pp. 254-259, ISBN 1-4244-0361-8.
15. R. B. Rusu, R. Robotin, Gh. Lazea, C. Marcu, "Towards Open Architectures for Mobile Robots: ZeeRO", IEEE-TTTC International Conference on Automation, Quality and Testing, Robotics AQTR 2006 (THETA 15), 25-28 May, Cluj-Napoca, Romania, 2006, pp. 260-265, ISBN 1-4244-0361-8
16. L. Vaida, L. Nascutiu, C. Vaida, C. Marcu, "The increase of the functional performances of

*percussive rock-drills by varying its frequency*, 2006 International Conference on Experimental Fluid Mechanics, Cehia, 2006, ISBN 80-7372-141-4

17. C. Ciupan, Vrg. Ispas, M. Damian, E. Ciupan, C. Marcu, "Driving System for a Simulation Platform used for a Transport Vehicle", Anals of the Oradea University, Fascicle of Management and Technological Engineering vol. IV/2005, CD-ROM Edition, ISSN 1583-0691

RESEARCH GRANTS  
(TOTAL 6)

Director 1 grant:

1. Director: *Stand experimental pentru simularea roboților industriali seriali*, Grant type TD, code CNCSIS 509/2007, period 2007-2008, Value: 45000 RON

Member 5 grants:

1. Member: *Dezvoltatea sistemelor de percepție multisenzor și fuziunea senzorilor la roboți mobile*, Grant type A, code CNCSIS 1549/2007, director Prof.dr.ing. Gheorghe Lazea
2. Member: *Metode și tehnologii bazate pe medicina moleculară și celulară aplicate în chirurgia și tratamentul cancerului osos, a metastazelor osoase și a leziunilor osteo-articulare - OSMOCEL*, Grant type Partnership, no. 41050/2007, responsible UTC-N Prof.dr.ing. Liviu Miclea
3. Member: *Sistem inteligent de monitorizare și avertizare precoce asupra răspândirii pandemice a virusurilor, SIMONPAN*, Grant type CEEX, no. 128/2006, director Prof.dr.ing. Honoriu Valean
4. Member: *Sisteme multirobot autonome cooperante*, Grant type A, code CNCSIS 1028/2004, , director Prof.dr.ing. Gheorghe Lazea
5. Member: *Stand informatizat pentru încercarea materialelor de construcție*, Grant type CALIST, no. 4224/2003, director Prof.dr.ing. Liviu Vaida

INSTITUTIONAL PROJECTS  
(TOTAL 1)

National:

1. Member: *Platforma de cercetare și formare interdisciplinară în tehnologii avansate pentru studii doctorale și masterat*, Grant type PLATFORME/Interdisciplinary research and education platform, no. 105/2006

PRIZES  
(TOTAL 2)

1. Marcu, C., 2nd Prize, *Sesiunea studentească Electrotehnologii*, Cluj-Napoca, 1999
2. Marcu, C., "Electrotehnologii 2000" Prize, *Sesiunea studentească Electrostatica*, Cluj-Napoca, 2000

Cluj-Napoca  
04.10.2010

Asist. Ing. Vasile-Cosmin MARCU