Europass Curriculum Vitae

Personal information

First name(s) / Surname(s)
Vasile, Ion, MANTA

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No. 11, Ţuţea Petre, 700730, Iasi, Romania

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Nationality
Romanian

Date of birth
01.01.1962, Bălăneşti, Gorj, Romania

Gender
Male

Administrative Positions

- 2016 – present, Dean, Faculty of Automatic Control and Computer Engineering, Technical University "Gheorghe Asachi", Iaşi
- 2008 – 2012, Dean, Faculty of Automatic Control and Computer Engineering, Technical University "Gheorghe Asachi", Iaşi
- 2004 - 2008, Scientific Secretary, Faculty of Automatic Control and Computer Engineering, Technical University "Gheorghe Asachi", Iaşi
- 2004 - present, Socrates/Erasmus program coordinator, Department of Computer Engineering, Faculty of Automatic Control and Computer Engineering
- 2005 - 2011, Executive Director of the Research Centre of type C "Intelligent devices and software", Faculty of Automatic Control and Computer Engineering

Work experience

Dates

2007 → present; **PhD supervisor** in the field "*Computer Engineering and Information Technology*"
- 2009-2012, Director, Doctoral School, Faculty of Automatic Control and Computer Engineering
- **13** PhD theses validated by the Ministry of Education:
  1. *Image processing algorithms for object motion tracking*, Adrian Burlacu, 2009
  2. *Graphical processing in high performance computing*, Simona Caraiman (Aruştei), 2010
  3. *Parallel algorithms and implementation solutions for data mining applications*, Alexandru Archip, 2010
  4. *Remote monitoring of vital parameters using embedded systems*, Cristian Rotariu, 2010
  5. *Contributions to design, development and implementation of information systems in medical education*, Gabriela Gladiola Petroiu (Andruseac), 2011
  6. *Parallel applications design for computer clusters*, Cristian-Mihai Amarandei, 2011
  7. *Visualization and graphical processing of volume data*, Marius Gavrilescu, 2011, **PhD Joint Doctoral Agreement** Technical University of Vienna, Institute of Computer Graphics and Algorithms, prof. Eduard Groller
  8. *Image processing techniques and segmentation evaluation*, Cristian-Ionuţ Smochină, 2011, Reviewers: Prof. Werner Purgathoffer, prof. Walter G. Kropatsch, Technical University of Vienna, Institute of Computer Graphics and Algorithms
  9. *Analysis and visualization of biomedical datasets*, Paul Herghelegiu, 2011
  10. *Energy consumption optimization for secure embedded* systems, Nicolae Botezatu, 2011
  11. *New techniques for data processing and transmission in medical telemonitoring applications*, Robert-Gabriel Lupu, 2012

12. *Location-based applications*, Andrei Tabarcea, **PhD Joint Doctoral Agreement**, University of Eastern Finland, prof. Pasi Franti, 2014
13. *Comparative classical and quantum information processing*, Iulian Petrila, 2015

- **opponent** PhD thesis of Karol Waga, *Processing, Analysis and Recommendation of Location Data*, University of Eastern Finland, 2015

- 5 (five) current PhD students

- 2011 -2013, supervisor for 2 postdoctoral students:
  1. Simona Caraiman (Aruştei) - *Quantum computing models. Applications of quantum algorithms in processing graphics*
  2. Cristian Rotariu – *Networks of embedded systems for biomedical applications*

Dates	2009 – present, **expert ARACIS** in the field *Computer Engineering and Information Technology*" 2012 - present , **member CNATDCU**, commission "Computers, Information Technology and Systems Engineering"
Dates	2006 → present
Occupation or position held	Professor, Department of Computer Engineering
Main activities and responsibilities	Courses taught: Basics of Computer Programming, Data Structures and Algorithms, Elements of Computer Graphics, Graphics Processing Systems Research areas: quantum informatics (information representation, quantum calculations, quantum algorithms), computational physics (analytical and numerical computation methods in high energy physics, theories of calibration), 3D graphics (modeling and displaying three-dimensional surfaces and solids, synthesis of photo-realistic images, algorithms of image processing and image analysis), laser physics (laser beam characteristics, laser beam modification, applications of laser systems, optical communications)
Name and address of employer	Technical University "Gh Asachi" Iasi, Faculty of Automatic Control and Computer Engineering, Dimitrie Mangeron no. 53A, Iaşi
Type of business or sector	Education and research
Dates	2001 → 2006
Occupation or position held	Associate professor, Department of Computer Engineering
Main activities and responsibilities	Courses taught: Introduction to Computers and Systems Science, Data Structures and Algorithms, Physics, Graphics Processing Systems Research areas: quantum informatics (information representation, quantum calculations, quantum algorithms), computational physics (analytical and numerical computation methods in high energy physics, theories of calibration), 3D graphics (modeling and displaying three-dimensional surfaces and solids, synthesis of photo-realistic images, algorithms of image processing and image analysis), laser physics (laser beam characteristics, laser beam modification, applications of laser systems, optical communications)
Name and address of employer	Technical University "Gh Asachi" Iasi, Faculty of Automatic Control and Computer Engineering, Dimitrie Mangeron no. 53A, Iaşi
Type of business or sector	Education and research
Dates	1994 → 2001
Occupation or position held	Lecturer, Department of Physics, basic norm in the Faculty of Automatic Control and Computer Engineering
Main activities and responsibilities	Courses taught: Physics, Introduction to Computers and Systems Science, Laser Physics and Applications, Computer Programming Research areas: quantum informatics (information representation, quantum calculations, quantum algorithms), computational physics (analytical and numerical computation methods in high energy physics, theories of calibration), laser physics (laser beam characteristics, laser beam modification, applications of laser systems, optical communications), gauge theories, general relativity, high energy physics
Name and address of employer	Technical University "Gh Asachi" Iasi, Faculty of Automatic Control and Computer Engineering, Dimitrie Mangeron no. 53A, Iaşi
Type of business or sector	Education and research
Dates	1989 → 1994

Occupation or position held	Assistant, Department of Physics, basic norm in the Faculty of Automatic Control and Computer Engineering
Main activities and responsibilities	Seminars and laboratories for the courses: Physics, Computer Programming Research areas: computational physics (analytical and numerical computation methods in high energy physics, theories of calibration), laser physics (laser beam characteristics, laser beam modification, applications of laser systems, optical communications), gauge theories, general relativity, high energy physics
Name and address of employer	Technical University "Gh Asachi" Iasi, Faculty of Automatic Control and Computer Engineering, Dimitrie Mangeron no. 53A, Iaşi
Type of business or sector	Education and research
Dates	1986 → 1989
Occupation or position held	Research Engineer
Main activities and responsibilities	Designing, implementing and testing of software products
Name and address of employer	Institute of Computation Technique Bucharest, Iasi branch
Type of business or sector	Research and development

Education and training

Dates	1991 - 1998
Title of qualification awarded	PhD in Physics, theoretical physics specialization
Principal subjects/occupational skills covered	PhD Thesis: Symbolic computation methods in high energy physics supervisor Prof. Dr. Gheorghe Zet, Technical University "Gh. Asachi" Iasi. In the PhD thesis the use of algebraic computing languages (REDUCE, Mathematica, MAPLE) in theoretical physics was emphasized.
Name and type of organization providing education and training	"Al. I. Cuza" University Iasi, Faculty of Physics
Dates	1988 - 1993
Title of qualification awarded	Bachelor diploma, physics specialization
Principal subjects/occupational skills covered	5 years (evening school), physics specialization
Name and type of organization providing education and training	"Al. I. Cuza" University Iasi, Faculty of Physics
Level in national or international classification	Overall years of study average of 8.98
Dates	1981 - 1986
Title of qualification awarded	Engineer diploma, Automatic Control and Computer Engineering specialization
Principal subjects/occupational skills covered	5 years (electrical profile), Automatic Control and Computer Engineering specialization, major in the microprocessors domain.
Name and type of organization providing education and training	Polytechnic Institute "Gh. Asachi" Iasi, Faculty of Electrical Engineering
Level in national or international classification	Overall years of study average of 9.95, diploma exam average grade 10.

Personal skills and competences

Mother tongue(s)	**Romanian**

Other language(s)

Self-assessment	Understanding				Speaking				Writing	
European level (*)	Listening		Reading		Spoken interaction		Spoken production			
English	B2	Independent User	B2	Independent User	B1	Independent User	B1	Independent User	B1	Independent User
French	B2	Independent User	B2	Independent User	B1	Independent User	B1	Independent User	B1	Independent User

(*) Common European Framework of Reference for Languages

Social skills and competences	Communication and negotiation skills.
Organizational skills and competences	Experience in managing international and local academic activities (projects/collaborations on educational or scientific areas).
Technical skills and competences	Technical – engineering training.
Computer skills and competences	Advanced user - in accordance with professional tasks
Driving license	B category.

Additional information

120 scientific papers from which:

26 published in international journals (**21 ISI, IF sum: 27.833, IF sum/no_authors: 11.2, Relative Influence Score RIS sum: 16.196, RIS/no_authors: 6.314**);

34 published in national journals;

54 published in volumes of international conferences (with reviewers);

2 published in volumes of national conferences (with reviewers);

4 national symposium;

- author or co-author of 8 (eight) books with ISBN: 1 (one) single author, 2 (two) first author; contributions in 2 (two) books with ISBN publisher;
- co-author of 9 (nine) manuals and laboratory guides, publishing house of the Technical Univ. "Gh. Asachi";
- involved in 26 research grants with national funding (23 with MEN – 2 (two) director, 3 with Univ. "Al I Cuza ", Iasi, 1 with CFS Iasi)
- involved in 2 international grants (1 (one) FP6 and 1 (one) Leonardo).
- Local coordinator for 1 (one) international grant H2020: *Natural sense of vision through acoustics and haptics*, grant H2020, No. 643636, 2015 -2017, partner budget 350000 EUR (coordinator: University of Iceland, partners: University "Politehnica" of Bucharest (Romania),Technical University of Iasi (Romania), Szechenyi Istvan University (Hungary), Lodz University of Technology (Poland), Fondazione Istituto Per L'interscambio Scientifico (Italy), Icelandic National Institute For The Blind (Iceland), Info World (Romania), Fundacja Instytut Rozwoju Regionalnego (Poland); total budget: 4000000 EUR)

Selected publications:

1. Petrila, Iulian; Ungureanu, Florina; Manta, Vasile: Effects of laser beam modulation on all-optical switching phase diagrams in magneto-optical ultrafast storage device, *Journal of Computational Electronics*, Volume: 14   Issue: 2   Special Issue: SI   Pages: 627-633, 2015 (Impact factor: 1.52, SRI: 1.175)
2. Caraiman, S., Manta, V., Image Segmentation on a Quantum Computer, *Quantum Information Processing*, 2015, Volume: 14   Issue: 5   Special Issue: SI   Pages: 1693-1715 (Impact Factor: 1.923, SRI: 1.184)
3. Petrila, I; Manta, V., Metropolis Monte Carlo analysis of all-optical switching, *Computer Physics Communications*, Volume 185, Issue 11, pages 2874-2878, 2014, (Impact Factor: 2.407, SRI: 2.673)
4. Caraiman, S.; Manta, V., Histogram-based segmentation of quantum images *Theoretical Computer Science*, Elsevier, Volume 529, pp. 46-60, 2014, ISSN: 0304-3975, (Impact Factor: 0.516, SRI: 1.063), DOI: 10.1016/j.tcs.2013.08.005
5. Caraiman, S., Manta, V., Quantum Image Filtering in the Frequency Domain, *Advances in Electrical and Computer Engineering*, Volume 13, Issue 3, 2013, pages: 77 – 84, ISSN: 1582-7445, e-ISSN: 1844-7600, DOI: 10.4316/AECE.2013.03013, (Impact Factor: 0.555)
6. Cristian Rotariu, Vasile Manta, Razvan Ciobotariu, Integrated System Based on Wireless Sensors Network for Cardiac Arrhythmia Monitoring, *Advances in Electrical and Computer Engineering*, vol. 13, no. 1, pp. 95-100, 2013, ISSN: 1582-7445 (Impact Factor: 0.555)
7. Smochina, C., Manta, V., Kropatsch, W., Crypts detection in microscopic images using hierarchical structures, *Pattern Recognition Letters*, Volume 34, Issue 8, 1 June 2013, Pages 934–941, http://dx.doi.org/10.1016/j.patrec.2012.11.008, (Impact Factor 1.724, SRI=1.514)
8. Herghelegiu P, Manta V., Perin R., Bruckner S., Gröller E., Biopsy Planner - Visual Analysis for Needle Pathway Planning in Deep Seated Brain Tumor Biopsy, *Comput Graph Forum*, Volume 31, Issue 3pt2, 2012, pp. 1085-1094, DOI: 10.1111/j.1467-8659.2012.03101.x (Impact Factor 1.636 SRI= 2.284)
9. Herghelegiu Paul; Gavrilescu Marius; Manta Vasile, Visualization of Segmented Structures in 3D Multimodal Medical Data Sets, *Advances In Electrical And Computer Engineering*, Volume: 11 Issue: 3, Pages: 99-104   DOI: 10.4316/AECE.2011.03016 Published: 2011, Impact Factor 0.700
10. Gavrilescu Marius, Manta Vasile, Advances in the visualization of three-dimensional seismic volume data, *Environmental Engineering and Management Journal* Volume: 10 Issue: 4   Pages: 567-578 Published: APR 2011, Impact Factor 1.435
11. Caraiman, S.; Manta, V., Image Representation and Processing Using Ternary Quantum Computing, *Lecture Notes in Computer Science*, Volume 7824, 2013, pp 366-375, Book Title Adaptive and Natural Computing Algorithms, ISSN 0302-9743 Publisher Springer Berlin Heidelberg, Proceedings 11th International Conference, ICANNGA 2013, Lausanne, Switzerland, April 4-6, 2013. DOI 10.1007/978-3-642-37213-1_38 (indexed ISI)

12. Smochina C., Manta V., Kropatsch W.G., Semantic segmentation of microscopic images using a morphological hierarchy, In Proc. 14th International Conference on Computer Analysis of Images and Patterns, Seville, SPAIN Date: AUG 29-31, LNCS 6854, pp. 102-109, 2011. (indexed ISI)
13. Smochina C., Rogojanu R., Manta V., Kropatsch W.G., Epithelial area detection in cytokeratin microscopic images using MSER segmentation in anisotropic pyramid, In Proc. 6th IAPR International Conference on Pattern Recognition in Bioinformatics, Delft, NETHERLANDS NOV 02-04, LNBI 7036, pp. 318, 2011. (indexed ISI)
14. S. (Caraiman) Arustei and V. Manta. New Applications of Quantum Algorithms to Computer Graphics: the Quantum Random Sample Consensus Algorithm. In CF '09: Proceedings of the 6th ACM Conference on Computing frontiers, pages 81–88, New York, NY, USA, 2009. ACM. (indexed ISI)
15. Cristian Rotariu, Dragos Arotaritei, Vasile Manta, Wireless System for Remote Monitoring of Atrial Fibrillation, *Proceedings of the 5th European DSP Education & Research Conference*, EDERC 2012, Amsterdam, The Netherlands, September 13-14, 2012, pp.129-133, ISBN: 978-1-4673-4597-2, (indexata ISI)

Hirsch index:

- h-index **5** in ISI Web of Science: http://www.researcherid.com/rid/C-4254-2011
- h-index **6** in Scopus: http://www.scopus.com/authid/detail.uri?authorId=6603231376#
- h-index **9** in Google Academic: http://scholar.google.ro/citations?user=AdkxA_AAAAAJ&hl=en

Participation in institutional programs (TEMPUS, SOCRATES, etc.);

University of Joensuu, Department of Computer Science, Finland (2004)
Vienna University of Technology, Department of Computer Science, Austria (2005)
University of Joensuu, Department of Computer Science, Finland (2006)
Vienna University of Technology, Department of Computer Science, Austria (2007)
Berufsakademie Mannheim, Department of Computer Science, Germany (2007)
Institut National Polytechnique de Toulouse, France (2008)
University of Odensee, Denmark (2009)
Institut National Polytechnique de Toulouse, France (2010)
University of Helsinki, Finland, 2010
University of Minho, Portugal, 2014
University of Eastern Finland, 2015

Invited Professor to Karlsruhe Institute of Technology, March 2011

Awards

- the second place, physics domain, national scientific-professional contest for students "Traian Lalescu" 1983, subsection High Technical Education of engineers year II;
- mention, systems theory domain, National Session of Scientific Student Circles, 1986, with the paper Designing a robust PID regulator.
- nominated in "Who's Who in the World", editions 2003-present;
- nominated in "International Biographical Center", Cambridge, 2003-present;
- nominated in American Biographical Institute, Raleigh, North Carolina, 2004-present.

Activities in scientific societies

- TENSOR Society (Japan);
- Editorial board of the Bulletin of the Polytechnic Institute of Iasi, Automatic Control and Computer Engineering section (2005 to present)
- Editorial board of Advanced in Electrical and Computer Engineering, ISI journal (2009 to present).

April 18, 2016   prof.dr.ing.fiz. Vasile Manta