


PERSONAL INFORMATION

Marița Tiberiu



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Sex Male | Date of birth 22.12.1971 | Nationality Romanian

WORK EXPERIENCE

- 2000 – now **Associate professor (2013-present), Senior lecturer(2003–2013), Lecturer (2000 - 2003)**
 Technical University Cluj-Napoca, Faculty of Automation and Computer Science, Computer Science Department,
 Str. Memorandumului nr. 28, RO-400114 Cluj-Napoca, ROMANIA
 Tel. +4 0264 401 200, 401248, Fax +4 0264 592 055 (www.utcluj.ro)
 - Teaching: lectures, seminars, labs, and projects in Image Processing, Computer Vision, Design with Microprocessors, Human-Computer Interaction, Robotics Vision Systems
 - Research in the field of Computer Vision, Image Processing and Pattern Recognition in national and international projects (FP7, CNCSIS, CEEX, PN2)
 Business or sector: Education & research
- 1997-2000 **Lecturer (1999 - 2000), Junior lecturer (1997 – 1999)**
 Technical University Cluj-Napoca, Faculty of Electronics and Telecommunications, Bases of Electronics Department,
 Str. C. Daicoviciu nr. 15, 400020 Cluj-Napoca, România
 - Teaching activities: seminars, labs, and projects in Optoelectronics, Optical Communications
 - Research: Optical Communications modeling and simulation applications development
 Business or sector: Education & research
- 1996-1997 **Engineer**
 1996 - "GED Service" Cluj-Napoca, 1997 - "Energobit" Cluj-Napoca (www.energobit.com)
 - Hardware/ Software Engineer : Hardware/software maintenance/Software development and maintenance/ remote data acquisition and control
 Business or sector : Design, maintenance and services (computers)

EDUCATION AND TRAINING

- 1998 - 2008 **PhD, Computer Science** ISCED 6
 Technical University Cluj-Napoca, Faculty of Automation and Computer Science
 - Image Processing and Pattern Recognition, Stereo-vision, Camera Calibration, Driving Assistance Systems, 3D Environment Perception
- 1997-1998 **Postgraduate , Electronics & Telecommunications: Design Techniques of Complex Electronic Circuits** ISCED 5
 Technical University Cluj-Napoca, Faculty of Electronics and Telecommunications
 - Design of analogue and digital VLSI circuits, Analysis and synthesis of electronic circuits, Fuzzy systems, Digital signal processing, Fiber optic communication systems.
- 1990 - 1995 **Engineer, Computer Science** ISCED 5
 Technical University Cluj-Napoca, Faculty of Automation and Computer Science
 - Programming , Mathematics, Computer Architecture and Microprocessor Design,
 - Data Bases, Computer Networks, Artificial Intelligence,
 - Graphics, Image Processing and Pattern Recognition

PERSONAL SKILLS

Mother tongue(s) Romanian / Hungarian

Other language(s)	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	B2	B2	B2	B1
Certificate of linguistic competence nr. 02845 / 09.02.2017, Technical University Cluj-Napoca					
German	A2	B1	A2	A2	B1

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

Communication skills

- Team working skills and experience (over 30 research projects). Seriousness, flexibility, adaptive capacity, communication skills.
- Communications skills training (certificate Xpert/EUROED nr. RO/NDA/00109 / 16.05.2009)

Organizational / managerial skills

- Local manager (Cluj-Napoca branch) for the PACT project, RO 3405 - POSDRU-AP 2 – DMI 2.1-PS-AM/PS -OI București –Ilfov project (2008-2011)
- Scientific responsible for work groups in international research projects conducted between Technical University Cluj-Napoca and Volkswagen AG (2001-2009).
- Project management training (certificate Xpert/EUROED nr. RO/MP/00171 / 13.06.2009)
- Coordinator for student Internship activities at the Computer Science Department
- Member in the Automation and Computer Science Faculty council (2012 – present)

Job-related skills

- Responsible for scientific and administrative activities in a number of over 30 national and international research projects: CNCSIS-A, CEEX, PN2, FP7, international (Volkswagen AG)
- Participation in the development of prototype-based applications based on stereovision for driving assistance systems and for medical imaging
- Research Internships at Volkswagen AG, "Electronic Research Department", Wolfsburg, Germany, under research contracts between UTCN and Volkswagen AG - periods: May. 2001 - Jan. 2002, July 2003, May to Sept. 2004, Oct. 2005, January 2010 (FP7 Intersafe2)

Computer skills

- Operating Systems: Windows, Linux
- Software development: C/C++, Visual Studio, Matlab, Python
- Image @ graphic editors: Corel Photo-Paint/Draw, Adobe PhotoShop
- Text editors: Microsoft Office™

Other skills Analogue and digital photography, image and video processing, vision and stereovision cameras and systems

Driving license

- B

ADDITIONAL INFORMATION

Publications **Selection of relevant publications**

- S. Nedeveschi, V. Popescu, R. Danescu, **T. Marita**, A Lane Assessment Method Using Visual Information Based On Dynamic Bayesian Network, accepted for publication in *Journal of Intelligent Transportation Systems: Technology, Planning, and Operations*, Vol. 19, Issue 3, 2015, pp. 225-239, Published online 27 Jun 2014, DOI: 10.1080/15472450.2013.856724, ISSN 1547-2450. (IF: 1.344/2014 | 1.514/5-year).
- S. Nedeveschi, V. Popescu, D. Radu, **T. Marita**, F. Oniga, Accurate Ego-Vehicle Global Localization at Intersections through Alignment of Visual Data with Digital Map, *IEEE Transactions on Intelligent Transportation Systems*, Vol. 14, Issue 2, 2013, pp. 673-687, ISSN 1524-9050, DOI: 10.1109/TITS.2012.2228191 (IF: 2.472/2013 | 2.935/5-year)

- S. Nedevschi, C. Vancea, **T. Marita**, T. Graf, On-Line Calibration Method for Stereovision Systems Used in Far Range Detection Vehicle Applications, *IEEE Transactions on Intelligent Transportation Systems*, vol.8, no. 4, pp. 651-660, 2007, ISSN 1524-9050, DOI: [10.1109/TITS.2007.908576](https://doi.org/10.1109/TITS.2007.908576) (IF: 1.689/2007 | 2.935/5-year)
- R. Brehar, **T. Marița**, M. Negru, S. Nedevschi, Pedestrian Identification in Infrared and Visible Images Based on Pose Keypoints Matching, 2019 2nd International Joint Conference on Computer Vision and Pattern Recognition (CCVPR 2019), Nov. 22-24, 2019, Prague, Czech Republic.
- R. Brehar, F. Vancea, **T. Marița**, C. Vancea, S. Nedevschi, Object Detection in Monocular Infrared Images Using Classification – Resregression Deep Learning Architectures, Proceedings of the 15-th IEEE International Conference on Intelligent Computer Communication and Processing (ICCP2019), Sept. 5-7, 2019, Cluj-Napoca, Romania, ISBN 978-1-7281-4914-1.
- R. Galatus, D., Petreus, D. Moga, **T. Marita**, N. Stroia, Extending battery life time in the wireless sensor applications with fluorescent optical fiber concentrator, Proceedings of 2018 IEEE International Instrumentation and Measurement Technology Conference: Discovering New Horizons in Instrumentation and Measurement (I2MTC 2018), 14-17 May, 2018, Huston, Texas, p. 1-6. ISBN 978-153862222-3, DOI: [10.1109/I2MTC.2018.8409560](https://doi.org/10.1109/I2MTC.2018.8409560)
- R. Galatus, P. Farago, **T. Marita**, L. Zeni, Integrated System SPR Array Sensors based on Side Glow MMA Fibers, In Optical Sensors (Optical Society of America), 2-5 July 2018, Zurich Switzerland, p. JTU2A-80. ISBN 978-155752820-9, DOI: [10.1364/BGPPM.2018.JTU2A.80](https://doi.org/10.1364/BGPPM.2018.JTU2A.80)
- R. Brehar, F. Vancea, **T. Marita**, S. Nedevschi, A Deep Learning Approach For Pedestrian Segmentation In Infrared Images, Proceedings of the 14-th IEEE International Conference on Intelligent Computer Communication and Processing (ICCP2018), Sept. 6-8, 2018, Cluj-Napoca, Romania, ISBN 978-1-5386-8445-0, DOI: [10.1109/ICCP.2018.8516630](https://doi.org/10.1109/ICCP.2018.8516630)
- M.C. Giuroiu, **T. Marita**, Gesture Recognition Toolkit Using a Kinect Sensor, Proceedings of the 11-th IEEE International Conference on Intelligent Computer Communication and Processing (ICCP2015), Cluj-Napoca, Romania, Sept. 3-5, 2015, p. 317 – 324, ISBN: 978-1-4673-8200-7, DOI: [10.1109/ICCP.2015.7312678](https://doi.org/10.1109/ICCP.2015.7312678)
- R. Brehar, C. Vancea, **T. Marita**, I. Giosan, S. Nedevschi, Pedestrian Detection in the Context of Multiple-Sensor Data Alignment for Far-Infrared and Stereo Vision Sensors, Proceedings of the 11-th IEEE International Conference on Intelligent Computer Communication and Processing (ICCP2015), Cluj-Napoca, Romania, Sept. 3-5, 2015, p. 385 – 392, ISBN: 978-1-4673-8200-7, DOI: [10.1109/ICCP.2015.7312690](https://doi.org/10.1109/ICCP.2015.7312690)
- M.I. Barbu, I. Giosan, **T. Marita**, Height restriction barriers detection from traffic scenarios using stereo-vision, Proceedings of the 11-th IEEE International Conference on Intelligent Computer Communication and Processing (ICCP2015), Cluj-Napoca, Romania, Sept. 3-5, 2015, p. 209 – 215, ISBN: 978-1-4673-8200-7, DOI: [10.1109/ICCP.2015.7312631](https://doi.org/10.1109/ICCP.2015.7312631)
- A. Ciurte, **T. Marita**, R. Buiga, Circulating Tumor Cells Classification and characterization in Dark Field Microscopic Images of Unstained Blood, Proceedings of the 11-th IEEE International Conference on Intelligent Computer Communication and Processing (ICCP2015), Cluj-Napoca, Romania, Sept. 3-5, 2015, p. 367 – 374, ISBN: 978-1-4673-8200-7, DOI: [10.1109/ICCP.2015.7312686](https://doi.org/10.1109/ICCP.2015.7312686)
- **T. Marita**, M. Negru, R. Danescu, S. Nedevschi, Stop-line Detection and Localization Method for Intersection Scenarios, Proceedings of 2011 IEEE 7-th International Conference on Intelligent Computer Communication and Processing (ICCP 2011), Cluj-Napoca, Romania, 25-27 August, 2011, pp. 293 – 298, ISBN 978-1-4577-1478-8/11.A.D. DOI: [10.1109/ICCP.2011.6047883](https://doi.org/10.1109/ICCP.2011.6047883)
- Haller, C. Pantilie, **T. Marita**, S. Nedevschi, Statistical Method for Sub-Pixel Interpolation Function Estimation, Proceedings of the 13th International IEEE Annual Conference on Intelligent Transportation Systems (ITSC2010), September 19-22, 2010, Madeira Island, Portugal, pp. 1098-1103. ISBN 978-1-4244-7658-9/10. DOI: [10.1109/TIP.2011.2163163](https://doi.org/10.1109/TIP.2011.2163163)
- **T. Marita**, Barriers Detection Method for Stereovision-Based ACC Systems, Proceedings of the 5-th IEEE International Conference on Intelligent Computer Communication and Processing (ICCP2009), Cluj-Napoca, Romania, August 27-29, 2009, pp. 95-102, ISBN: 978-1-4244-5007-7/09. DOI: [10.1109/ICCP.2009.5284778](https://doi.org/10.1109/ICCP.2009.5284778)
- S. Nedevschi, **T. Marita**, R. Danescu, F. Oniga, S. Bota, On-board Stereo Sensor for Intersection Driving Assistance. Architecture and Specification, Proceedings of the 5-th IEEE International Conference on Intelligent Computer Communication and Processing (ICCP2009), Cluj-Napoca, Romania, August 27-29, 2009, pp. 409-416, ISBN: 978-1-4244-5007-7. DOI: [10.1109/ICCP.2009.5284726](https://doi.org/10.1109/ICCP.2009.5284726)
- S. Nedevschi, C.D. Pantilie, **T. Marița**, S.M. Ducea, Statistical Methods for Automatic Segmentation of Elastographic Images, Proceedings of the 4-th IEEE International Conference on Intelligent Computer Communication and Processing (ICCP2008), Cluj-Napoca, Romania, August 28-30,

2008, pp. 287-290, ISBN: 978-4244-2673-7. DOI: 10.1109/ICCP.2008.4648388

- **T. Marita**, F. Oniga, S. Nedevschi, T. Graf, Calibration Accuracy Assessment Methods for Stereovision Sensors Used in Vehicles, in Proceedings of IEEE 3-rd International Conference on Intelligent Computer Communication and Processing (ICCP2007), 6-8 Sept. 2007, Cluj-Napoca, Romania, pp. 111-118, ISBN 1-4244-149-1. DOI: 10.1109/ICCP.2007.4352149
- S. Nedevschi, R. Danescu, **T. Marita**, F. Oniga, C. Pocol, S. Sobol, C. Tomiuc, C. Vancea, M.M. Meinecke, T. Graf, T. B. To, M.A. Obojski, A Sensor for Urban Driving Assistance Systems Based on Dense Stereovision, Proceedings of 2007 IEEE Intelligent Vehicles Symposium, (IV2007), Istanbul, Turkey, June 13-15, 2006, pp 276-283, ISBN 1-4244-1068-1/07. DOI: 10.1109/IVS.2007.4290127
- **T. Marita**, F. Oniga, S. Nedevschi, T. Graf, R. Schmidt, Camera Calibration Method for Far Range Stereovision Sensors Used in Vehicles, Proceedings of IEEE Intelligent Vehicles Symposium, (IV2006), June 13-15, 2006, Tokyo, Japan, pp. 356-363, ISBN 4-901122-86-X. DOI: 10.1109/IVS.2006.1689654
- S. Nedevschi, C. Vancea, **T. Marita**, T. Graf, On-Line Calibration Method for Stereovision Systems Used in Vehicle Applications, Proceedings of the IEEE Intelligent Transportation Systems Conference (ITSC 2006), Toronto, Canada, September 17-20, 2006, pp. 957-962, ISBN 1-4244-0094-5/06. DOI: 10.1109/ITSC.2006.1706868
- S. Nedevschi, R. Danescu, **T. Marita**, F. Oniga, C. Pocol, S. Sobol, T. Graf, R. Schmidt, Driving Environment Perception Using Stereovision, Proceedings of IEEE Intelligent Vehicles Symposium, (IV2005), June 2005, Las Vegas, USA, pp.331-336., ISBN 0-7803-8961-1/05. DOI: 10.1109/IVS.2005.1505124
- S. Nedevschi, R. Schmidt, T. Graf, R. Danescu, D. Frentiu, **T. Marita**, F. Oniga, C. Pocol, 3D Lane Detection System Based on Stereovision, IEEE Intelligent Transportation Systems Conference (ITSC), October 2004, Washington, USA, pp.161-166, ISBN 0-7803-8501-2. DOI: 10.1109/ITSC.2004.1398890
- S. Nedevschi, R. Danescu, D. Frentiu, **T. Marita**, F. Oniga, C. Pocol, R. Schmidt, T. Graf, High Accuracy Stereo Vision System for Far Distance Obstacle Detection, IEEE Intelligent Vehicles Symposium, (IV2004), June 2004, Parma, Italy, pp. 292-297, ISBN 0-7803-8311-7. DOI: 10.1109/IVS.2004.1336397
- S. Nedevschi, **T. Marita**, D. Puiu, Intermediate Representation in Model Based Recognition Using Straight Line and Ellipsoidal Arc Primitives, Proceeding of 11th International Conference on Image Analysis and Processing 2001, 26-28 September, 2001, Palermo, Italy, p. 156-161, DOI: 10.1109/ICIAP.2001.957001

Publications

Books and book chapters

- R. Galatus, N. Puscas, **T. Marita**, *Senzori Optici: concepte fundamentale si aplicatii*, Editura Casa Cartii de Stiinta, Cluj-Napoca, 2015, ISBN 978-606-17-0748-5.
- Sergiu Nedevschi, Radu Danescu, Florin Oniga, **Tiberiu Marita**, *Tehnici de viziune artificiala aplicata în conducerea automata a autovehiculelor*, Editura U.T. Press, Cluj-Napoca, 2012, ISBN 978-973-662-787-3.
- S. Nedevschi, **T. Marita**, R. Danescu, F. Oniga, S. Bota, I. Haller, C.D. Pantilie, M. Drulea, C. Golban, On-board 6D Visual Sensor for Intersection Driving Assistance, chapter in *Advanced Microsystems for Automotive Applications 2010 : Smart Systems For Green Cars And Safe Mobility*, editors G. Meyer, J. Valldorf, published by Springer, 7 May 2010, pp. 253-264, ISBN 978-3-642-12647-5.
- S. Nedevschi, R. Danescu, **T. Marita**, F. Oniga, C. Pocol, S. Bota, M.-M. Meinecke, M. A. Obojski, Stereovision-Based Sensor for Intersection Assistance, chapter in *Advanced Microsystems for Automotive Applications 2009: Smart Systems for Safety, Sustainability and Comfort*, editors G. Meyer, J. Valldorf, W. Gessner, published by Springer, p.129-163, ISBN 978-3-642-00745-3.
- S. Nedevschi, R. Danescu, **T. Marita**, F. Oniga, C. Pocol, S. Bota and C. Vancea, A Sensor for Urban Driving Assistance Systems Based on Dense Stereovision, chapter in "*Stereo Vision*" editor A. Bhatti, published by *InTech Education and Publishing*, Vienna, 2008, pages 235-272, ISBN: 978-953-7619-22-0.
- E. Voiculescu, **T. Marita**, *Optoelectronica*, Ed. Albastra, Cluj-Napoca, 2001, ISBN 973-9443-96-6.

Projects

Selection of relevant research projects in which I was an active team member

- "Stereo-Camera Based Object Recognition System for Vehicle Application (SCABOR)", international research grant founded by Volkswagen AG, Germany
- "Dense Stereo-Based Object Recognition system for automatic cruise control in urban traffic"

- environments (DESBOR)” – international research grant founded by Volkswagen AG, Germany
- “Stereo-Based Object Tracking and Pedestrian Recognition in Traffic environments (DESPED)”, international research grant founded by Volkswagen AG, Germania
 - “Dense STEREO-Based Object Tracking and PEDESTRIAN Recognition for Pre-Crash-Applications (STEREOPED)”, international research grant founded by Volkswagen AG, Germany
 - “Stereo Sensor for City Automatic Cruise Control (STEROSENS)”, international research grant founded by Volkswagen AG, Germany
 - “Cooperative Intersection Safety (INTERSAFE-2)”, nr. 223951, FP7-ICT-2007-2
 - “Incentives for Semantics (INSEMTIVES)”, nr. 231181, FP7-ICT-2007-3
 - “Plug And Navigate ROBOTS for smart factories (PAN-ROBOTS)”, nr. 314193, FP7-ICT
 - “Metoda si sistem pentru achizitia in timp real a imaginilor tridimensionale de inalta rezolutie bazat pe stereoviziune trinoculara”, contract CNCSIS type A
 - “Cercetari privind dezvoltarea tehnicilor computerizate de screening citologic si asistare a diagnosticului histopatologic”, contract CNCSIS type A
 - “Teleasistenta Ultrasonografica în Screeningul si Monitorizarea Hepatocarcinomului – TELEHEPASCAN”, Program CEEX, Contract nr. 3/2005
 - “Studiul calitativ si cantitativ al elastografiei ultrasonore si angioultrasonografiei tridimensionale native in depistarea, diagnosticul si monitorizarea prin tehnici neinvazive a cancerului mamar - ELASTOBREAST”, Program CEEX, Contract nr. 149/2006.
 - “Tratamentul tumorilor renale prin crio-chirurgie laparoscopica, individualizat prin simulare pe model tridimensional reconstituit – CRIOLAPSIM”, Program CEEX, Contract nr. 121/2006.
 - “Algoritm de diagnostic stadial si de predictie a evolutiei fibrozei hepatice folosind tehnici ultrasonografice non-invazive, optimizat prin analiza stocastica si de imagini – SONOFIBROCAST”, PNII - Program 4, Contract 41-071/2007
 - “Perceptia senzoriala, modelarea si reprezentarea modelului lumii pentru sisteme de asistare a conducerii (PERSENS)”, PN2-ID-PCE nr. ID1522 (2009-2011)
 - Cooperative Advanced Driving Assistance System Based on Smart Mobile Platforms and Road Side Units – SmartCoDrive, PN II PCCA 2011 3.2-0742
 - Percepția multi-scalară și multi-modală a mediilor 3D dinamice prin fuziunea datelor de stereoviziune densă, flux optic dens și odometrie vizuală (MULTISENS), PN-II-ID-PCE-2011-3-1086 (2012-2015)
 - CTC-VideoScope (PN-II-PT-PCCA-2013-4-2289) (2014-2016)
 - Automated Urban Parking and Driving – UP-Drive, Horizon 2020, (2016-2019)
 - Multispectral environment perception by fusion of 2D and 3D sensorial data from the visible and infrared spectrum”, (MULTISPECT), PN-III-P4-ID-PCE-2016-0727, contract no. 60/2017 (2017-2019)
 - „Abordare inovativa de mare precizie privind tratamentul intraoperator asistat robotic al tumorilor hepatice pe baza diagnosticului integrat imagistic-molecular” (IMPROVE), PCCDI59/2018 (2017-2020)
 - „Platforma hibrida de comunicatii prin lumina vizibila si realitate augmentata pentru dezvoltarea de sisteme inteligente de asistenta si siguranta activa a autovehiculelor” (CARSAFE), PCCDI 21/2018 (2017-2020)

Projects in which I was responsible with scientific activities

- “Tool for computer assisted mammographic image processing and analysis” (M-ASSIST), PN-III-P2-2.1-CI-2018-1362, nr. 235CI/2018, Scientific coordinator.
- “Research and development contract for the supply of 3 software applications for viewing, segmenting, sectioning, measuring and archiving of 3D models from reconstructed dental arches from US images” (3DentArVis), nr.70/2018 (2018-2019), project financed by Chifor Research SRL, Project coordinator.
- Postdoctoral research project “EXCEL, POSDRU/89/1.5/S/62557 (2010-2013), research theme: “Contributions to the automated interpretation and understanding of the visual content from images and video sequences”
- „Dense-Stereo based Object recognition for Automatic Cruise Control in Urban Environments III (DESBOR-III), contract no. 06019593/15.09.2006, international research grant founded by Volkswagen AG, Germany, team leader