

Curriculum Vitae
Sergiu Nedevschi, PhD E. E.
Professor of Computer Science
Computer Science Department
Technical University of Cluj-Napoca
Romania



Full Name: Sergiu S. Nedevschi

Nationality: Romanian

Job Title: Professor with Computer Science Department, Vice Rector of [Technical University of Cluj-Napoca](#) (TUCN) in charge with Scientific Research and ICT, manager of the Image Processing and Pattern Recognition Research Center.

Date of Birth: 09.10.1951

E-mail Address/ Web Page: Sergiu.Nedevschi@cs.utcluj.ro / <http://cv.utcluj.ro>

Work Phone Number: +40 264 202395

Fax Number: +40 264 592055

Work Address: Technical University of Cluj-Napoca, 28 Memorandumului Street, 400114, Cluj-Napoca, Romania

Academic Qualifications:

1975: Graduate of Technical University of Cluj-Napoca, Msc. in Electrical Engineering;

1993: PhD in Electrical Engineering at Technical University of Cluj-Napoca, Romania (thesis title "Model Based Object Recognition").

Employment:

1975-1983: Senior Research Fellow, Research Institute for Computer Technologies, Cluj-Napoca branch, (I.T.C.Cluj filiala Cluj-Napoca);

1983-1991: Assistant Professor, Computer Science Department, TUCN;

1991-1994: Senior Assistant Professor, Computer Science Department, TUCN;

1994-1998: Associate Professor, Computer Science Department, TUCN;

1998-: Professor, Computer Science Department, TUCN;

2000-2004: Head of Computer Science Department, TUCN;

2004-2012: Dean of Faculty of Automation and Computer Science, TUCN;

2012-: Vice Rector of TUCN in charge with Scientific Research and ICT

Teaching:

I am currently teaching for English and Romanian classes the following courses:

- Image Processing (3th year)
- Pattern Recognition (4th year)
- Artificial Vision (master)
- Artificial Vision for Autonomous Driving (master)

Educational Projects:

- Network of European Tertiary Level Educators – NETTLE, EU founded Thematic Network project, (2005-2007),
- Network for Web-based Continuous Education in European Studies - CONED, Tempus Project IB_JEP 13467/98, (1998-2001)
- Euro-standards in Information Technology - ESITEC, Tempus S_JEP 12531-97, (1997-2000)

Research areas:

- Image Processing and Pattern Recognition
- Stereovision Based Sensorial Perception
- Environment Perception, Understanding and Representation
- Intelligent Vehicles, Driving Assistance Systems, Autonomous Mobile Systems
- Medical Image Processing
- Computer Architecture and Digital Design
- Design with Microprocessors and Digital Signal Processors

Research Activity:

I was involved in 79 research projects, being the coordinator, local coordinator or manager of 61 of them. I have coordinated or managed 29 international projects from which 6 FP7, 1 Horizon 2020, 19 with companies and 3 bilateral projects.

The research activity was carried out in the Image Processing and Pattern Recognition Research Lab established in 1998 and upgraded to Research Center in 2010.

Selected Projects:

1. “Automated Urban Parking and Driving – UP-Drive”, Horizon 2020 project, partners VW, ETH Zurich, IBM Zurich, University of Praga, - **S. Nedevschi**, local coordinator. (2016-2019)
2. “Reconfigurable ROS-based Resilient Reasoning Robotic Cooperating Systems - R5-COP”, FP7 ARTEMIS project, - **S. Nedevschi**, local coordinator. (2014-2017)
3. “Image processing based on stereo and Mono cameras for Driver Assistance Systems”, research project funded by Robert Bosch, Germany, - **S. Nedevschi**, coordinator (2013-2016)
4. “**PAN-Robots** - Plug And Navigate ROBOTS for smart factories”, FP7 project, partners SICK Germany, VTT Finland, University of Modena, Electric 80, - **S. Nedevschi**, local coordinator. (2012 – 2015),
5. “Co-operative Mobility Services of the Future – **CoMoSeF**”, Celtic Plus project, - **S. Nedevschi**, local coordinator. (2012-2015)
6. “Cooperative Advanced Driving Assistance System Based on Smart Mobile Platforms and Road Side Units – **SmartCoDrive**”, Romanian Ministry of Education and Research, code PN II PCCA 2011 3.2-0742 from 03.07.2012, - **S. Nedevschi**, coordinator. (2012-2016)
7. “Multi-scale and multi-modal perception of the 3D dynamic environments by fusion of the dens stereo, dens optical flow and visual odometry data - **MULTISENS**”, Romanian Ministry of Education and Research, code PN II IDEI 2011 - **S. Nedevschi**, project manager. (2012-2016)
8. “**DRIVE C2X**” - Accelerate cooperative mobility, FP7 project, - **S. Nedevschi**, local coordinator. (2011-2013).
9. “**INSEMTIVES** - Incentives for Semantics, FP7 project, **S. Nedevschi** - local coordinator. (2010-2012)
10. “Large Scale Semantic Computing Semantic Web technologies distributed reasoning probabilistic reasoning web-scale inference information retrieval – **LarkC**”, FP7 project, (2010-2011), **S. Nedevschi**, local coordinator. (2010-2011)
11. “Perceptia senzoriala, modelarea si reprezentarea modelului lumii pentru sisteme de asistare a conducerii - **PERSENS**”, Romanian Ministry of Education and Research, code PN-II-IDEI exploratory research, - **S. Nedevschi**, project manager. (2009-2011),
12. “Cooperative Intersection Safety – **INTERSAFE 2**”, FP7 project, partners: IBEO, VW, BMW, Volvo, INRIA, UTC-N, - **S. Nedevschi**, local coordinator. (2008-2011)

Publications:

Books:	20
Chapters in Books:	8
Papers:	414
In proceedings of international conferences	288
In journals	95
In ISI journals	34

Selected publications:

1. D. Mitrea, S. Nedevschi, M. Abrudean, M. Lupsor, R. Badea, "The Role of the Textural Microstructure Co-occurrence Matrices in the Automatic Detection of the Cirrhosis Severity Grades from Ultrasound Images", *Control Engineering and Applied Informatics*, Vol. 18, pp. 96-107, DEC. 2016
2. C. Vicas, S. Nedevschi, "Detecting Curvilinear Features Using Structure Tensors", *IEEE Transactions on Image Processing*, vol. 24, no. 11, pp. 3874 - 3887, Nov. 2015.
3. M. Negru, S. Nedevschi, R. Peter, Exponential Contrast Restoration in Fog Conditions for Driving Assistance, *IEEE Transactions on Intelligent Transportation Systems*, Vol. 16, No. 4, pp. 2257-2268, AUG 2015.
4. V. Popescu, S. Nedevschi, R. Danescu, T. Marita, A Lane Assessment Method Using Visual Information Based on a Dynamic Bayesian Network, *JOURNAL OF INTELLIGENT TRANSPORTATION SYSTEMS*, Vol. 19. No. 3, pp. 225-239, JUL 2015.
5. A. Ciurte, S. Nedevschi, I. Rasa, Systems of nonlinear algebraic equations with unique solution, *NUMERICAL ALGORITHMS*, Vol. 68, No. 2, pp. 367-376, FEB 2015.
6. A. Vatavu, R. Danescu, S. Nedevschi, "Stereovision-Based Multiple Object Tracking in Traffic Scenarios Using Free-Form Obstacle Delimiters and Particle Filters", *IEEE Transactions on Intelligent Transportation Systems*, Vol. 16, No. 1, pp. 498-511, FEB. 2015.
7. R. Danescu and S. Nedevschi, "A Particle-Based Solution for Modeling and Tracking Dynamic Digital Elevation Maps", *IEEE Transactions on Intelligent Transportation Systems*, Vol. 15, No. 3, pp.: 1002-1015, JUN 2014.
8. M. Drulea, S. Nedevschi, Motion estimation using the correlation transform, *IEEE Transactions on Image Processing*, vol. 22, no. 8, pp. 3260-3270, DEC 2013.
9. S. Nedevschi, V. Popescu, D. Radu, M. Tiberiu, 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, pp. 673-687, JUN 2013.
10. R. Varga, S. Nedevschi, "Label transfer by Measuring Compactness", *IEEE Transactions on Image Processing*, MAY 2013.
11. Ciurte, S. Nedevschi, I. Rasa, "An algorithm for solving some nonlinear systems with applications to extremum problems", *Taiwanese Journal of Mathematics*, vol. 16, no. 3, pp. 1137-1150, JUN 2012.
12. C. Pantilie, S. Nedevschi, "SORT-SGM: Sub-pixel Optimized Real-Time Semi-Global Matching for Intelligent Vehicles", în *IEEE Transactions on Vehicular Technology*, vol. 61, no. 3, pp. 1032-1042, MAR 2012.
13. I. Haller, S. Nedevschi, "Design of Interpolation Functions for Sub-Pixel Accuracy Stereo-Vision Systems", *IEEE Transactions on Image Processing*, vol. 21, no. 2, pp. 889-898, FEB 2012.
14. S. Nedevschi, S. Bota, C. Tomiuc, "Stereo-Based Pedestrian Detection for Collision-Avoidance Applications", *IEEE Transactions on Intelligent Transportation Systems*, 2009, vol. 10, no. 3, pp. 380-391, 2009.
15. R. Danescu, S. Nedevschi, "Probabilistic Lane Tracking in Difficult Road Scenarios Using Stereovision", *IEEE Transactions on Intelligent Transportation Systems*, vol. 10, no. 2, pp. 272-282, 2009.
16. S. Nedevschi, C. Vancea, T. Marita, T. Graf, "Online Extrinsic Parameters Calibration for Stereovision Systems Used in Far-Range Detection Vehicle Applications", *IEEE Transactions on Intelligent Transportation Systems*, vol. 8, no. 4, pp. 651-660, 2007.

Patents:

1 patent and 3 proposals in evaluation

Citations:

h-index 16 in ISI Web of Science and 667 citations

h-index 18 in Scopus and 1326 citations

h-index 27 in Google Academic and 2896 citations

Activity:

- Associate Editor for IEEE Transactions on Intelligent Transportation Systems
- Associate Editor for IEEE Transactions on Intelligent Vehicles
- Associate Editor for Electronic Letters on Computer Vision and Image Processing
- Editor of ACAM Scientific Journal
- Member of Editorial Board of Scientific Bulletin of "Politehnica" University of Timisoara, Romania, Transactions on Automatic Control and Computer Science
- Reviewer: IEEE Transactions on Intelligent Transportation Systems, IEEE Transactions on Vehicular Technologies, IEEE Transactions on Image Processing, Optics and Lasers in Engineering, Sensors
- External PhD and habilitation evaluator at universities from Romania, France, Sweden, Ireland, Australia, Pakistan
- Invited professor at VTT Tampere and Helsinki Finlanda, SICK Hamburg Germany, Chonnam National University from Gwangju, Korea, University of Limerick, Ireland, Technical University of Braunschweig, Germany.
- Independent evaluator of EU FP7 projects, evaluator of EU COST and CHIST – ERA projects.
- Member of: IEEE Computer Society, IEEE Signal Processing Society, IEEE Intelligent Transportation Society, IEEE Romania section Computers chapter
- IEEE Romania Section Committee Member in charge with Educational Activities
- Evaluator of National Council of Academic Evaluation and Accreditation (CNEAA),
- Evaluator of Romanian Agency for Quality in Higher Education (ARACIS) in the field of Computer Science and Information Technology.
- Member of National Council for Titles, Diplomas and Certificates (CNATDCU)
- Evaluator of National Council for Scientific Research in Higher Education (CNCSIS)
- Evaluator of National Council for Scientific Research (CNCS)
- Conference Chair, PC co-chair, PC member, member in the local organizing committee, session chair of more than 50 international conferences and workshops: IEEE IV Symposium, IEEE ITSC, IEEE ICCP, IEEE INES, CVVT:E2M, ICINCO, CSCS, SINTES, IEEE SACII. IEEE AQTR
- 20 PhD students received their PhD title under my coordination.

Awards and Honours:

- Correspondent member of Romanian Academy
- Correspondent member of Romanian Academy of Technical Sciences
- “Best Associate Editor Award of the IEEE Transactions on Intelligent Transportation System” in 2011 given by IEEE Intelligent Transportation Systems Society in 2012,
- ”Constantin Budeanu” Romanian Academy Prize in 2009 for papers published in „Stereovision Based Sensorial Perception”,
- “Marius Hanganut” Prize of Technical University of Cluj-Napoca in 2005 for Achievements in Research Activity.

January 2017

Sergiu Nedevschi
Professor in Computer Science