

## LISTA DE LUCRĂRI PUBLICATE

### A – Teza de doctorat

„PERCEPȚIA BAZATĂ PE STEREOVIZIUNE A SCENELOR DE TRAFIC”  
conducător științific : Prof. dr. ing. Sergiu NEDEVSCI.  
Universitatea Tehnică din Cluj-Napoca, 2011

### B – Cărți și capitole în cărți

#### CĂRȚI

1. **F. Oniga**, *De la bit la procesor. Introducere în arhitectura calculatoarelor*, Editura U.T. Press, Cluj-Napoca, 2019, ISBN 978-606-737-366-0
2. **F. Oniga**, M. Negru, *Arhitectura Calculatoarelor – Îndrumător de laborator*, Editura U.T. Press, Cluj-Napoca, 2019, ISBN 978-606-737-350-9
3. S. Nedevschi, T. Marița, , **F. Oniga**, R. Brehar, I. Giosan, S. Bota, A. Ciurte, A. Vatavu, *Image Processing - Laboratory Guide*, UT Press Cluj-Napoca, 2016, ISBN 978-606-737-137-6.
4. M. Negru, **F. Oniga**, S. Nedevschi, *Computer Architecture –Laboratory Guide*, U.T. Press Cluj-Napoca, 2015, ISBN 978-606-737-123-9.
5. S. Nedevschi, T. Marita, R. Danescu, **F. Oniga**, R. Brehar, I. Giosan, C. Vicas, *Procesarea imaginilor. Indrumator de laborator*, U.T. PRESS, Cluj-Napoca, 2013, ISBN 978-973-662-796-5.
6. S. Nedevschi, R. Dănescu, **F. Oniga**, T. Marița, *Tehnici de viziune artificială aplicate în conducerea automată a autovehiculelor*, Editura U.T. Press, Cluj-Napoca, 2012, ISBN 978-973-662-787-3.

#### CAPITOLE DE CARTE

1. 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,” capitol în “Stereo Vision”, publicată de InTech Education and Publishing, Vienna, Noiembrie 2008, ISBN 978-953-7619-22-0.

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## C – Lucrări indexate ISI/BDI

### c1) Articole / studii publicate în reviste de specialitate de circulație internațională recunoscute (cotate ISI)

1. S. Nedevschi, V. Popescu, R. Danescu, 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, No. 2, June 2013, pp. 673-687, ISSN 1524-9050.
2. R. Danescu, **F. Oniga**, V. Turcu, O. Cristea, "Long Baseline Stereovision for Automatic Detection and Ranging of Moving Objects in the Night Sky", *Sensors*, vol. 12, No. 10, October 2012, pp. 12940-12963, ISSN 1424-8220.
3. R. Danescu, C. Pantilie, **F. Oniga**, S. Nedevschi, "Particle Grid Tracking System for Stereovision Based Obstacle Perception in Driving Environments", *IEEE Intelligent Transportation Systems Magazine*, vol. 4, No. 1, March 2012, pp. 6-20, ISSN 1939-1390.
4. R. Danescu, **F. Oniga**, S. Nedevschi, "Modeling and Tracking the Driving Environment with a Particle Based Occupancy Grid", *IEEE Transactions on Intelligent Transportation Systems*, vol. 12, No. 4, December 2011, pp. 1331-1342, ISSN 1524-9050.
5. **F. Oniga**, S. Nedevschi, "Processing Dense Stereo Data Using Elevation Maps: Road Surface, Traffic Isle and Obstacle Detection", in *IEEE Transactions on Vehicular Technologies*, Vol. 59, No.3, pp. 1172-1182, 2010, ISSN 0018-9545.

### c2) Studii publicate la conferințe indexate în baze de date internaționale de referință în domeniul Calculatoare si Tehnologia Informatiei (DBLP, ACM, IEEE, SCOPUS)<sup>1</sup>

1. **F. Oniga**, S. Nedevschi, "A Fast Ransac Based Approach for Computing the Orientation of Obstacles in Traffic Scenes," *2018 IEEE Intelligent Computer Communication and Processing (ICCP)*, pp. 209 - 214, Cluj-Napoca, September, 2018 [IEEE].
2. R. Brehar, C. Vancea, **F. Oniga**, M. Negru and S. Nedevschi, "A study of the impact of HOG and LBP based temporal association on far infrared pedestrian detection," *2016 IEEE 12th International Conference on Intelligent Computer Communication and Processing (ICCP)*, Cluj-Napoca, 2016, pp. 263-268. [IEEE]
3. **F. Oniga**, E. Sarkozi, S. Nedevschi "Fast obstacle detection using U-disparity maps with stereo vision," *2015 IEEE Intelligent Computer Communication and Processing*, pp. 203-207 , Cluj-Napoca, September, 2015. [IEEE] [ISI]
4. **F. Oniga**, S. Prodan, S. Nedevschi, "Traffic light detection on mobile devices," *2015 IEEE Intelligent Computer Communication and Processing*, pp. 287-292 , Cluj-Napoca, September, 2015. [IEEE] [ISI]

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<sup>1</sup> indexate în:

[IEEE] - IEEE Xplore (<http://ieeexplore.ieee.org/Xplore/guesthome.jsp> )

[ACM] - ACM portal (<http://portal.acm.org> )

[DBLP] - (<http://www.informatik.uni-trier.de> )

[SCOPUS] - (<http://www.scopus.com>)

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5. A. Petrovai, A. Costea, **F. Oniga**, S. Nedevschi, "Obstacle detection using stereovision for Android-based mobile devices," *IEEE Intelligent Computer Communication and Processing, Cluj-Napoca*, September 2014, pp. 141-147. [IEEE] [ISI]
  6. **F. Oniga**, A. Trif, S. Nedevschi, "Stereovision for Obstacle Detection on Smart Mobile Devices: First Results," Proceedings of the IEEE Intelligent Transportation Systems Conference, ITSC 2013, The Hague, Netherlands, 6-9 October 2013, pp. 342 – 347. [IEEE] [ISI]
  7. A. Trif, **F. Oniga**, S. Nedevschi, "Stereovision on Mobile Devices for Obstacle Detection in Low Speed Traffic Scenarios," *Proceedings of the IEEE Intelligent Computer Communication and Processing, ICCP 2013*, Cluj-Napoca, Romania, September 5-7, 2013, pp. 169 - 174. [IEEE]
  8. **F. Oniga**, M. Miron, R. Danescu, S. Nedevschi, "Automatic Recognition of Low Earth Orbit Objects From Image Sequences," *Proceedings of the IEEE Intelligent Computer Communication and Processing, ICCP 2011*, Cluj-Napoca, Romania, 25-27 Aug. 2011, pp. 335-338. [IEEE]
  9. **F. Oniga**, S. Nedevschi, "Curb Detection for Driving Assistance Systems: A Cubic Spline-Based Approach," *Proceedings of the IEEE Intelligent Vehicles Symposium, IV 2011*, Baden-Baden, Germany, 5-9 June 2011, pp. 945-950. [IEEE] [ISI]
  10. **F. Oniga**, S. Nedevschi, "Polynomial Curb Detection Based on Dense Stereovision for Driving Assistance," *Proceedings of the IEEE Intelligent Transportation Systems Conference, ITSC 2010*, Madeira, Portugal, 20-22 Sept. 2010, pp. 1110-1115, ISBN:978-1-4244-7657-2. [IEEE]
  11. Radu Danescu, **Florin Oniga**, Sergiu Nedevschi, "Particle Grid Tracking System for Stereovision Based Environment Perception," *Proceedings of the IEEE Intelligent Vehicles Symposium, IV 2010*, San Diego, CA, June 2010, pp. 987-992, ISBN: 978-1-4244-7868-2. [IEEE] [ISI]
  12. I. Haller, C. Pantilie, **F. Oniga**, and S. Nedevschi, "Real-time semi-global dense stereo solution with improved sub-pixel accuracy," *Proceedings of the IEEE Intelligent Vehicles Symposium, IV 2010*, San Diego, CA, June 2010, pp. 369-376, ISBN: 978-1-4244-7868-2. [IEEE] [ISI]
  13. A. Vataavu, S. Nedevschi, **F. Oniga**, "Real-time environment representation based on Occupancy Grid temporal analysis using a Dense Stereo-Vision System", *Proc. of the IEEE International Conference on Intelligent Computer Communication and Processing*, 26-28 aug. 2010, Cluj-Napoca, Romania, pp. 203 - 209, ISBN:978-1-4244-8229-0. [IEEE][ACM]
  14. **F. Oniga**, R. Danescu, S. Nedevschi, "Mixed Road Surface Model for Driving Assistance Systems," *Proceedings of the IEEE Intelligent Computer Communication and Processing, ICCP 2010*, Cluj-Napoca, Romania, 26-18 Aug. 2010, pp. 185-190, ISBN: 978-1-4244-8229-0. [IEEE][ACM]
  15. S. Nedevschi, R. Danescu, T. Marita, **F. Oniga**, C. Pocol, S. Bota, M-M. Meinecke, M. A. Obojski, "Stereovision-Based Sensor for Intersection Assistance", book chapter in *Advanced Microsystems for Automotive Applications*, April 2009, Springer, ISBN 978-3-642-00744-6, pp. 129-163.
  16. S. Nedevschi, T. Marita, R. Danescu, **F. Oniga**, S. Bota, I. Haller, C. Pantilie, M. Drulea, C. Golban, "On-board 6D Visual Sensor for Intersection Driving Assistance", book chapter in *Advanced Microsystems for Automotive Applications*, part 4, 2010, Springer, ISBN:978-3-642-12647-3 , pp. 253-264.
  17. R. Danescu, **F. Oniga**, S. Nedevschi, M-M. Meinecke, "Tracking Multiple Objects Using Particle Filters and Digital Elevation Maps," *Proceedings of the IEEE*

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- Intelligent Vehicles Symposium, IV 2009*, Xi'an, China, 3-5 June 2009, pp. 88-93. [IEEE] [ISI]
18. R. Danescu, D. Lebu, **F. Oniga**, S. Nedevschi, M.-M. Meinecke, "A Flexible Solution for Detection and Tracking of Multiple Objects," *Proceedings of the IEEE International Conference on Intelligent Computer Communication and Processing*, ICCP 2009, Cluj-Napoca, Romania, 27-29 Aug. 2009, pp. 165-168. [IEEE] [ISI]
  19. S. Nedevschi, T. Marita, R. Danescu, **F. Oniga**, S. Bota, "On-board Stereo Sensor for Intersection Driving Assistance. Architecture and Specification," *Proceedings of the IEEE International Conference on Intelligent Computer Communication and Processing*, ICCP 2009, Cluj-Napoca, Romania, 27-29 Aug. 2009, pp. 409-416. [IEEE] [ISI]
  20. **F. Oniga**, S. Nedevschi, R. Danescu, M.-M. Meinecke, "Global Map Building Based on Occupancy Grids Detected from Dense Stereo in Urban Environments," *Proceedings of the IEEE International Conference on Intelligent Computer Communication and Processing*, ICCP 2009, Cluj-Napoca, Romania, 27-29 Aug. 2009, pp. 111-117. [IEEE] [ISI]
  21. A. Vatavu, S. Nedevschi, **F. Oniga**, "Real Time Object Delimiters Extraction for Environment Representation in Driving Scenarios", ICINCO-RA 2009, Milano, Italy, ISBN 978-989-674-000-9, pp. 86-93, 2009. [DPLB] [ISI]
  22. **F. Oniga**, S. Nedevschi, M. Meinecke, "Curb Detection Based on a Multi-Frame Persistence Map for Urban Driving Scenarios," *Proceedings of the IEEE Intelligent Transportation Systems Conference*, ITSC 2008, Beijing, China, 12-15 Oct. 2008, pp. 67-72, ISBN: 978-1-4244-2112-1. [IEEE] [ISI]
  23. S. Nedevschi, A. Vătavu, **F. Oniga**, M. Meinecke, "Forward Collision Detection using a Stereo Vision System", *Proceedings of the IEEE International Conference on Intelligent Computer Communication and Processing*, ICCP 2008, Cluj-Napoca, Romania, 28-30 Aug. 2008, pp. 115-122, ISBN-978-1-4244-2673-7; [IEEE] [ISI]
  24. **F. Oniga**, S. Nedevschi, M. Meinecke "Curb Segments Detection with Temporal Filtering for Urban Driving Scenarios," *Proceedings of the IEEE International Conference on Intelligent Computer Communication and Processing*, ICCP 2008, Cluj-Napoca, Romania, 28-30 Aug. 2008, pp. 291-294, ISBN-978-1-4244-2673-7;. [IEEE] [ISI]
  25. S. Nedevschi, R. Danescu, T. Marita, **F. Oniga**, C. Pocol, S. Sobol, C. Tomiuc, C. Vancea, M. Meinecke, T. Graf, T. B. To, M.A. Obojski, "A Sensor for Urban Driving Assistance Systems Based on Dense Stereovision," *Proceedings of the IEEE Intelligent Vehicles Symposium, IV 2007*, Istanbul, Turkey, 13-15 June 2007, pp. 276-283. [IEEE] [ISI]
  26. **F. Oniga**, S. Nedevschi, M.-M. Meinecke, T-B. To, "Road Surface and Obstacle Detection Based on Elevation Maps from Dense Stereo," *Proceedings of the IEEE Intelligent Transportation Systems Conference*, ITSC 2007, Seattle, Washington, USA, Sept. 30 - Oct. 3 2007, pp. 859 – 865, ISBN: 978-1-4244-1396-6. [IEEE] [ISI]
  27. **F. Oniga**, S. Nedevschi, M.-M. Meinecke, "Curb Detection Based on Elevation Maps from Dense Stereo," *Proceedings of the IEEE International Conference on Intelligent Computer Communication and Processing*, ICCP 2007, Cluj-Napoca, Romania, 6-8 Sept. 2007, pp.119-125, ISBN 1-4244-149-1. [IEEE] [ISI]
  28. 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. [IEEE] [ISI]

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29. S. Nedevschi, **F. Oniga**, R. Danescu, T. Graf, R. Schmidt, "Increased Accuracy Stereo Approach for 3D Lane Detection," *Proceedings of the IEEE Intelligent Vehicles Symposium, IV 2006*, Tokyo, Japan, June 13-15, 2006, pp. 42-49. [IEEE]
  30. T. Marita, **F. Oniga**, S. Nedevschi, T. Graf, R. Schmidt, "Camera Calibration Method for Far Range Stereovision Sensors Used in Vehicles," *Proceedings of the IEEE Intelligent Vehicles Symposium, IV 2006*, Tokyo, Japan, June 13-15, 2006, pp. 356-363, 4-901122-86-X. [IEEE]
  31. S. Nedevschi, S. Bota, T. Marita, **F. Oniga**, C. Pocol, „Real-Time 3D Environment Reconstruction Using High Precision Trinocular Stereovision,” 2006, IEEE AQTR 2006, 1-4244-0361-8/06. [IEEE]
  32. S. Nedevschi, R. Danescu, T. Marita, **F. Oniga**, C. Pocol, S. Sobol, T. Graf, R. Schmidt, "Driving Environment Perception Using Stereovision," *Proceedings of the IEEE Intelligent Vehicles Symposium, IV 2005*, Las Vegas, Nevada, USA, 6-8 June 2005, pp.331-336. [IEEE]
  33. S. Nedevschi, R. Schmidt, T. Graf, R. Danescu, D. Frentiu, T. Marita, **F. Oniga**, C. Pocol, "3D Lane Detection System Based on Stereovision," *Proceedings of the IEEE Intelligent Transportation Systems Conference, ITSC 2004*, Washington, DC, 3-6 Oct. 2004, pp. 161-166. [IEEE]
  34. S. Nedevschi, R. Schmidt, T. Graf, R. Danescu, D. Frentiu, T. Marita, **F. Oniga**, C. Pocol, "High Accuracy Stereo Vision System for Far Distance Obstacle Detection," *Proceedings of the IEEE Intelligent Vehicles Symposium, IV 2004*, Parma, Italy, 14-17 June 2004, pp.161-166. [IEEE]
  35. S. Nedevschi, R. Danescu, D. Frentiu, T. Marita, **F. Oniga**, C. Pocol, "Spatial Grouping of 3D Points from Multiple Stereovision Sensors," *Proceedings of the IEEE International Conference on Networking, Sensing and Control, ICNSC 2004*, Taipei, Taiwan, pp. 874-879. [IEEE]
  36. S. Nedevschi, R. Danescu, D. Frentiu, T. Marita, **F. Oniga**, C. Pocol, Thorsten Graf, Rolf Schmidt, "High Accuracy Stereovision Approach for Obstacle Detection on Non-Planar Roads", *IEEE Intelligent Engineering Systems 2004 (IEEE-INES 2004)*, pp. 211-216. [IEEE]
  37. S. Nedevschi, R. Danescu, D. Frentiu, T. Marita, **F. Oniga**, C. Pocol, R. Schmidt, T. Graf, "Stereovision Approach For Obstacle Detection On Non-Planar Roads", in proc of 1st International Conference on Informatics in Control, Automation and Robotics (ICINCO), 2004, Vol. 2, pp. 11-18. [DBLP]

## D – Lucrări publicate în reviste și volume de conferințe cu referenți (neindexate)

### **d1) Studii publicate în volumele unor manifestări științifice internaționale recunoscute din străinătate**

1. **F. Oniga**, S. Nedevschi, M. M. Meinecke, "Temporal Integration of Occupancy Grids Detected from Dense Stereo Using an Elevation Map Representation", in *Proceedings of the 6th International Workshop on Intelligent Transportation (WIT 2009)*, Hamburg, Germany, pp. 133-138.
2. S. Nedevschi, R. Danescu, T. Marita, **F. Oniga**, C. Pocol, "Moving Camera Rotation Estimation Using Horizon Line Features' Motion Field", in proc of 6-th

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- International Carpathian Control Conference, 2005, Lilafured-Miskolc, Hungary, pp.449-454, ISBN 963-661-645-0.
3. S. Nedevschi, R. Danescu, D. Frentiu, T. Marita, **F. Oniga**, C. Pocol, "3D Environment Reconstruction Using Multiple Moving Stereovision Sensors", microCAD International Scientific Conference, Miskolc, Hungary, March 2004, pp. 93-98
  4. S. Nedevschi, R. Danescu, D. Frentiu, T. Marita, **F. Oniga**, C. Pocol, "Extraction of Dynamic Traffic Description Using Multiple Stereovision Equipped Vehicles", Proceedings of Computing, Communications and Control Technologies (CCCT'04), Austin, Texas, USA, 15-17 August, 2004, pp. 410-415
  5. S. Nedevschi, T. Marita, R. Danescu, **F. Oniga**, D. Frentiu, C. Pocol, "Camera Calibration Error Analysis in Stereo Measurements", Proceedings of MicroCAD 2003 International Scientific Conference, Miskolc, 6-7 March 2003, pp. 51-57
  6. S. Nedevschi, R. Danescu, D. Frentiu, T. Marita, **F. Oniga**, C. Pocol, Real-Time Extraction of 3D Dynamic Environment Description Using Multiple Stereovision Sensors, Proceedings of International Conference on CCCT 2003, Orlando, Florida, 29 July – 1 August, 2003, Vol. 3, pp. 520-524

**d2) Studii publicate în volumele unor manifestări științifice internaționale recunoscute din țară**

1. **F. Oniga**, S. Nedevschi, „Improving the accuracy of 3D stereo reconstruction through sub-pixel contour-based correlation”, 2006, ”, in proc of IEEE 2-nd International Conference on Intelligent Computer Communication and Processing 2006 (IEEE-ICCP 2006), 978-973-662-233-5.
2. S. Nedevschi, R. Danescu, D. Frentiu, T. Marita, **F. Oniga**, C. Pocol, “Dynamic traffic description using stereovision equipped vehicles and ad-hoc wireless networking”, IEEE-TTTC International Conference on Automation, Quality Testing and Robotics, Cluj Napoca, Romania, May, 2004.
3. S. Nedevschi, M. Vaida, T. Marita, R. Danescu, D. Frentiu, **F. Oniga**, Ciprian Pocol, ”Camera Calibration Method for Stereo Measurements”, Proceedings of IEEE-TTTC International Conference on Automation, Quality and Testing, Robotics,(THETA 13), May 23 – 25, 2002, Cluj-Napoca, Romania, pp. 111-118

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Semnătura

