Universitatea Tehnică din Cluj-Napoca
Departamentul Calculatoare

Conf. dr. ing. Florin Oniga

LISTA DE LUCRĂRI PUBLICATE

A – Teza de doctorat

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

B – Cărţi şi capitole în cărţi

CĂRŢI

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. Mariţa, , **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. Mariţa, *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.

C – Lucrări indexate ISI/BDI

c1) Articole / studii publicate în reviste de specialitate de circulaţie internaţională 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 conferinţe indexate în baze de date internaţionale de referinţă în domeniul Calculatoare si Tehnologia Informatiei (DBLP, ACM, IEEE, SCOPUS)[1]

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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[ACM] - ACM portal (http://portal.acm.org)
[DBLP] - (http://www.informatik.uni-trier.de)
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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. Vatavu, 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*

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]**
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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]**
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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]**
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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]**
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D – Lucrări publicate în reviste şi volume de conferinţe cu referenţi (neindexate)

d1) Studii publicate în volumele unor manifestări ştiinţifice internaţionale 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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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 ştiinţifice internaţionale recunoscute din ţară

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.
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