

Lista de lucrări publicate

Candidat: Conf. Dr. Ing. Radu Gabriel Dănescu
Post: Profesor 12, Departamentul Calculatoare

1. Teze

1.1. Teza de doctorat

1. **Radu Dănescu**, „Tehnici de viziune artificială în timp real bazate pe estimatori probabilistici”, Universitatea Tehnică din Cluj-Napoca, 2009 (conducător prof. dr. ing. Sergiu Nedevschi).

1.2. Teza de abilitare

1. **Radu Dănescu**, Solutions for modeling and perception of dynamic 3D environments, Universitatea Tehnică din Cluj-Napoca, 2014.

2. Cărți și capitole din cărți

2.1. Cărți

1. 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.
2. Sergiu Nedevschi, Tiberiu Marița, **Radu Dănescu**, Florin Oniga, Raluca Brehar, Ionel Giosan, Cristian Vicaș, *Procesarea imaginilor - îndrumător de laborator*, ISBN 978-973-662-796-5, U.T. Press Cluj-Napoca, 2013.
3. Sergiu Nedevschi, Tiberiu Marița, **Radu Dănescu**, Florin Oniga, Raluca Brehar, Ionel Giosan, Silviu Bota, Anca Ciurte, Andrei Vatavu, *Image Processing - Laboratory Guide*, ISBN 978-606-737-137-6, UT Press Cluj-Napoca, 2016

2.2. Capitole de carte

1. Sergiu Nedevschi, **Radu Danescu**, Tiberiu Marita, Florin Oniga, Ciprian Pocol, Silviu Bota, Cristian Vancea, *A Sensor for Urban Driving Assistance Systems Based on Dense Stereovision*, in "Stereo Vision", book edited by Asim Bhatti, ISBN 978-953-7619-22-0, InTech Europe, Croatia, 2008.
2. Sergiu Nedevschi, **Radu Danescu**, Tiberiu Marita, Florin Oniga, Ciprian Pocol, Silviu Bota, Marc Michael Meinecke, Marian Andrzej Obojski, *Stereovision-Based Sensor for Intersection Assistance*, in "Advanced Microsystems for Automotive Applications: Smart Systems for Safety, Sustainability, and Comfort", book edited by G. Meyer, J. Valldorf, W. Gessner, ISBN 978-3-642-00744-6, Springer Berlin Heidelberg, 2009.
3. Sergiu Nedevschi, Tiberiu Marita, **Radu Danescu**, Florin Oniga, Silviu Bota, Istvan Haller, Cosmin Pantilie, Marius Drulea, Catalin Golban, *On-Board 6D Visual Sensor for Intersection Driving Assistance*, in "Advanced Microsystems for Automotive Applications: Smart Systems for Green Cars and Safe Mobility", book edited by G. Meyer, J. Valldorf, ISBN 978-3-642-12647-5, Springer Berlin Heidelberg, 2010.
4. **R. Danescu**, A. Petrovai, R. Itu, S. Nedevschi, *Generic Obstacle Detection for Mobile Devices Using a Dynamic Intermediate Representation*, book chapter in Volume 427 of the series Advances in Intelligent Systems and Computing (Proceedings of the Second International Afro-European Conference for Industrial Advancement AECIA 2015), pp 629-639, Springer Berlin Heidelberg, 2016, ISBN 978-3-319-29503-9, ISSN 2194-5357.

3. Articole in extenso, publicate în reviste din fluxul științific internațional principal

3.1. Articole in reviste cotate ISI

1. **R. Danescu**, R. Itu, A. Petrovai, "Generic Dynamic Environment Perception Using Smart Mobile Devices", *Sensors*, Vol. 16, No. 10, 2016, Art. No. 1721, ISSN 1424-8220.
2. D. Borza, A. S. Darabant, **R. Danescu**, "Real-Time Detection and Measurement of Eye Features from Color Images", *Sensors*, Vol. 16, No. 7, 2016, Art. No. 1105, ISSN 1424-8220.
3. 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: Technology, Planning, and Operations*, vol. 19, No. 3, 2015, pp. 225-239, ISSN 1547-2442.
4. 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, February 2015, pp. 498-511, ISSN 1524-9050.
5. **R. Danescu**, A. Ciurte, V. Turcu, "A Low Cost Automatic Detection and Ranging System for Space Surveillance in the Medium Earth Orbit Region and Beyond", *Sensors*, vol. 14, No. 2, February 2014, pp. 2703-2731, ISSN 1424-8220.
6. **R. Danescu**, S. Nedevschi, "A Particle-Based Solution for Modeling and Tracking Dynamic Digital Elevation Maps", *IEEE Transactions on Intelligent Transportation Systems*, vol. 15, No. 3, June 2014, pp. 1002-1015, ISSN 1524-9050.
7. D. Borza, A. S. Darabant, **R. Danescu**, "Eyeglasses Lens Contour Extraction from Facial Images Using an Efficient Shape Description", *Sensors*, vol. 13, No. 10, October 2013, pp. 13638-13658, ISSN 1424-8220.
8. 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.
9. O. Cristea, P. Dolea, V. Turcu, **R. Danescu**, "Long baseline stereoscopic imager for close to Earth objects range measurements", *Acta Astronautica*, vol. 90, No. 1, September 2013, pp. 41-48, ISSN 0094-5765.
10. **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.
11. **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.
12. **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.
13. **R. Danescu**, S. Nedevschi, "Probabilistic Lane Tracking in Difficult Road Scenarios Using Stereovision", *IEEE Transactions on Intelligent Transportation Systems*, vol. 10, No. 2, June 2009, pp. 272-282m ISSN 1524-9050.

3.2. Articole in reviste BDI

1. S Nedevschi, T Marita, M Vaida, **R Danescu**, D Frentiu, F Oniga, C Pocol, D Moga, „Camera Calibration Method for Stereo Measurements”, *Journal of Control Engineering and Applied Informatics*, 4 (2), pp. 21-28, 2002.
2. **R. Danescu**, S. Nedevschi, S. Danescu, R. Cosgarea, „Flexible Web-Based System for Storing and Retrieving Information about Patients with Genodermatoses”, *AUTOMATION COMPUTERS APPLIED MATHEMATICS*, VOL.17, NO. 1, 2008, pp. 74-79.
3. S. Nedevschi, **R. Danescu**, D. Frentiu, T. Marita, F. Oniga, C. Pocol, T. Graf, R. Schmidt, "High Accuracy Stereovision Approach for Obstacle Detection on Non-Planar Roads," *Journal of Automation, Computers and Applied Mathematics (ACAM)*, Vol.14, No. 2, 2005, Cluj-Napoca, Romania, pp. 173-178, ISSN 1221-437X.

4. Publicații in extenso, apărute în lucrări ale principalelor conferințe internaționale de specialitate

4.1. Articole indexate ISI (conform www.isiknowledge.com)

1. A. Petrovai, **R. Danescu**, M. Negru, C. C. Vancea, S. Nedevschi, "A Stereovision based Rear-End Collision Warning System on Mobile Devices", *2016 IEEE 12th International Conference on Intelligent Computer Communication and Processing (ICCP 2016)*, pp. 285-292.
2. M. P. Muresan, S. Nedevschi, **R. Danescu**, "Patch warping and local constraints for improved block matching stereo correspondence", *2016 IEEE 12th International Conference on Intelligent Computer Communication and Processing (ICCP 2016)*, pp. 321-327.
3. **R.G. Danescu**, R. Itu, A. Petrovai, „Sensing the driving environment with smart mobile devices, in Proceedings” - *2015 IEEE 11th International Conference on Intelligent Computer Communication and Processing, ICCP 2015*, pp. 271-278, 2015.
4. D.L. Borza, **R.G. Danescu**, A.S. Darabant, „Eyeglasses contour extraction using genetic algorithms, in Proceedings”, *2015 IEEE 11th International Conference on Intelligent Computer Communication and Processing, ICCP 2015*, pp. 327-333, 2015.
5. A. Petrovai, **R. Danescu**, S. Nedevschi, „A stereovision based approach for detecting and tracking lane and forward obstacles on mobile devices”, in *IEEE Intelligent Vehicles Symposium, Proceedings*, vol. 2015-August, pp. 634-641, 2015.
6. Andrei Vatavu, **Radu Danescu**, Sergiu Nedevschi, „Modeling and Tracking of Crowded Traffic Scenes by using Policy Trees, Occupancy Grid Blocks and Bayesian Filters”, in *2014 IEEE 17th International Conference On Intelligent Transportation Systems (ITSC)*, pp. 1948-1955, 2014.
7. Razvan Itu, **Radu Danescu**, „An Efficient Obstacle Awareness Application for Android Mobile Devices”, in *2014 IEEE International Conference On Intelligent Computer Communication And Processing (ICCP)*, pp. 157-163, 2014.
8. Anca Ciurte, Adrian Soucup, **Radu Danescu**, „Generic Method for Real-time Satellite Detection Using Optical Acquisition Systems”, in *2014 IEEE International Conference On Intelligent Computer Communication And Processing (ICCP)*, pp. 179-185, 2014.
9. **Radu Danescu**, Anca Ciurte, Florin Oniga, Octavian Cristea, Paul Dolea, Vlad Dascal, Vlad Turcu, Liviu Mircea, Dan Moldovan, „Surveillance of Medium and High Earth Orbits Using Large Baseline Stereovision”, in *TIM 2013 Physics Conference*, vol. 1634, pp. 144-150, 2014.
10. Andrei Vatavu, **Radu Danescu**, Sergiu Nedevschi, „Tracking Multiple Objects in Traffic Scenarios using Free-Form Obstacle Delimiters and Particle Filters”, in *2013 16th International IEEE Conference On Intelligent Transportation Systems - (ITSC)*, pp. 1346-1351, 2013.
11. **Radu Danescu**, Sergiu Nedevschi, „A Flexible Solution for Modeling and Tracking Generic Dynamic 3D Environments, in 2013 16th International IEEE Conference On Intelligent Transportation Systems - (ITSC), pp. 1686-1692, 2013.
12. Voichita Popescu, **Radu Danescu**, Sergiu Nedevschi, „On-Road Position Estimation by Probabilistic Integration of Visual Cues”, in *2012 IEEE Intelligent Vehicles Symposium (IV)*, pp. 583-589, 2012.
13. Andrei Vatavu, **Radu Danescu**, Sergiu Nedevschi, „Real-Time Dynamic Environment Perception in Driving Scenarios using Difference Fronts”, in *2012 IEEE Intelligent Vehicles Symposium (IV)*, pp. 717-722, 2012.
14. **Radu Danescu**, Sergiu Nedevschi, „New Results in Stereovision Based Lane Tracking”, in *2011 IEEE Intelligent Vehicles Symposium (IV)*, pp. 230-235, 2011.
15. **Radu Danescu**, Florin Oniga, Sergiu Nedevschi, „Particle Grid Tracking System for Stereovision Based Environment Perception”, in *2010 IEEE Intelligent Vehicles Symposium (IV)*, pp. 987-992, 2010.
16. Ioana Chira, Ancuta Chibulcutean, **Radu Danescu**, „Real-Time Detection of Road Markings for Driving Assistance Applications”, in *ICCES'2010: the 2010 International Conference On Computer Engineering & Systems*, pp. 158-163, 2010.
17. Florin Oniga, Sergiu Nedevschi, **Radu Danescu**, Marc-Michael Meinecke, „Global Map Building Based on Occupancy Grids Detected from Dense Stereo in Urban Environments”, in *2009 IEEE 5th International Conference On Intelligent Computer Communication And Processing*, pp. 111-117, 2009.
18. **Radu Danescu**, Daniel Lebu, Florin Oniga, Sergiu Nedevschi, Marc-Michael Meinecke, „A Flexible Solution for Detection and Tracking of Multiple Objects”, in *2009 IEEE 5th International Conference On Intelligent Computer Communication And Processing*, pp. 165-168, 2009.

19. Sergiu Nedevschi, Marita Tiberiu, **Radu Danescu**, Florin Oniga, Silviu Bota, „On-board Stereo Sensor for Intersection Driving Assistance. Architecture and Specification”, in 2009 IEEE 5th International Conference On Intelligent Computer Communication And Processing, pp. 409-416, 2009.
20. **Radu Danescu**, Florin Oniga, Sergiu Nedevschi, Marc-Michael Meinecke, „Tracking Multiple Objects Using Particle Filters and Digital Elevation Maps”, in 2009 IEEE Intelligent Vehicles Symposium, pp. 88-93, 2009.
21. **Radu Danescu**, Sergiu Nedevschi, „Adaptive and Robust Road Tracking System Based on Stereovision and Particle Filtering, in 2008 IEEE 4th International Conference On Intelligent Computer Communication And Processing, *Proceedings*, pp. 67-73, 2008.
22. **Radu Danescu**, Sergiu Nedevschi, Marc-Michael Meinecke, Thanh-Binh To, „A Stereovision-Based Probabilistic Lane Tracker for Difficult Road Scenarios”, in 2008 IEEE Intelligent Vehicles Symposium, pp. 789-794, 2008.
23. **R. Danescu**, S. Nedevschi, M. Meinecke, T. Graf, „Stereovision based vehicle tracking in urban traffic environments”, in 2007 *IEEE Intelligent Transportation Systems Conference*, pp. 355-359, 2007.
24. **R. Danescu**, S. Nedevschi, M. Meinecke, T. To, „Lane geometry estimation in urban environments using a stereovision system”, in 2007 *IEEE Intelligent Transportation Systems Conference*, pp. 360-365, 2007.
25. Sergiu Nedevschi, **Radu Danescu**, Tiberiu Marita, Florin Oniga, Ciprian Pocol, Stefan Sobol, Corneliu Tomiuc, Cristian Vancea, Marc Meinecke, Thorsten Graf, Thanh To, Marian Obojski, „A sensor for urban driving assistance systems based on dense stereovision”, in 2007 IEEE Intelligent Vehicles Symposium, pp. 830-837, 2007.
26. **Radu Danescu**, Sergiu Nedevschi, Thanh-Binh To, „A stereovision-based lane detector for marked and non-marked urban roads”, in ICCP 2007: IEEE 3RD International Conference On Intelligent Computer Communication And Processing, pp. 81-88, 2007.
27. Sergiu Nedevschi, Florin Oniga, **Radu Danescu**, Thorsten Graf, Rolf Schmidt, „Increased accuracy stereo approach for 3D lane detection”, in 2006 *IEEE Intelligent Vehicles Symposium*, pp. 42-49, 2006.
28. S. Nedevschi, **R. Danescu**, T. Marita, F. Oniga, C. Pocol, S. Sobol, T. Graf, R. Schmidt, „Driving environment perception using stereovision”, in 2005 IEEE Intelligent Vehicles Symposium, pp. 331-336, 2005.
29. 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”, in 2004 *IEEE Intelligent Vehicles Symposium*, pp. 292-297, 2004.
30. S. Nedevschi, **R. Danescu**, D. Frentiu, T. Marita, F. Oniga, C. Pocol Online detection of dynamic traffic description using stereo sensor, GPS and wireless communication equipped vehicles, in International Conference on Computing, Communications and Control Technologies, Vol 4, *Proceedings*, pp. 410-415, 2004.
31. S. Nedevschi, R. Schmidt, T. Graf, **R. Danescu**, D. Frentiu, T. Marita, F. Oniga, C. Pocol, „3D lane detection system based on stereovision”, in ITSC 2004: *7th International Ieee Conference On Intelligent Transportation Systems*, pp. 161-166, 2004.
32. S. Nedevschi, **R. Danescu**, D. Frentiu, T. Marita, F. Oniga, C. Pocol, „Real-time extraction of 3D dynamic environment description using multiple stereovision sensors”, in *International Conference on Computers, Communication and Control 2003*, pp. 520-524, 2003.

4.2. Articole indexate BDI (conform scopus, dblp)

1. A. Ciurte, **R. Danescu**, „Automatic detection of MEO satellite streaks from single long exposure astronomic images”, in *VISAPP 2014 - Proceedings of the 9th International Conference on Computer Vision Theory and Applications*, vol. 1, pp. 538-544, 2014.
2. **R.G. Danescu**, „Obstacle detection using dynamic particle-based occupancy grids”, *2011 International Conference on Digital Image Computing: Techniques and Applications, DICTA 2011*, pp. 585-590, 2011.

3. F. Oniga, M. Miron, **R. Danescu**, S. Nedevschi, Automatic recognition of low earth orbit objects from image sequences, in *Proceedings - 2011 IEEE 7th International Conference on Intelligent Computer Communication and Processing*, ICCP 2011, pp. 335-338, 2011.
4. A. Vatavu, **R. Danescu**, S. Nedevschi, „Environment perception using dynamic polylines and particle based occupancy grids”, *2011 IEEE 7th International Conference on Intelligent Computer Communication and Processing*, ICCP 2011, pp. 239-244, 2011.
5. T. Marita, M. Negru, **R. Danescu**, S. Nedevschi, „Stop-line detection and localization method for intersection scenarios”, *2011 IEEE 7th International Conference on Intelligent Computer Communication and Processing*, ICCP 2011, pp. 293-298, 2011.
6. **R. Danescu**, S. Nedevschi, „Detection and classification of painted road objects for intersection assistance applications”, *IEEE Conference on Intelligent Transportation Systems*, ITSC, pp. 433-438, 2010.
7. F. Oniga, **R. Danescu**, S. Nedevschi, „Mixed road surface model for driving assistance systems”, *2010 IEEE 6th International Conference on Intelligent Computer Communication and Processing*, ICCP10, pp. 185-190, 2010.
8. S. Nedevschi, V. Popescu, T. Marita, **R. Danescu**, M.-M. Meinecke, M.-A. Obojski, J. Knaup, „Intersection representation enhancement by sensorial data and digital map alignment”, *2010 IEEE 6th International Conference on Intelligent Computer Communication and Processing*, ICCP10, pp. 393-400, 2010.
9. **R. Danescu**, S. Sobol, S. Nedevschi, T. Graf, „Stereovision-based side lane and guardrail detection”, in *IEEE Conference on Intelligent Transportation Systems*, ITSC, pp. 1156-1161, 2006.
10. S. Nedevschi, **R. Danescu**, D. Frentiu, T. Marita, F. Oniga, C. Pocol, „Spatial grouping of 3D points from multiple stereovision sensors”, *IEEE International Conference on Networking, Sensing and Control*, vol. 2, pp. 874-879, 2004.
11. Sergiu Nedevschi, **Radu Danescu**, Dan Frentiu, Tiberiu Marita, Florin Oniga, Ciprian Pocol, Thorsten Graf, Rolf Schmidt, „High accuracy stereovision approach for obstacle detection on non-planar roads”, in *Proc. IEEE INES*, pp. 211-216-2004.
12. **Radu Danescu**, Sergiu Nedevschi, „Robust Real-Time Lane Delimiting Features Extraction”, in *Proceedings of 2nd IEEE International Conference on Intelligent Computer Communication and Processing (ICCP 2006)*, pp. 77-82-2006.
13. Sergiu Nedevschi, **Radu Danescu**, Ciprian Pocol, Marc Michael Meinecke, „Stereo Image Processing for ADAS and Pre-Crash Systems”, *5th International Workshop on Intelligent Transportation*, pp. 55-60-2008.
14. Sergiu Nedevschi, **Radu Danescu**, Dan Frentiu, Tiberiu Marita, Florin ONIGA, Ciprian POCOL, „Dynamic Traffic Description Using Stereovision Equipped Vehicles and Ad-hoc Wireless Networking”, *AQTR 2004*.
15. Sergiu Nedevschi, Tiberiu Marita, **Radu Danescu**, Florin Oniga, Dan Frentiu, Ciprian Pocol, „3D Environment Reconstruction Using Multiple Moving Stereovision Sensors”, in *microCAD International Scientific Conference*, pp. 93-98-2004.

5. Extras: cele mai relevante 10 publicații, incluse în format electronic în dosar

1. **R. Danescu**, S. Nedevschi, “Probabilistic Lane Tracking in Difficult Road Scenarios Using Stereovision”, *IEEE Transactions on Intelligent Transportation Systems*, vol. 10, No. 2, June 2009, pp. 272-282m ISSN 1524-9050.
2. **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.
3. **R. Danescu**, S. Nedevschi, “A Particle-Based Solution for Modeling and Tracking Dynamic Digital Elevation Maps”, *IEEE Transactions on Intelligent Transportation Systems*, vol. 15, No. 3, June 2014, pp. 1002-1015, ISSN 1524-9050.
4. **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.

5. 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.
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, February 2015, pp. 498-511, ISSN 1524-9050.
7. **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.
8. **R. Danescu**, A. Ciurte, V. Turcu, "A Low Cost Automatic Detection and Ranging System for Space Surveillance in the Medium Earth Orbit Region and Beyond", *Sensors*, vol. 14, No. 2, February 2014, pp. 2703-2731, ISSN 1424-8220.
9. **R. Danescu**, R. Itu, A. Petrovai, "Generic Dynamic Environment Perception Using Smart Mobile Devices", *Sensors*, Vol. 16, No. 10, 2016, Art. No. 1721, ISSN 1424-8220.
10. D. Borza, A. S. Darabant, **R. Danescu**, "Real-Time Detection and Measurement of Eye Features from Color Images", *Sensors*, Vol. 16, No. 7, 2016, Art. No. 1105, ISSN 1424-8220.

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