

CURRICULUM VITAE

Last name: Gasteratos

First name: Antonios

Father's name: Christos

Date of birth: 10 March, 1972

Place of birth: Athens, Hellas (Greece)

Nationality: Hellenic (Greek)

Work address: Section of Production Systems,
Department of Production and Management Engineering,
Democritus University of Thrace
GR-671 00 XANTHI
GREECE

Work phone: +302541079359

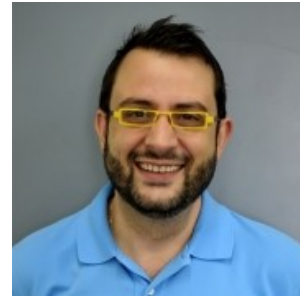
Work Fax: +302541079343

Corresponding address: P.O. Box 377
GR-671 00 XANTHI
GREECE

E-mail address: agaster@pme.duth.gr
gasteratos@ieee.org

Web page: <http://robotics.pme.duth.gr/>
<http://robotics.pme.duth.gr/antonis/>

ResearcherID B-7796-2012



Current Position

Associate Professor: “Mechatronics and Artificial Vision”, Department of Production and Management Engineering, Democritus University of Thrace, since 2012.

Positions Held

- 1999 – 2000: Post –Doctoral Fellow, LIRA-Lab, DIST, University of Genoa, Italy.
- 2001 – 2003: Lecturer (non-permanent position), Department of Electrical and Computer Engineering, Democritus University of Thrace (academic year 2001-2002 and fall semester of year 2001-2002).
- 2002 - 2003: Assistant Professor (non-permanent position), Department of Electrical and Computer Engineering; Department of Educational Sciences in Early Childhood, Democritus University of Thrace (spring semester).
- 2003 – 2007: Lecturer: “Robotics”, Department of Production and Management Engineering, Democritus University of Thrace.
- 2005 - 2007: Visiting Professor, Department of Educational Sciences in Early Childhood, Democritus University of Thrace.
- 2007 – 2012: Assistant Professor: “Mechatronics and Artificial Vision”, Department of Production and Management Engineering, Democritus University of Thrace, since 2007 (tenureship 2011).

Studies

- Ph.D., Democritus University of Thrace, Greece, Feb. 1999.
- Diploma (equal to Masters) in Electrical and Computer Engineering, Democritus University of Thrace, Greece, Nov. 1994.

Languages

Hellenic (Greek), mother tongue.

English, excellent.

Italian, very good.

Research Interests

Robotics, with emphasis on artificial vision, vestibular and hearing systems and their integration. Intelligent and autonomous robots (humanoid, walking, underwater, flying, etc). Autonomous behaviours (navigation, grasping, etc). Multi-sensor data fusion with

application to robotics and automation. Deep learning architectures with application to robot cognition. Safety in mechatronics systems.

Design and implementation of digital VLSI and FPGA systems. Digital image processing, with emphasis on non-linear and fuzzy image processing. Computer architectures and microprocessors. Their application on digital image processing, machine vision and pattern recognition.

Publications

Ph.D. Thesis

- A1. Antonios Gasteratos, *Development and Hardware Implementation of New Techniques for Non-linear Image Processing*, Department of Electrical and Computer Engineering, Democritus University of Thrace, Xanthi, Greece, 1998. (in Greek).

Diploma Thesis

- B1. Antonios Gasteratos, *Design and VLSI Implementation of a Circuit for the Computation of Morphological Operators*, Department of Electrical and Computer Engineering, Democritus University of Thrace, Xanthi, Greece, 1994. (in Greek).

Books, Book Chapters, Editorials

- C1. Antonios Gasteratos and Ioannis Andreadis, "Soft Mathematical Morphology: Extensions, Algorithms and Implementations", **Invited Contribution**, *Advances in Imaging and Electron Physics*, **Vol. 110**, Ch. 3, pp 63-99, P.W. Hawkes (Editor), 1999.
- C2. Maria Vardavoulia, Antonios Gasteratos and Ioannis Andreadis, "Binary, Gray-Scale, and Vector Soft Mathematical Morphology: Extensions, Algorithms, and Implementations", **Invited Contribution**, *Advances in Imaging and Electron Physics*, **Vol. 119**, Ch. 1, pp 1-54, Peter W. Hawkes (Editor), 2001.
- C3. Konstantinos Konstantinidis, Antonios Gasteratos and Ioannis Andreadis, "The Impact of Low-Level Features in Semantic-Based Image Retrieval", **Invited contribution under review**, *Semantic-Based Visual Information Retrieval*, Yu-Jin Zhang, to appear.
- C4. Antonios Gasteratos, Spyridon Mouroutsos and Ioannis Andreadis, *Measurements' Technique*, Publication of the Association for the Development and the Exploitation of the Property of DUTH, Xanthi 2006. (in Greek).
- C5. Antonios Gasteratos, Markus Vincze, and John K. Tsotsos (Eds.), *Computer Vision Systems*, ICVS 2008, Lecture Notes in Computer Science **Vol. 5008**, Springer-Verlag, Berlin-Heidelberg, 2008.

- C6. Angelos Amanatiadis, Antonios Gasteratos, Vassilios G. Kaburlasos and Stelios E. Papadakis, "Image Stabilization in Active Robot Vision" in *Robot Vision*, Ales Ude (Ed.), IN-TECH Publishing, Vienna, 2010, (ISBN 978-953-307-077-3).
- C7. Angelos Amanatiadis and Antonios Gasteratos, "Stereo Vision System for Remotely Operated Robots" in *Remote and Telerobotics*, Nicolas Mollet (Ed.), IN-TECH Publishing, Vienna, 2010, (ISBN: 978-953-307-081-0).
- C8. Dimitrios Chrysostomou and Antonios Gasteratos, "Three-Dimensional Scene Reconstruction: A Review of Approaches", in *Depth Map and 3D Imaging Applications: Algorithms and Technologies*, Ch. 8, pp 142-162, Aamir Saeed Malik, Tae-Sun Choi and Humaira Nisar (Eds), IGI Global, Hershey PA, USA, 2011, (ISBN 978-1-61350-326-3).
- C9. Lazaros Nalpantidis and Antonios Gasteratos, "Stereo Vision Depth Estimation Methods for Robotic Applications", in *Depth Map and 3D Imaging Applications: Algorithms and Technologies*, Ch. 21, pp 397-417, Aamir Saeed Malik, Tae-Sun Choi and Humaira Nisar (Eds), IGI Global, Hershey PA, USA, 2011, (ISBN 978-1-61350-326-3).
- C10 Rigas Kouskouridas and Antonios Gasteratos, "From Object Recognition to Object Localization", in *Cross-Disciplinary Applications of Artificial Intelligence and Pattern Recognition: Advancing Technologies* Ch. 1, pp 1-7, Vijay Kumar Mago and Nitin Bhatia (Eds), IGI Global, Hershey PA, USA, 2012, (ISBN 978-1-61350-429-1).
- C11. Lazaros Nalpantidis, Ioannis Kostavelis and Antonios Gasteratos, "Intelligent Stereo Vision for Autonomous Robot Traversability Estimation", in *Robotic Vision: Technologies for Machine Learning and Vision Applications*, Jose García-Rodríguez and Miguel Cazorla, IGI Global, to appear.
- C12. George Giakos, Mohd Zaid Abdullah, Wuqiang Yang, Maria Petrou, Konstantina Nikita, Matteo Pastorino, Mihalis Zervakis, Angelos Amanatiadis, Dimitrios A. Karras, Michele Ceccarelli, Dimitris Iakovidis, George Zentai, Cesare Svelto and Antonios Gasteratos, "Imaging Systems and Techniques 2011", *Measurement Science and Technology* (IOP), **Vol 23**, 110101, (1pp), 2012, *Special Issue on Imaging Systems and Techniques*. doi:10.1088/0957-0233/23/11/110101.
- C13. Ioannis Kostavelis, Evangelos Boukas, Lazaros Nalpantidis, Antonios Gasteratos, "A Mechatronic Platform for Robotic Educational Activities", in *Mechatronics Engineering: Research Development and Education*, Maki K. Habib, J. Paulo Davim (eds), ISTE, London, UK, 2013.

Journal Papers

- D1. Antonios Gasteratos, Ioannis Andreadis and Philippos Tsalides, "Improvement of the Majority Gate Algorithm for Grey Scale Dilation/Erosion", *IEE Electronics Letters*, **Vol. 32**, No 9, pp 806-807, 1996.
- D2. Ioannis Andreadis, Antonios Gasteratos and Philippos Tsalides, "An ASIC for Fast Grey-Scale Dilation", *Microprocessors and Microsystems*, **Vol. 20**, No 2, pp 89-96, 1996.
- D3. Antonios Gasteratos, Ioannis Andreadis and Philippos Tsalides, "Extension and Very Large Scale Integration Implementation of the Majority Gate for Gray Scale Morphological Operations", *Optical Engineering*, **Vol. 36**, No 3, pp 857-861, 1997.
- D4. Antonios Gasteratos, Ioannis Andreadis and Philippos Tsalides, "Realization of Rank Order Filters Based on the Majority Gate", *Pattern Recognition*, **Vol. 30**, No 9, pp 1571-1576, 1997.
- D5. Ioannis Andreadis, Ioannis Kokolakis, Antonios Gasteratos and Philippos Tsalides, "A Stochastic D/A Converter Based on a Cellular Automaton Architecture", *VLSI Design*, **Vol. 7**, No 2, pp 203-210, 1998.
- D6. Antonios Gasteratos, Ioannis Andreadis and Philippos Tsalides, "Fuzzy Soft Mathematical Morphology", *IEE Proceedings Vision Image and Signal Processing*, **Vol. 145**, No 1, pp 40-49, 1998.
- D7. Antonios Gasteratos, Ioannis Andreadis and Philippos Tsalides, "Realisation of Soft Morphological Filters", *IEE Proceedings Circuits, Devices and Systems*, **Vol. 145**, No 3, pp 201-206, 1998.
- D8. Antonios Gasteratos, Ioannis Andreadis and Philippos Tsalides, "A Parallel Architecture for Implementation of Filters Based on Order Statistics", *Pattern Recognition Letters*, **Vol. 19**, No 9, pp 815-820, 1998.
- D9. Antonios Gasteratos and Ioannis Andreadis, "A New Algorithm for Weighted Order Statistics Operations", *IEEE Signal Processing Letters*, **Vol. 6**, No 4, pp 84-86, 1999.
- D10. Antonios Gasteratos and Ioannis Andreadis, "Non-Linear Image Processing in Hardware", *Pattern Recognition*, **Vol. 33**, No 6, pp 1013-1021, 2000. **Special Issue on Mathematical Morphology and Nonlinear Image Processing.**
- D11. Ricardo Manzotti, Antonios Gasteratos, Giorgio Metta and Giulio Sandini, "Disparity Estimation on Log-Polar Images and Vergence Control", *Computer Vision and Image Understanding*, **Vol. 83**, No 2, pp 97-117, 2001.
- D12. Antonios Gasteratos, Carlos Beltran, Giorgio Metta and Giulio Sandini, "PRONTO: A System for Mobile Robot Navigation via CAD-Model Guidance", *Microprocessors and Microsystems*, **Vol. 26**, No 1, pp 17-26, 2002.

- D13. Ioannis Andreadis, Charalambos Fyrinides, Antonios Gasteratos and Yannis Boutalis, "Decomposition of Grey-scale Morphological Structuring Elements in Hardware", *Image Processing and Communications*, **Vol. 8**, No 2, pp 13-22, 2002.
- D14. Markus Vincze, Minu Ayromlou, Carlos Beltran, Antonios Gasteratos, Simon Hoffgaard, Ole Madsen, Wolfgang Ponweiser and Michael Zillich, "A System to Navigate a Robot into a Ship Structure", *Machine Vision and Applications*, **Vol. 14**, No 1, pp 15-25, 2003, **Special Issue on Computer Vision Systems**.
- D15. Giorgio Metta, Antonios Gasteratos and Giulio Sandini, "Learning to Track Colored Objects with Log-polar Vision", *Mechatronics*, **Vol. 14**, No 9, pp 989-1006, 2004.
- D16. Konstantinos Konstantinidis, Antonios Gasteratos and Ioannis Andreadis, "Image Retrieval Based on Fuzzy Color Histogram Processing", *Optics Communications*, **Vol. 248**, No 4-6, pp 375-386, 2005.
- D17. Vassilios Vonikakis, Antonios Gasteratos and Ioannis Andreadis, "Enhancement of Perceptually Salient Contours Using a Parallel Artificial Cortical Network", *Biological Cybernetics*, **Vol. 94**, No 3, pp 192-214, 2006.
- D18. Ioannis Gasteratos, Antonios Gasteratos and Ioannis Andreadis, "An Algorithm for Adaptive Mean Filtering and its Hardware Implementation", *Journal of VLSI Signal Processing*, **Vol. 44**, No 1-2, pp 63-78, 2006.
- D19. Christos Georgoulas, Leonidas Kotoulas, Georgios Ch. Sirakoulis, Ioannis Andreadis and Antonios Gasteratos, "Real-Time Disparity Map Computation Module", *Microprocessors and Microsystems*, **Vol. 32**, No 3, pp 159-170, 2008.
- D20. Antonios Gasteratos, "Tele-autonomous Active Stereo-vision Head", *International Journal of Optomechatronics*, **Vol. 2**, No 2, pp 144-161, 2008.
- D21. Vassilios Vonikakis, Ioannis Andreadis and Antonios Gasteratos, "Fast Centre-surround Contrast Modification", *IET Image Processing*, **Vol. 2**, No 1, pp 19-34, 2008.
IET Image Processing Premium 2009
- D22. Lazaros Nalpantidis, Georgios Ch. Sirakoulis, and Antonios Gasteratos, "Review of Stereo Vision Algorithms: from Software to Hardware", *International Journal of Optomechatronics*, to appear.
- D23. Nikolaos Kyriakoulis and Antonios Gasteratos, "A Recursive Fuzzy System for Efficient Digital Image Stabilization", *Advances in Fuzzy Systems*, **Vol. 2008**, Article ID 920615, 8 pages, 2008, doi:10.1155/2008/920615.
- D24. Antonios Gasteratos, "Active Camera Stabilization with a Fuzzy-grey Controller", *European Journal of Mechanical and Environmental Engineering*, Vol 2009-2, pp 18-20, 2009.
- D25. Lazaros Nalpantidis and Antonios Gasteratos, "Stereo Vision for Robotic Applications in the Presence of Non-ideal Lighting Conditions", *Image and Vision Computing*, (Elsevier), Vol 28, No 6, pp 940-951, 2010.

- D26. Lazaros Nalpantidis and Antonios Gasteratos, "Biologically and Psychophysically Inspired Adaptive Support Weights Algorithm for Stereo", *Robotics and Autonomous Systems*, (Elsevier), Vol 58, No 5, pp 457-464, 2010.
- D27. Nikolaos Kyriakoulis and Antonios Gasteratos, "Color Based Monocular Visuo-Inertial 3D Pose Estimation of a Volant Robot", *IEEE Transactions on Instrumentation & Measurement*, **Vol 59**, No 10, pp 2706-2715, 2010, doi 10.1109/TIM.2010.2045258.
- D28. Nikolaos Kyriakoulis, Antonios Gasteratos and Spyridon G. Mouroutsos, "An Adaptive Fuzzy System for the Control of the Vergence Angle on a Robotic Head", *Journal of Intelligent and Fuzzy Systems*, (IOS press), **Vol 21**, No 6, pp 385-394, 2010, doi: 10.3233/IFS-2010-0459.
- D29. Vassilios Vonikakis, Ioannis Andreadis and Antonios Gasteratos, "Recognition of 2-d Shapes Inspired by the Human Visual System", *Journal of Computational Methods in Science and Engineering*, (IOS press), **Vol 10**, No 1-2, pp 23-35, 2010.
- D30. Alexandros Iosifidis, Spyridon G. Mouroutsos and Antonios Gasteratos, "A hybrid static/active video surveillance system", *International Journal of Optomechatronics*, (Taylor & Fransis), **Vol 5**, No 1, pp 80-95, 2011.
- D31. Lazaros Nalpantidis and Antonios Gasteratos, "Stereovision-based Fuzzy Obstacle Avoidance Method", *International Journal of Humanoid Robotics*, (Wolrd Scientific), **Vol 8**, No 1, pp 169-183, 2011, doi: 10.1142/S0219843611002381.
- D32. Lazaros Nalpantidis, Angelos Amanatiadis, Georgios Sirakoulis and Antonios Gasteratos, "An Efficient Hierarchical Matching Algorithm for Processing Uncalibrated Stereo Vision Images and its Hardware Architecture", *IET Image Processing*, **Vol 5**, No 5, pp 481-492, 2011.
- D33. Angelos Amanatiadis, Vassileios G. Kaburlasos, Antonios Gasteratos and S. E. Papadakis, "Evaluation of Shape Descriptors for Shape-Based Image Retrieval", *IET Image Processing*, **Vol 5**, No 5, pp 493-499, 2011.
- D34. Rigas Kouskouridas and Antonios Gasteratos, "Location Assignment of Recognized Objects via a Multi-Camera System", *International Journal of Signal Processing, Image Processing and Pattern Recognition*, **Vol 4**, No 3, pp 1-17, 2011.
- D35. Lazaros Nalpantidis, Georgios Sirakoulis and Antonios Gasteratos, "Non Probabilistic Cellular Automata-enhanced Stereo Vision Simultaneous Localisation and Mapping (SLAM)", *Measurement Science and Technology* (IOP), **Vol 22**, 114027, (13pp), doi:10.1088/0957-0233/22/11/114027.
- D36. Angelos Amanatiadis, Antonios Gasteratos and Dimitrios Koulouriotis, "An Intelligent Multi-sensor System for First Responder Indoor Navigation", *Measurement Science and Technology* (IOP), **Vol 22**, 114025, (12pp), doi:10.1088/0957-0233/22/11/114025.

- D37. Rigas Kouskouridas, Antonios Gasteratos and Efthimios Badekas, "Evaluation of Two-parts Algorithms for Objects' Depth Estimation", *IET Computer Vision*, **Vol 6**, No 1, pp 70-78, 2012, doi: 10.1049/iet-cvi.2009.0094.
- D38. Ioannis Kostavelis and Antonios Gasteratos, "On the Optimization of Hierarchical Temporal Memory", *Pattern Recognition Letters*, (Elsevier), **Vol 22**, No 5, pp 670-676, 2012, doi: 10.1016/j.patrec.2011.11.017.
- D39. Nikolaos Kyriakoulis and Antonios Gasteratos, "On Visuo-inertial Fusion for Robot Pose Estimation Using Hierarchical Fuzzy Systems", *International Journal of Optomechatronics* (Taylor & Francis), **Vol 6**, No 1, pp 17-36, 2012, doi: 10.1080/15599612.2012.664241.
- D40. Dimitrios Chrysostomou, Antonios Gasteratos, Lazaros Nalpantidis and Georgios Ch. Sirakoulis, "Multi-view 3D Scene Reconstruction Using Ant Colony Optimization Techniques", *Measurement Science and Technology* (IOP), **Vol 23**, 114006, (12pp), 2012, *Special Issue on Imaging Systems and Techniques*. doi:10.1088/0957-0233/23/11/114006.
- D41. Dimitrios Chrysostomou, Nikolaos Kyriakoulis and Antonios Gasteratos, "An Efficient Method to Reconstruct Prismatic Rigid Objects by Multiple Camera Arrangements", *Measurement Science and Technology* (IOP), **Vol 23**, 114002, (11pp), 2012, *Special Issue on Imaging Systems and Techniques*. doi:10.1088/0957-0233/23/11/114002.
- D42. Rigas Kouskouridas, Konstantinos Charalampous and Antonios Gasteratos, "6DoF Object Pose Measurement by a Monocular Manifold-based Pattern Recognition Technique", *Measurement Science and Technology* (IOP), **Vol 23**, 114005, (13pp), 2012, *Special Issue on Imaging Systems and Techniques*. doi:10.1088/0957-0233/23/11/114005.
- D43. Eleftheria Mitka, Antonios Gasteratos, Nikolaos Kyriakoulis and Spyridon G. Mouroutsos, "Safety Certification Requirements for Domestic Robots", *Safety Science* (Elsevier), **Vol 50**, No 10, pp 1888-1897, 2012, doi: 10.1016/j.ssci.2012.05.009.
- D44. Konstantinos Charalampous, Ioannis Kostavelis, Angelos Amanatiadis and Antonios Gasteratos, "A Sparse Deep-Learning Algorithm for Recognition and Categorisation", *Electronics Letters* (IET), **Vol 48**, No 20, pp 1265-1266, 2012, doi: 10.1049/el.2012.1033
- D45. Ioannis Kostavelis, Lazaros Nalpantidis and Antonios Gasteratos, "Collision Risk Assessment for Autonomous Robots by Offline Traversability Learning", *Robotics and Autonomous Systems*, (Elsevier), **Vol 60**, No 11, pp 1367-1376, 2012, doi: 10.1016/j.robot.2012.03.004.
- D46. Rigas Kouskouridas, Antonios Gasteratos and Christos Emmanouilidis, "Efficient Representation and Feature Extraction for Neural Network-based 3D Object Pose Estimation", in press *Neurocomputing*
- D47. Vasilios Vonikakis, Dimitrios Chrysostomou, Rigas Kouskouridas and Antonios Gasteratos, "A Biologically Inspired Scale-space for Illumination Invariant

Feature Detection", accepted for publication in *Measurement Science and Technology* (IOP).

Conference Papers

- E1. Ioannis Andreadis, Antonios Gasteratos and Philippos Tsalides, "Fast computation of the response of the typical CIE observer", *Hellenic Conference on Solid State Physics*, Xanthi, September 1995.
- E2. Ioannis Andreadis, Antonios Gasteratos and Philippos Tsalides, "A New ASIC for the Measurement of Appearance" *IEEE Instrumentation and Measurement Technology Conference*, Brussels, Belgium, 4-6 June 1996, **Vol. 1**, pp 545-548, (ISBN 0-7803-3312-8).
- E3. Antonios Gasteratos, Ioannis Andreadis and Philippos Tsalides, "A New Hardware Structure for Implementation of Soft Morphological Filters", *7th International Conference on Computer Analysis of Images and Patterns (CAIP '97)*, Kiel, Germany, September 1997. *Lecture Notes in Computer Science*, Springer-Verlag, Berlin-Heidelberg, **Vol. 1296**, pp 488-494.
- E4. Antonios Gasteratos, Ioannis Andreadis and Philippos Tsalides, "Soft Morphological Structuring Element Decomposition", *International Symposium on Mathematical Morphology (ISMM '98)*, Amsterdam, The Netherlands, June 1998. *Mathematical Morphology and its Applications to Image and Signal Processing*, H.J.A.M. Heijmans and J.B.T.M. Roerdink, (Editors), Kluwer Academic Publishers, Dordrecht, The Netherlands, 1998, pp 407-413.
- E5. Antonios Gasteratos, Ioannis Andreadis and Philippos Tsalides, "Non-Linear Edge Detectors Based on the Majority Gate", *International Conference on Telecommunications (ICT '98)*, Chalkidiki, Greece, June 1998, **Vol. 4**, pp 155-159.
- E6. Markus Vincze, Minu Ayromlou, Stuart Galt, Antonios Gasteratos, Claus Gramkow, Neal Hewer, Simon Hoffgaard, Ole Madsen, Ricardo Martinotti, Ole Neckelmann, Giulio Sandini, Richard Waterman and Michael Zillich, "RobVision - Visually Guiding a Walking Robot through a Ship Structure", *1st International Conference on Computer Applications and Information Technology in the Maritime Industries (COMPIT '2000)*, Potsdam/Berlin, Germany, March-April 2000, pp 477-489. **Invited Talk.**
- E7. Antonios Gasteratos, Ricardo Martinotti, Giorgio Metta and Giulio Sandini, "Precise 3D Measurements with a High Resolution Stereo Head", *1st International Workshop on Image and Signal Processing and Analysis (IWISPA '2000)*, Pula, Croatia, 14-15 June 2000, pp 171-176.
- E8. Stuart Galt, David S. Cooke, Giulio Sandini, Antonios Gasteratos and Carlos Beltran, "An Advanced Walking Vehicle with Autonomous Navigation Capabilities", *3rd*

- International Conference on Climbing and Walking Robots (CLAWAR'2000)*, Madrid, Spain, 2-4 October 2000, pp 731-739.
- E9. Minu Ayromloy, Carlos Beltran, Antonios Gasteratos, Ole Madsen, Wolfgang Ponweiser and Michael Vincze, "ROBVISION: Vision Based Navigation for Mobile Robots", *25th Workshop of the Austrian Association for Pattern Recognition (OeAGM)*, Berchtesgaden, Bavaria, Germany, 7-8 June 2001, pp 25-32.
- E10. Ioannis Andreadis, Charalambos Fyrinides, Antonios Gasteratos and Yannis Boutalis, "Decomposition of Grey-scale Morphological Structuring Elements in Hardware", *European Workshop on Service and Humanoid Robots*, June 2001, Santorini, Greece.
- E11. Michael Vincze, Minu Ayromloy, Carlos Beltran, Antonios Gasteratos, Simon Hoffgaard, Ole Madsen, Wolfgang Ponweiser and Michael Zillich, "A System to Navigate a Robot into a Ship Structure", *International Workshop on Computer Vision Systems (ICVS 2001)*, Vancouver, Canada, 7-8 July 2001. *Lecture Notes in Computer Science*, Bernt Schiele and Gerhard Sagerer (Eds.), Springer-Verlag Berlin-Heidelberg, **Vol. 2095**, pp 268-283.
- E12. Carlos Beltran, Minu Ayromlou, Wolfgang Ponweiser, Ole Madsen, Markus Vincze and Antonios Gasteratos, "CAD Based Vision for Guiding a Mobile Robot", *Advanced Concepts for Intelligent Vision Systems (ACIVS'2001)*, Baden-Baden, Germany, 30 July – 3 August 2001, pp 13-17.
- E13. Wolfgang Ponweiser, Minu Ayromlou, Markus Vincze, Carlos Beltran, Ole Madsen and Antonios Gasteratos, "ROBVISION - Vision Based Navigation for Mobile Robots" *IEEE International Conference on Multisensor Fusion and Integration for Intelligent Systems (MFI'01)*, Baden-Baden, Germany 20-22 August 2001, pp 109-114.
- E14. Markus Vincze, Minu Ayromloy, Carlos Beltran, Antonios Gasteratos, Simon Hoffgaard, Ole Madsen, Wolfgang Ponweiser and Michael Zillich, "A System to Navigate a Robot into a Ship Structure", *4th International Conference on Climbing and Walking Robots (CLAWAR'2001)*, Karlsruhe, Germany, 24-26 September 2001, pp 953-960. **Invited Talk.**
- E15. Ole Madsen, Minu Ayromloy, Carlos Beltran, Antonios Gasteratos, Wolfgang Ponweiser and Markus Vincze, "Model and Vision Based Pose Estimation for Mobile Robots", *LASTED International Conference on Robotics and Applications*, Tampa, Florida, USA, 19-22 November 2001.
- E16. Antonios Gasteratos and Giulio Sandini, "Factors Affecting the Accuracy of an Active Vision Head", *2nd Hellenic Conference on Artificial Intelligence (SETN-02)*, Thessaloniki, Greece, 11-12 April 2002, *Lecture Notes in Artificial Intelligence*, Ioannis P. Vlahavas and Constantine D. Spyropoulos (Eds.), Springer-Verlag Berlin-Heidelberg, **Vol. 2308**, pp 413-422.

- E17. Antonios Gasteratos, Panagiotis Zafeiridis and Ioannis Andreadis, "An Intelligent System for Aerial Image Retrieval and Classification", *3rd Hellenic Conference on Artificial Intelligence (SETN-04)*, Samos, Greece, 4-8 May 2004, *Lecture Notes in Artificial Intelligence*, George A. Vouros and Themis Panayiotopoulos (Eds.), Springer-Verlag Berlin-Heidelberg, **Vol. 3025**, pp 63-71.
- E18. Gerasimos Louverdis, Ioannis Andreadis and Antonios Gasteratos, "A New Content Based Median Filter", *12th European Signal Processing Conference (EUSIPCO 2004)*, 6-10 September 2004, Vienna, Austria, 1337-1340.
- E19. Vassilios Vonikakis, Ioannis Andreadis and Antonios Gasteratos, "A New Approach to Machine Contour Perception", *International Conference of Computational Methods in Sciences and Engineering 2004 (ICCMSE 2004)*, Vouliagmeni-Kavouri, Attica, Greece, 19-23 November 2004, *Lecture Series on Computer and Computational Sciences*, Theodore Simos and George Maroulis (Eds.), VSP, Leiden, The Netherlands, pp 566-568.
- E20. Leonidas Kotoulas, Christos Georgoulas, Antonios Gasteratos, Georgios Ch. Sirakoulis and Ioannis Andreadis, "A Novel Three Stage Technique for Accurate Disparity Maps", *EOS Conference on Industrial Imaging and Machine Vision*, 13-15 June 2005, Munich, Germany.
- E21. Leonidas Kotoulas, Antonios Gasteratos, Georgios Ch. Sirakoulis, Christos Georgoulas and Ioannis Andreadis, "Enhancement of Fast Acquired Disparity Maps using a 1-D Cellular Automation Filter", *5th LASTED International Conference on Visualization, Imaging, and Image Processing (VIIP 2005)*, 7-9 September 2005, Benidorm, Spain, pp 355-359.
- E22. Vassilios Vonikakis, Ioannis Andreadis and Antonios Gasteratos, "Simple-Shape Classification Based on the Human Visual System", *5th LASTED International Conference on Visualization, Imaging, and Image Processing (VIIP 2005)*, 7-9 September 2005, Benidorm, Spain, pp 162-167.
- E23. Antonios Gasteratos, Paschalis Gonidis and Ioannis Andreadis, "A Hardware Structure for Time-to-impact Computation Using Log-Polar Images", *5th International Conference on Technology and Automation (ICTA'05)*, 15-16 October 2005, Thessaloniki, Greece, pp 348-353.
- E24. Gusztáv Arz, András Tóth, Daniel Bratanov, Nikolay Zlatov, Roberto Guzmán Diana, Stefko Burdzhiev, Antonios Gasteratos, David Pereira, Carlos Beltran, Uberto Delprato, "EU FP6 Project RESCUER Develops Intelligent Robot and Information Technologies for EOD/IEDD/Rescue Mission", *1st Middle-East European Conference on Military Technology*, 19-20 October 2005, Budapest, Hungary.
- E25. Vassilios Vonikakis, Ioannis Andreadis and Antonios Gasteratos, "Extraction of Salient Contours in Color Images", *4th Hellenic Conference on Artificial Intelligence (SETN-*

- 04), Heraklion, Greece, 18-20 May 2006, *Lecture Notes in Artificial Intelligence*, Grigoris Antoniou, George Potamias, Costas Spyropoulos, Dimitris Plexousakis (Eds.), Springer-Verlag Berlin-Heidelberg, **Vol. 3955**, pp 400-410.
- E26. Nikolaos Kyriakoulis, Antonios Gasteratos and Angelos Amanatiadis, "Comparison of Data Fusion Techniques for Robot Navigation", *4th Hellenic Conference on Artificial Intelligence (SETN-04)*, Heraklion, Greece, 18-20 May 2006, *Lecture Notes in Artificial Intelligence*, Grigoris Antoniou, George Potamias, Costas Spyropoulos, Dimitris Plexousakis (Eds.), Springer-Verlag Berlin-Heidelberg, **Vol. 3955**, pp 547-550.
- E27. Georgios Panitsidis, Konstantinos Konstantinidis, Vasileios Vonikakis, Ioannis Andreadis and Antonios Gasteratos, "Fast Image Retrieval Based on Attributes of the Human Visual System", 7th Nordic Signal Processing Symposium (*NORSIG 2006*), Reykjavik, Iceland, June 7 - 9, 2006, pp 206-209.
- E28. Kostas Mpampos and Antonios Gasteratos, "Autonomous Navigation of a Flying Vehicle on a Predefined Route", *Towards Autonomous Robotic Systems (TAROS 2006)*, 4 - 6 September, 2006, University of Surrey, Guildford, U.K., pp 134-138, (ISBN 0-9553879-0-6).
- E29. Vassilios Vonikakis, Ioannis Andreadis and Antonios Gasteratos, "Fast Dynamic Range Compression for Grayscale Images", *International Workshop on Advanced Image Technology 2007 (IWAIT 2007)*, Bangkok, Thailand, 8-9 January 2007.
- E30. Vassilios Vonikakis, Ioannis Andreadis, Nikolaos Papamarkos and Antonios Gasteratos, "Adaptive Document Binarization: A human vision approach", *2nd International Conference on Computer Vision Theory and Applications (VISAPP)* 8 - 11 March, 2007, Barcelona, Spain.
- E31. Angelos Amanatiadis, Ioannis Andreadis, Antonios Gasteratos and Nikolaos Kyriakoulis, "A Rotational and Translational Image Stabilization System for Remotely Operated Robots", *IEEE International Workshop on Imaging Systems and Techniques, (IST 2007)*, Krakow, Poland, May 2007.
- E32. Angelos Amanatiadis, Ioannis Andreadis and Antonios Gasteratos, "A Log-polar Interpolation Applied to Image Scaling", *IEEE International Workshop on Imaging Systems and Techniques, (IST 2007)*, Krakow, Poland, May 2007.
- E33. Dimitrios Chrysostomou and Antonios Gasteratos, "Comparison and Evaluation of Similarity Measures for Vergence Angle Estimation", *16th International Workshop on Robotics in Alpe-Adria-Danube (RAAD2007)*, Ljubljana, Slovenia, 7-9 June 2007.
- E34. Lazaros Nalpantidis, Georgios Ch. Sirakoulis and Antonios Gasteratos, "Review of Stereo Matching Algorithms for 3D vision", *16th International Symposium on Measurement and Control in Robotics (ISMCR 2007)*, Warsaw, Poland, 21-23 June 2007, pp 116-124 .

- E35. Carlos Beltran Gonzalez, Antonios Gasteratos, Angelos Amanatiadis, Dimitrios Chrysostomou, Roberto Guzman, Andras Toth, Lorand Szollosi, Andras Juhasz and Peter Galambos, "Methods and techniques for intelligent navigation and manipulation for bomb disposal and rescue operations", *IEEE International Workshop on Safety, Security, and Rescue Robotics (SSRR2007)*, Rome, Italy, 27-29 September 2007.
- E36. Gusztav Arz, Andras Toth, Daniel Bratanov, Nikolay Zlatov, Roberto Guzman Diana, Stephan Burdzhiev, Antonios Gasteratos, David Pereira, Carlos Beltran, Uberto Delprato, "EU FP6 Project RESCUER: the development of a dexterous robot and intelligent information technologies for EOD/IEDD/rescue missions" *PRACTRO 2007*, Varna, Bulgaria, 2007, (ISBN 978-954-91851-4-0).
- E37. Nikolaos Kyriakoulis, Antonios Gasteratos and Angelos Amanatiadis, "Image Sequence Stabilization Using Fuzzy Kalman Filtering and Log-polar Transformation", accepted for presentation at *3rd International Conference on Computer Vision Theory and Applications (VISAPP)*, 22 - 25 January 2008, Funchal, Madeira, Portugal.
- E38. Geert De Cubber, Lazaros Nalpantidis, Georgios Ch. Sirakoulis and Antonios Gasteratos, "Intelligent Robots Need Intelligent Vision Visual 3D Perception", *IARP/EURON Workshop on Robotics for Risky Interventions and Environmental Surveillance (RISE)*, 7-8 January 2008, Benicàssim, Spain.
- E39. Angelos Amanatiadis, Antonios Gasteratos, Christos Georgoulas, Leonidas Kotoulas and Ioannis Andreadis, "Development of a Stereo Vision System for Remotely Operated Robots: A Control and Video Streaming Architecture", *International Conference on Virtual Environments, Human-Computer Interfaces and Measurement Systems, (VECIMS 2008)*, 14-16 July 2008, Instambul, Turkey, pp 14-19.
- E40. Alexandros S. Xanthopoulos, Dimitrios E. Koulouriotis and Antonios Gasteratos, "A Reinforcement Learning Approach for Production Control in Manufacturing Systems", *International Workshop on Evolutionary and Reinforcement Learning for Autonomous Robot Systems (ERLARS)*, 22 July 2008, Patras, Greece, in conjunction with ECCAI2008.
- E41. Nikolaos Kyriakoulis, Antonios Gasteratos and Spyridon G. Mouroutsos, "Fuzzy Vergence Control for an Active Binocular Vision System", *7th IEEE International Conference on Cybernetic Intelligent Systems 2008*, 9-10 September 2008, Middlesex University, London, United Kingdom, pp 150-163.
- E42. Lazaros Nalpantidis, Georgios Ch. Sirakoulis and Antonios Gasteratos, "A Dense Stereo Correspondence Algorithm for Hardware Implementation with Enhanced Disparity Selection", *5th Hellenic Conference on Artificial Intelligence*, 2-5 October 2008, Syros, Greece, pp 365-370.

- E43. Geert De Cubber, Daniela Doroftei, Lazaros Nalpantidis, Georgios Ch. Sirakoulis and Antonios Gasteratos, "Stereo-based Terrain Traversability Analysis for Robot Navigation", *LARP/EURON Workshop on Robotics for Risky Interventions and Environmental Surveillance (RISE)*, 12-13 January 2008, Brussels, Belgium.
- E44. Angelos Amanatiadis, Antonios Gasteratos and Spyridon Mouroutsos, "An Architecture for the Control of a Mechatronic Head Used in Rescue Robotics Applications", *LARP/EURON Workshop on Robotics for Risky Interventions and Environmental Surveillance (RISE)*, 12-13 January 2008, Brussels, Belgium.
- E45. Rigas Kouskouridas, Vasileios Belagiannis, Dimitrios Chrysostomou and Antonios Gasteratos, "Comparative Study of Feature Extraction Algorithms", *1st Hellenic Conference on Robotics*, 23-24 February 2009, Athens, Greece.
- E46. Nikolaos Kyriakoulis, Evaggelos Karakasis, Antonios Gasteratos, Dimitrios Koulouriotis and Spyridon G. Mouroutsos, "Computation of the Pose Vector of a Moving Robot with a Monocular Vision System", *1st Hellenic Conference on Robotics*, 23-24 February 2009, Athens, Greece.
- E47. Lazaros Nalpantidis, Angelos Amanatiadis, Georgios Sirakoulis, Nikolaos Kyriakoulis, and Antonios Gasteratos, "Dense Disparity Estimation Using a Hierarchical Matching Technique from Uncalibrated Stereo Vision", *2009 IEEE International Workshop on Imaging Systems and Techniques (IST 2009)*, Shenzhen, China, 11-12 May 2009.
- E48. Nikolaos Kyriakoulis, Evangelos Karakasis, Antonios Gasteratos, and Angelos Amanatiadis, "Pose Estimation of a Volant Platform with a Monocular Visuo-Inertial System", *2009 IEEE International Workshop on Imaging Systems and Techniques (IST 2009)*, Shenzhen, China, 11-12 May 2009.
- E49. Angelos Amanatiadis, Vassileios G. Kaburlasos, S. E. Papadakis, and Antonios Gasteratos, "A Comparative Study of Invariant Descriptors for Shape Representation and Retrieval", *2009 IEEE International Workshop on Imaging Systems and Techniques (IST 2009)*, Shenzhen, China, 11-12 May 2009.
- E50. Rigas Kouskouridas, Vasileios Belagiannis, Antonios Gasteratos, Nikolaos Kyriakoulis, Dimitrios Chrysostomou, Alexandros Iosifidis, Evaggelos Karakasis, Efthimios Badekas and Spyridon G. Mouroutsos, "Intelligent Integrated Vision System for Indoor Robotics Applications", *5th National & International HSSS Conference*, Xanthi 24-27 June 2009.
- E51. Gabor Stepan, Andras Toth, Laszlo L. Kovacs, Gunnar Bolmsjo, Giorgos Nikoleris, Dragoljub Surdilovic, Andreas Conrad, Antonios Gasteratos, Nikolaos Kyriakoulis, Dimitrios Chrysostomou, Rigas Kouskouridas, Joseph Canou, Tom Smith, William Harwin, Rui Loureiro, Rafa Lopez and Miguel Moreno, "ACROBOTER: a ceiling based crawling, hoisting and swinging service robot platform", *Beyond Gray Droids:*

- Domestic Robot Design for the 21st Century Workshop at HCI 2009*, Cambridge, UK, 1 September 2009.
- E52. Vasileios Belagiannis and Antonios Gasteratos, "A Real-time Visual Detection and Tracking System", *Student's Eureka 2009 – 3rd Panhellenic Scientific Student Informatics Conference*, Corfu, 10-12 September 2009.
- E53. Ioannis Kostavelis, Lazaros Nalpantidis and Antonios Gasteratos, "Real-Time Algorithm for Obstacle Avoidance Using a Stereoscopic Camera", *Student's Eureka 2009 – 3rd Panhellenic Scientific Student Informatics Conference*, Corfu, 10-12 September 2009.
- E54. Yvan Baudoin, Daniela Doroftei, Geert De Cubber, Sid Ahmed Berrabah, Carlos Pinzon, F. Warlet, Jeremi Gancet, Elvina Motard, M. Ilzkovitz, Lazaros Nalpantidis and Antonios Gasteratos, "View-Finder: Robotics Assistance to Fire-Fighting Services and Crisis Management", *IEEE International Workshop on Safety, Security and Rescue Robotics 2009*, Denver, Colorado, USA, 3-6 November, 2009
- E55. Rigas Kouskouridas, Ethimios Badekas, and Antonios Gasteratos, "Simultaneous Visual Object Recognition and Position Estimation Using SIFT", *Second International Conference on Intelligent Robotics and Applications (ICIRA 2009)*, Singapore, 16 - 18 December, 2009, *Lecture Notes in Artificial Intelligence*, Ming Xie, Youlun Xiong, Caihua Xiong, Honghai Liu, Zhencheng Hu (Eds.), Springer-Verlag Berlin-Heidelberg, Vol 5928, pp 866-875.
- E56. Lazaros Nalpantidis, Ioannis Kostavelis, and Antonios Gasteratos, "Stereovision-based Algorithm for Obstacle Avoidance", *Second International Conference on Intelligent Robotics and Applications (ICIRA 2009)*, Singapore, 16 - 18 December, 2009, *Lecture Notes in Artificial Intelligence*, Ming Xie, Youlun Xiong, Caihua Xiong, Honghai Liu, Zhencheng Hu (Eds.), Springer-Verlag Berlin-Heidelberg, Vol 5928, pp 195-204.
- E57. Lazaros Nalpantidis, Dimitrios Chrysostomou, Antonios Gasteratos, "Obtaining Reliable Depth Maps for Robotic Applications from a Quad-camera System", *Second International Conference on Intelligent Robotics and Applications (ICIRA 2009)*, Singapore, 16 - 18 December, 2009, *Lecture Notes in Artificial Intelligence*, Ming Xie, Youlun Xiong, Caihua Xiong, Honghai Liu, Zhencheng Hu (Eds.), Springer-Verlag Berlin-Heidelberg, Vol 5928, pp 906-916.
- E58. Rigas Kouskouridas, Nikolaos Kyriakoulis, Dimitrios Chrysostomou, Vasileios Belagiannis, Spyridon G. Mouroutsos, and Antonios Gasteratos, "The Vision System of the ACROBOTER Project", *Second International Conference on Intelligent Robotics and Applications (ICIRA 2009)*, Singapore, 16 - 18 December, 2009, *Lecture Notes in Artificial Intelligence*, Ming Xie, Youlun Xiong, Caihua Xiong, Honghai Liu, Zhencheng Hu (Eds.), Springer-Verlag Berlin-Heidelberg, Vol 5928, pp 957-966.

- E59. Ioannis Kostavelis, Lazaros Nalpantidis and Antonios Gasteratos, "Comparative Presentation of Real-Time Obstacle Avoidance Algorithms Using Solely Stereo Vision", IARP/EURON International Workshop on Robotics for risky interventions and Environmental Surveillance-Maintenance (RISE'2010), January 2010, 20-21, Sheffield, UK.
- E60. Alexandros Iosifidis, Spyridon G. Mouroutsos and Antonios Gasteratos, "Real-time Video Surveillance by a Hybrid Static/Active Camera Mechatronic System", *2010 IEEE/ASME International Conference on Advanced Intelligent Mechatronics (AIM 2010)*, 6-9 July 2010, Montreal, Canada.
- E61. Dimitrios Chrysostomou, Nikolaos Kyriakoulis and Antonios Gasteratos, "Multi-camera 3D Scene Reconstruction from Vanishing Points", *2010 IEEE International Conference on Imaging Systems and Techniques (IST 2010)*, 1-2 July 2010, Thessaloniki, Greece.
- E62. Lazaros Nalpantidis, Georgios Sirakoulis, Andrea Carbone and Antonios Gasteratos, "Computationally Effective Stereovision SLAM", *2010 IEEE International Conference on Imaging Systems and Techniques (IST 2010)*, 1-2 July 2010, Thessaloniki, Greece.
- E63. Angelos Amanatiadis, Dimitrios Chrysostomou, Dimitrios Koulouriotis and Antonios Gasteratos, "A Fuzzy Multi-Sensor Architecture for Indoor Navigation", *2010 IEEE International Conference on Imaging Systems and Techniques (IST 2010)*, 1-2 July 2010, Thessaloniki, Greece.
- E64. Nikolaos Kyriakoulis and Antonios Gasteratos, "Light-Invariant 3D Object's Pose Estimation Using Color Distance Transform", *2010 IEEE International Conference on Imaging Systems and Techniques (IST 2010)*, 1-2 July 2010, Thessaloniki, Greece.
- E65. Rigas Kouskouridas and Antonios Gasteratos, "Visual Assistance to an Advanced Mechatronic Platform for Pick and Place Tasks", *Third International Conference on Intelligent Robotics and Applications (ICIRA 2010)*, Shanghai, China, 10-12 November 2010, *Lecture Notes in Computer Science*, Honghai Liu, Han Ding, Zhenhua Xiong and Xiangyang Zhu (Eds), Springer-Verlag Berlin-Heidelberg, **Vol. 6425**, pp 705-716.
- E66. Rigas Kouskouridas, Michalis Bakaloumis and Antonios Gasteratos, "Nod Recognition by Inertial Sensors and Machine Learning Techniques", *2nd Hellenic Conference on Robotics*, 9-10 December 2010, Patras, Greece.
- E67. Evangelos Boukas, Alexandros Boukas, Antonios Gasteratos and Spyridon Mouroutsos, "A Lab Exercise Using a Moving Robotic Platform and MSRS", *2nd Hellenic Conference on Robotics*, 9-10 December 2010, Patras, Greece.
- E68. Rigas Kouskouridas, Angelos Amanatiadis and Antonios Gasteratos, "Guiding a Robotic Gripper by Visual Feedback for Object Manipulation Tasks", *IEEE International Conference on Mechatronics (ICM 2011)*, Istanbul, Turkey, 13-15 April, 2011.

- E69. Dimitrios Chrysostomou, Lazaros Nalpantidis and Antonios Gasteratos, "Lighting Compensating Multiview Stereo", *2011 IEEE International Conference on Imaging Systems and Techniques (IST 2011)*, 17-18 May 2011, Penang, Malaysia.
- E70. Lazaros Nalpantidis, John Kalomiros and Antonios Gasteratos, "Robust 3D Vision for Robots Using Dynamic Programming", *2011 IEEE International Conference on Imaging Systems and Techniques (IST 2011)*, 17-18 May 2011, Penang, Malaysia.
- E71. Konstantinos Siozios, Dionysios Diamantopoulos, Ioannis Kostavelis, Evangelos Boukas, Lazaros Nalpantidis, Dimitrios Soudris, Antonios Gasteratos, Marcos Avilés and I. Anagnostopoulos, "SPARTAN Project: Efficient Implementation of Computer Vision Algorithms onto Reconfigurable Platform Targeting to Space Applications", *6th International Workshop on Reconfigurable Communication-centric Systems-on-Chip, ReCoSoC'2011*, Montpellier, France, 20-22 June 2011.
- E72. Ioannis Kostavelis, Lazaros Nalpantidis and Antonios Gasteratos, "Supervised Traversability Learning for Robot Navigation", *12th Conference Towards Autonomous Robotic Systems (TAROS 2011)*, 31 August - 2 September 2011. Sheffield, United Kingdom.
- E73. Marcos Avilés, Kostas Siozios, Dionysios Diamantopoulos, Lazaros Nalpantidis, Ioannis Kostavelis, Evangelos Boukas, Dimitrios Soudris and Antonios Gasteratos, "A Co-Design Methodology for Implementing Computer Vision Algorithms for Rover Navigation onto Reconfigurable Hardware", *Workshop on Computer Vision on Low-Power Reconfigurable Architectures* in conjunction with the *21st International Conference on Field Programmable Logic and Applications in Chania*, Crete, Greece, 4 September 2011.
- E74. Ioannis Kostavelis, Evangelos Boukas, Lazaros Nalpantidis, Antonios Gasteratos and Marcos Avilés Rodrialvarez, "SPARTAN System: Towards a Low-Cost and High-Performance Vision Architecture for Space Exploratory Rovers", *Computer Vision in Vehicle Technology, From Earth to Mars (CVVT2011)*, in conjunction with *13th International Conference on Computer Vision*, 6-13 November 2011, Barcelona, Spain.
- E75. Rigas Kouskouridas and Antonios Gasteratos, "Establishing Low Dimensional Manifolds for 3D Object Pose Estimation", *2012 IEEE International Conference on Imaging Systems and Techniques (IST 2012)*, 16-17 July 2012, Manchester, U.K.
- E76. Dimitrios Chrysostomou and Antonios Gasteratos, "Optimum Multi-Camera Arrangement Using a Bee Colony Algorithm", *2012 IEEE International Conference on Imaging Systems and Techniques (IST 2012)*, 16-17 July 2012, Manchester, U.K.
- E77. Ioannis Kostavelis, Lazaros Nalpantidis and Antonios Gasteratos, "Object Recognition Using Saliency Maps and HTM Learning", *2012 IEEE International Conference on Imaging Systems and Techniques (IST 2012)*, 16-17 July 2012, Manchester, U.K.

- E78. Rigas Kouskouridas, Theodora Retzepe, Eleni Charalampoglou and Antonios Gasteratos, "Ontology-based 3D Pose Estimation for Autonomous Object Manipulation", *2012 IEEE International Conference on Imaging Systems and Techniques (IST 2012)*, 16-17 July 2012, Manchester, U.K.
- E79. Vasilios Vonikakis, Dimitrios Chrysostomou, Rigas Kouskouridas and Antonios Gasteratos, "Improving the Robustness in Feature Detection by Local Contrast Enhancement", *2012 IEEE International Conference on Imaging Systems and Techniques (IST 2012)*, 16-17 July 2012, Manchester, U.K.
- E80. Rigas Kouskouridas, Angelos Amanatiadis and Antonios Gasteratos, "Pose Manifolds for Efficient Visual Servoing", *2012 IEEE International Conference on Imaging Systems and Techniques (IST 2012)*, 16-17 July 2012, Manchester, U.K.
- E81. Evangelos Boukas, Ioannis Kostavelis, Lazaros Nalpantidis and Antonios Gasteratos, "Exploiting Orbital Images to Refine Space Exploration Rover Localization", *International Symposium on Artificial Intelligence, Robotics and Automation in Space, i-SAIRAS*, 4-6 September 2012, Turin, Italy.
- E82. Malamati Bitzidou, Dimitrios Chrysostomou and Antonios Gasteratos, "Multi-camera 3D Object Reconstruction for Industrial Automation", *APMS 2012 International Conference Advances in Production Management Systems*, 24-26 September 2012, Rhodes, Greece.
- E83. Ioannis Kostavelis, Evangelos Boukas, Lazaros Nalpantidis and Antonios Gasteratos, "Path Tracing on Polar Depth Maps for Robot Navigation", *International Conference on Cellular Automata for Research and Industry*, 24-27 September 2012, Santorini, Greece.
- E84. Angelos Amanatiadis, Konstantinos Charalampous and Antonios Gasteratos, "Efficient Robot Path Planning in the Presence of Dynamically Expanding Obstacles", *International Conference on Cellular Automata for Research and Industry*, 24-27 September 2012, Santorini, Greece.
- E85. Ioannis Kostavelis, Antonios Gasteratos, Evangelos Boukas and Lazaros Nalpantidis, "Learning the Terrain and Planning a Collision-free Trajectory for Indoor Post-disaster Environments", *IEEE International Workshop on Safety, Security and Rescue Robotics*, 5-8 November 2012, College Station, Texas, USA.
- E86. Dimitrios Chrysostomou, Georgios Ch. Sirakoulis and Antonios Gasteratos, "A Bio-inspired Multi-camera Topology for Crowd Analysis", *1st International Workshop on Pattern Recognition and Crowd Analysis (PRCA '12)* held in conjunction with 21st IARP International Conference on Pattern Recognition (ICPR '12), Tsukuba, Japan, 11-16 November 2012.
- E87. George Lentaris, Dionisis Diamantopoulos, Kostas Siozios, Ioannis Stamoulias, Goannis Kostavelis, Evaggelos Boukas, Lazaros Nalpantidis, Dimitrios Soudris and

Antonios Gasteratos, "SPARTAN: Efficient Implementation of Computer Vision Algorithms for Autonomous Rover Navigation", Workshop on Reconfigurable Computing (WRC), 8th HiPEAC Berlin, Germany, 21- 23 January 2013.

Other publications

- F1. Antonios Gasteratos and Giulio Sandini, "On the accuracy of the Eurohead", LIRA - TR 2/00, July 2000.
- F2. Antonios Gasteratos and Carlos Beltran, "Finding the 3D orientation of a line using Hough transform and a stereo pair", LIRA - TR 3/00, November 2000.
- F3. Antonios Gasteratos, "Specialized hardware structures for morphological image processing" in *CVonline: On-Line Compendium of Computer Vision*, R. Fisher (ed). <http://www.dai.ed.ac.uk/Cvonline>, September 2000.
- F4. Antonios Gasteratos, Maria Vardavoulia and Ioannis Andreadis, "Morphological operators: standard and soft" in *CVonline: On-Line Compendium of Computer Vision*, R. Fisher (Ed). <http://www.dai.ed.ac.uk/Cvonline>, September 2000.
- F5. Antonios Gasteratos, "An Innovative Robot for Risk Management", Bulletin of Panellenic Assosiation of Mechanical and Electrical Engineers, No 396, March 2007, pp 42-47.

Teaching

Interests

- Robotics
- Artificial Vision
- Image Processing
- Pattern Recognition
- Electronics
- Instrumentation and Measurements

Experience

- 2001-2003: "Automated Electronic Measurements", Department of Electrical and Computer Engineering, Democritus University of Thrace.
- 2002-2003: "Electrical Circuits I", Department of Electrical and Computer Engineering, Democritus University of Thrace.
- 2002-2003: "Digital Systems Interfacing Techniques", Department of Electrical and Computer Engineering, Democritus University of Thrace.
- 2002-2003: "Informatics", Lab exercises, Department of Educational Sciences in Early Childhood.

- 2003-2012: "Automated Control Systems", Department of Production and Management Engineering, Democritus University of Thrace.
- 2003-2004: "Measurement Techniques", Department of Production and Management Engineering, Democritus University of Thrace.
- 2003-2012: "Robotics", Department of Production and Management Engineering, Democritus University of Thrace.
- 2003-2004: "Ergonomics", Department of Production and Management Engineering, Democritus University of Thrace.
- 2004-2012: "Measurement Technology and Sensors", Department of Production and Management Engineering, Democritus University of Thrace.
- 2005-2012: "Electronics", Department of Production and Management Engineering, Democritus University of Thrace.
- 2005-2007: "Principals of Information Sciences and Cognitive Sciences I", Department of Educational Sciences in Early Childhood, Democritus University of Thrace.

Prior to the Doctoral Degree

- 1994-1997: Laboratory exercises "Electronics I" to the students of the 4th semester at the Department of Electrical and Computer Engineering, Democritus University of Thrace, Greece.
- 1995-1998: Tutorial exercises "Microprocessors and Applications" to the students of the 7th semester at the Department of Electrical and Computer Engineering, Democritus University of Thrace, Greece.
- 1996-1998: Laboratory exercises "Electronics II" to the students of the 5th semester at the Department of Electrical and Computer Engineering, Democritus University of Thrace, Greece.

PhD Supervision

Completed

1. Nikolaos Kyriakoulis: *Robot Vision Systems for Target Tracing and Tracking*, Xanthi 2010.
2. Lazaros Nalpantidis: *Study and Implementation of Stereo Vision Systems for Robotics Applications*, Xanthi 2010.
3. Dimitrios Chrysostomou: *Multi-Camera Systems for Navigation and Surveillance of Robotic Systems*, Xanthi 2013.
4. Rigas Kouskouridas: *New Pattern Recognition Techniques in Machine Vision Systems*, Xanthi 2013.

Ongoing

1. Konstantinos Tsaousidis
2. Rigas Kouskouridas

3. Ioannis Kostavelis
4. Konstantinos Charalampous
5. Evangelos Boukas
6. Alexandros Athinellis

Supervision of Diploma theses

1. Konstantinos Mpamos: "Navigation of a Flying Dynamic Platform", Xanthi 2005.
2. Nikolaos Kyriakoulis: "Data Fusion Techniques for Robot Navigation", Xanthi 2005.
3. Georgios Tairidis: "The Security Technician: Gauges, thresholds and measurements", Xanthi 2005.
4. Inaki Saez Gutierrez: "Machine Vision in Flexible Manufacturing Systems and Applications", Xanthi 2005.
5. Vasilios Valkanidis, "Recognition of Non-speech Sounds", Xanthi 2006.
6. Andreas Gkouridis, "Human Faces Tracking", Xanthi 2006.
7. Sara Ibaez Marin, "A New Method for Scenes Recognition", Xanthi 2006.
8. Vasilios Tsartsarakis, "Image Segmentation for Robotics Systems Navigation", Xanthi 2006.
9. Aekaterini Parasidou, "Urban Sounds Classification", Xanthi 2006.
10. Dimitrios Chrysostomou, "Vergence Angle Estimaion for an Active Vision Head", Xanthi 2006.
11. Rigas Kouskouridas, "Disparity Maps Extraction Using Salient Contours", Xanthi 2006.
12. Ioannis Alexiou, "Image Synchronization in a Binocular Vision System", Xanthi 2006.
13. Stergiani Karaiskou, "Image Retrieval Based on Color Information", Xanthi 2006.
14. Maria Giatsidou, "Programming and Simulation of the Flexible Manufacturing System 200", Xanthi 2006.
15. Athanasios Michailidis, "A Comparative Study of Image Retrieval Techniques using Color Information Around the Edges", Xanthi 2007.
16. Photini Mitsitska, "Robotised Painting", Xanthi 2008.
17. Theodoros Pantis, "3D Object Representation with Voxel Coloring", Xanthi 2008.
18. Vassilios Mpelagiannis, "Object Localazation nad Tracking", Xanthi 2009.
19. Ioannis Kostavelis, "A Stereo Camera Based Obstacle Avoidance Algorithm", Xanthi 2009.
20. Michael Mpakaloumis, "Nod Recognition Using Inertial Sensors and Machine Learning Techniques", Xanthi 2010.
21. Evangelos Mpoukas, "Implementation of SLAM Algorithms on a Robotic Rover", Xanthi 2010.

22. Alexandros Mpoukas, "Teleoperation of the Boe-bot Platform Using MSRS and WiiMote", Xanthi 2011.
23. Theodora Retzepe & Eleni Charalamboglou, "Machine Learning Techniques for Autonomous Grasping", Xanthi 2011.
24. Bitzidou Malamati, "Multicamera Aiding System for Object Assembly", Xanthi 2012.
25. Nikolaos Rofalis, " Using an RGB-D Sensor to Follow Human Targets by a Robotic Platform", *Ξάνθη* 2012.

Member of Examining Committees

- 17/6/2004: Styliani Chatzianagnostou, MSc, Department of Electrical and Computer Engineering, DUTH.
- 25/2/2005: Christos Batzios, MSc, Department of Electrical and Computer Engineering, DUTH.
- 19/5/2010: Ioannis Hadjisavvas, MSc, Department of Electrical and Computer Engineering, DUTH.
- 19/5/2010: Alexandros Iosifidis, MSc, Department of Electrical and Computer Engineering, DUTH.
- 27/9/2010: Alexandros Xanthopoulos, PhD, Department of Production and Management Engineering, DUTH.
- 30/5/2011: Eleftheria Mitka, MSc, Department of Electrical and Computer Engineering, DUTH.
- 31/5/2012: External Examiner for Mr. Jan Wedekind; thesis entitled: *Efficient Implementations of Machine Vision Algorithms using a Dynamically Typed Programming Language*, submitted to Sheffield Hallam University in partial fulfillment of the requirements for the PhD degree.
- 10/2012 Reviewer for the thesis of Mr. Leonardo De-Maeztu; thesis entitled: *Towards accurate and real-time local stereo correspondence algorithms: computational efficiency and massively parallel architectures*, submitted to the Public University of Navarre, Pamplona, Spain in partial fulfillment of the requirements for the PhD degree.

Talks - Seminars

- Antonios Gasteratos: "An Introduction to Non-Linear Image Processing", LIRA-Lab, DIST, Universita di Genova, Genoa, Italy, 2 March 1999.
- Antonios Gasteratos: "Accurate 3D Measurements with a High Resolution Stereo Head: The ROBVISION project", VIRGO TMR Meeting, Genoa, Italy, 2 March 2000.

- Carlos Beltran, Antonios Gasteratos, Giorgio Metta and Giulio Sandini: "A Binocular Vision System for Stabilization and Self-Localization", VIRGO TMR Meeting, Bonn, Germany, 2 March 2001 (Presented by C. Beltran).
- Antonios Gasteratos: "Research Activities on Walking, Underwater and Humanoid Robots, Using Robot Vision and Artificial Vestibular Techniques", Department of Electrical and Computer Engineering, National Technical University of Athens, Athens 1 November 2001.
- Antonios Gasteratos: "Robot Navigation Based on Sensors and Decision Techniques", Department of Production and Management Engineering, Democritus University of Thrace, Xanthi, 18 February 2003.
- Antonios Gasteratos: "Algorithm Teaching", "Organising the Course of Computer Networks", "Organising an Informatics Laboratory at Gymnasium", "Organising an Informatics Laboratory at Lyceum", Regional Training Centre of Kavala, Kavala and Xanthi, 29 November – 2 December 2004.
- Antonios Gasteratos: "Algorithm Teaching", "Organising an Informatics Laboratory at Gymnasium", "Organising an Informatics Laboratory at Lyceum", Regional Training Centre of Kavala, Kavala 9 December 2005.
- Antonios Gasteratos: "The Role of Low-level Features in Retrieving Images", Faculty of Computer and Information Science, University of Ljubljana, Ljubljana, Slovenia 19 December 2005.
- Antonios Gasteratos: "Stereo Vision Algorithms: Principals and robotics applications", Cultural and Educational Technology Institute, Xanthi, May 2008.
- Antonios Gasteratos: "Machine Vision: Application in Robotics Systems", Section of Software, Department of Electrical and Computer Engineering, DUTH.
- Antonios Gasteratos: "Machine vision systems for robotics applications", ITI, CERTH, Thessaloniki, 12 October, 2011.
- Member of the panel entitled "Robotics and AI, am I afraid of them?", Festival of Science and Technology, 15 December 2012, National Institute of Research, Athens.

Professional Service Activities

Member of International Networks and Platforms

- "EU Robotics Network (EURON), FP6-IST-507728".
- "European Research Network for Cognitive Computer Vision Systems (ECVision), FP6-IST- 35454".

- "European Network for the Advancement of Artificial Cognitive Systems (euCognition), FP6-IST-26408".
- "Innovative Production Machines and Systems (I*PROMS)", IST Network of Excellence.
- Member of EUROP (European Robotics Platform).
- Member of EUCogII, Funded by European Commission – ICT (2009 -).
- Member of ETPIS (European Platform on Industrial Safety).

Member in Editorial Boards and Program Committees

- **General Chair:** 6th International Conference on Computer Vision Systems, (*ICVS 2008*) 12-15 May 2008, Santorini, Greece.
- Member of the Editorial Board: International Journal of Optomechatronics, (Taylor & Francis), since 2007.
- Member of Editorial Board: Journal of Computers, (Academy Publishers), since 2007.
- Member of the Editorial Board: Journal of Engineering Science & Technology Review (2007-2012).
- Member of the Editorial Board: ISRN Machine Vision (Hindawi), since 2011.
- Member of the Editorial Board: International Journal of Advanced Robotic Systems (InTech), since 2011.
- Associate Editor: Human-centric Computing and Information Sciences (Springer), since 2012.
- Member of the Steering Committee of the International Conference on Computer Vision Systems (*ICVS*), since 2008.
- Member of the Program Committee for the 9th International Conference on Computer Vision Theory and Applications (*VISAPP*), 5-8 January, Lisbon, Portugal.
- Member of the Program Committee (PC) for the 8th International Conference on Future Information Technology (FutureTech), 4-6 September 2013, Gwangju, Korea.
- Member of the Program Committee: 9th International Conference on Computer Vision Systems, July 16 - 18, 2013, St. Petersburg, Russia.
- Member of the Scientific Committee of the 7th International Conference Sciences of Electronics, Technologies of Information and Telecommunications (*SETIT 2013*), Chongqing, China, 11 - 13 October 2013.
- Member of the Program Committee: 8th International Conference on Computer Vision Theory and Applications (*VISAPP*), 21-24 February 2013, Barcelona, Spain.

- Member of the Program Committee: 2012 International Conference on Connected Vehicles & Expo, 12-16 December 2012, Beijing, China
- Member of the Program Committee for the Cognitive Assistive Systems Workshop, in conjunction to IROS 2012.
- Member of the Technical Program Committee for the 2012 FTRA International Symposium on Advances in Cryptography, Security and Applications for Future Computing (*ACSA-12*), Jeju, Korea, 22-25 November 2012
- Member of the Technical Program Committee for the 21st International Conference on Pattern Recognition (ICPR 2012), 11-15 November 2012, Tsukuba, Japan.
- Member of the Technical Program Committee for the IEEE Globecom 2012 - Communication and Information System Security Symposium, 3-7 December 2012, Anaheim, California, USA.
- Member of the International Scientific Committee for the APMS 2012, International Conference on Advances in Production Management Systems, 24-26 September 2012, Rhodes, Greece.
- Member of the Scientific Committee for the CompIMAGE 2012 Conference- Computational Modeling of Objects Presented in Images: Fundamentals, Methods and Applications, 5-7 September 2012, Rome, Italy.
- Member of the Programme Committee of the 13th edition of UK's conference *Towards Autonomous Robotics Systems*, TAROS 2012, 20-25 August 2012, Bristol, UK.
- Member of the International Board and Technical Committee and **Co-Chair**: 2012 IEEE International Conference on Imaging Systems and Techniques (*IST 2012*), 16-17 July 2012, Manchester, UK.
- Member of the Scientific Committee of the CompIMAGE 2012 Conference- Computational Modeling of Objects Presented in Images: Fundamentals, Methods and Applications, 5-7 September 2012, Rome, Italy
- Member of the Scientific Committee of the 6th International Conference Sciences of Electronics, Technologies of Information and Telecommunications (*SETIT 2011*), Sousse, Tunisia, 12-15 May 2011.
- Member of the International Program Committee: 4rd International Conference on Intelligent Robotics and Applications (*ICIRA 2011*), Aachen, Germany, 6-9 December 2011.
- Member of the International Program Committee: 13th IASTED International Conference on Intelligent Systems and Control, (*ISC 2011*), 11-13 July 2011, Cambridge, UK.

- Member of the Scientific Program Committee of the 2011 International Conference on Information and Communication Technologies in Forensics (ICTinForensics 2011), 23-24 June 2011, Salvador, Bahia, Brazil.
- Member of the International Program Committee: *3rd International Conference on Intelligent Robotics and Applications (ICIRA 2010)*, Singbai, China, 10-12 November 2010.
- Member of the Scientific Committee: 2nd Greek Conference on Robotics 2010.
- Member of Program Committee: ECCV 2010 Workshop on “Vision for Cognitive Tasks”, Herklion, Crete, Greece, 10 September 2010.
- Member of Technical Committee: 2nd International Conference on Multimedia Information NEtworking and Security, (*MINES2010*) Nanjing, China, 4-6 November, 2010.
- Member of the Technical Program Committee: 20th International Conference on Pattern Recognition, 23-26 August 2010, Istanbul, Turkey.
- Member of the Program Committee: 2010 International Conference on Image and Video Processing and Computer Vision (*IVPCV-10*), 12-14 July 2010, Orlando, Florida, USA.
- Member of the International Board of Directors and **Co-Chair**: 2010 IEEE International Conference on Imaging Systems and Techniques (*IST 2010*), 1-2 July 2010, Thessaloniki, Greece.
- Member of the Program Committee: 4th International Conference on Image and Signal Processing (*ICISP*), 30 June – 2 July 2010, Trois-Rivières, Québec, Canada.
- Member of the Program Committee: 5th International Conference on Computer Vision Theory and Applications (*VISAPP*), 17-21 May 2010, Angres, France.
- Member of the International Program Committee: IASTED International Conference on Intelligent Systems and Control, (*ISC 2009*), 4-6 November 2009, Cambridge, MA, USA.
- Member of the Program Committee: 7th International Conference on Computer Vision Systems (*ICVS2009*), 12-15 October 2009, Liège, Belgium.
- Member of the Technical Program Committee: Fifth International Conference on Image and Graphics (*ICIG2009*), 22-24 September 2009, Xi’an, China.
- Member of the Program Committee: 7th International Conference on Computer Vision Systems (*ICVS2009*), 12-15 October 2009, Liège, Belgium.
- Member of the Scientific Committee: 1st Greek Conference on Robotics 2009.
- Member of the Program Committee: 4th International Conference on Computer Vision Theory and Applications (*VISAPP*), 5 - 6 February 2009, Lisboa, Portugal.

- Member of the ICPR2008 (International Conference on Pattern Recognition) Program Committee for track 7 on Biometrics.
- Member of the International Program Committee: IASTED International Conference on Intelligent Systems and Control, (*ISC 2008*), 16-18 November 2008, Orlando, USA.
- Member of the Program Committee: IEEE, SMC, UK&RI, 7th Conference on Cybernetic Intelligent Systems 2008, 9-10 September 2008, Middlesex University, London, United Kingdom.
- Member of the Program Committee: 3rd International Conference on Computer Vision Theory and Applications (VISAPP), 22 - 25 January 2008, Funchal, Madeira, Portugal.
- Member of the Program Committee: IARP/EURON Workshop on Robotics for Risky Interventions and Environmental Surveillance (*RISE 2008*), 7-8 January 2008, Benicàssim (Spain).
- Member of the Technical Program Committee: Fourth International Conference on Image and Graphics, (*ICIG2007*), 22-24 August 2007, Chengdu, China.
- Member of the International Program Committee: IASTED International Conference on Intelligent Systems and Control, (*ISC 2007*), 19-21 November 2007, Cambridge, USA.
- Member of the Reviewing Committee: *2nd Workshop on Applications of Computer Vision*, 12 May 2006, Graz, Austria, in conjunction with *ECCV 2006*.

Other committees

- Reviewer of the IASTED Technical Committee on Image Processing.
- Member of the IAPR Technical Committee for Discrete Geometry (TC18).
- Member of the Editorial Board of the Greek Edition of Scientific American.
- Proposal reviewer for INTAS (since 2004).
- Member of the Standing Committee of Watching European Programs of TEE Section of Thrace (2004-2005).
- Member of the IASTED Technical Committee on Robotics for the term 2004-2007.
- Member of the IEEE Technical Committee on Safety Security and Rescue Robotics

Other appointments

- Greek Delegate High Level Representative (HLR) at EUREKA initiative (2009-2010).
- Greek Delegate at the General Assembly of the Ambient Assisted Living (AAL) Joint Programme (2011 - 2012).

- Session Chair: 5th IASTED International Conference on Visualization, Imaging, and Image Processing (VIIP 2005), Session 10: 3D Image Processing, 7-9 September 2005, Benidorm, Spain.
- Session Chair: 16th International Symposium on Measurement and Control in Robotics (*ISMCR 2007*), Warsaw, Poland, 21-23 June 2007.
- Session Chair: 1st Hellenic Conference on Robotics, 23-24 February, Athens, Greece.
- Session Chair: 2010 IEEE International Conference on Imaging Systems and Techniques (IST 2010), 1-2 July 2010, Thessaloniki, Greece. Session Chair: 2011 IEEE International Conference on Imaging Systems and Techniques (IST 2011), 17-18 May 2011, Penang, Malaysia.
- Session Chair: 12th Conference Towards Autonomous Robotic Systems, 31 August - 2 September 2011. Sheffield, United Kingdom.
- Session Chair: 2012 IEEE International Conference on Imaging Systems and Techniques (IST 2012), 16-17 July 2012, Manchester, U.K.
- Session Chair: International Symposium on Artificial Intelligence, Robotics and Automation in Space (i-SAIRAS), 4-6 September 2012, Turin, Italy
- Evaluation Committee of the Technical Chamber of Greece (Kavala's section) for the new members (Licence of Professionship to new Engineers).
- INTAS (International Association for the Promotion of Cooperation with Scientists from the New Independent States of the Former Soviet Union) evaluator.
- Proposal reviewer for the EURON research network.
- Proposal reviewer for the Georgian National Science Foundation.
- Project reviewer for the Greek General Secretariat for the Research and Technology.
- Proposal reviewer for the European Committee (FET-proactive).
- Proposal reviewer for the Joint Call Secretariat at German Aerospace Centre (2009).
- Proposal reviewer for the KORANET Pilot Joint Call (2010).
- Proposal reviewer for the European Metrology Research Programme (2010).
- Proposal reviewer for the Research Promotion Foundation at Cyprus (2011).
- Cited in *International Directory of Experts and Expertise, Premier Edition., Who's Who in the World, Who's Who of Emerging Leaders, Who's Who in Science and Engineering.*

Scientific reviewer

- Reviewer for the book *Semantic-Based Visual Information Retrieval*, Yu-Jin Zhang Editor.
- Paper reviewer for the Special Issue of *Pattern Recognition Journal on Mathematical Morphology*.

- Paper reviewer for the *IEEE Transactions on Fuzzy Systems* Journal.
- Paper reviewer for the *IEEE Transactions on Systems, Man and Cybernetics (Part C: Applications and Reviews)* Journal.
- Paper reviewer for the *IEEE Transactions on Circuits and Systems, Part II: Analog and Digital Signal Processing* Journal.
- Paper reviewer for the *IEE Proceedings - Vision, Image and Signal Processing* Journal.
- Paper reviewer for the *EURASIP Journal on Applied Signal Processing* Journal.
- Paper reviewer for the *IEEE Transactions on Image Processing* Journal.
- Paper reviewer for the *The Journal of VLSI Signal Processing* Journal.
- Paper reviewer for the *Optics Communications* Journal.
- Paper reviewer for the *WSEAS Transactions On Circuits and Systems* Journal.
- Paper reviewer for the *Journal of Optics & Laser Technology* Journal.
- Paper reviewer for the *Computer Vision and Image Understanding* Journal.
- Paper reviewer for the *Mechatronics* Journal.
- Paper reviewer for the *International Journal of Open Problems in Computer Science and Mathematics* Journal.
- Paper reviewer for the *Pattern Recognition Letters*.
- Paper reviewer for *IET Microwaves, Antennas & Propagation*
- Paper reviewer for *IEEE Transactions on Instrumentation & Measurement*
- Paper reviewer for *IET Electronics Letters*
- Paper reviewer for *IET Control Theory & Applications*
- Book reviewer for *Vision-based estimation and control* (Elsevier), Geraldo Silveira
- Paper reviewer for *IEEE/ASME Transactions on Mechatronics*
- Paper reviewer for *IEEE Transaction on Industrial Electronics*
- Paper reviewer for *IEEE Transactions on Systems, Man and Cybernetics (Part A: Systems and Human)*
- Book reviewer for *Depth Map and 3D Imaging Applications: Algorithms and Technologies*, Aamir Malik Editor.
- Book reviewer for *Cross-Disciplinary Applications of Artificial Intelligence and Pattern Recognition: Advancing Technologies*, Nitin Bhatia, Vijay Kumar Mago (Eds).
- Paper reviewer for *IET Computer Vision*
- Paper reviewer for *Graphical Models* (Elsevier)
- Paper reviewer for *Journal of Mathematical Imaging and Vision* (Springer)
- Paper reviewer for *International Journal of Approximate Reasoning* (Elsevier)

- Paper reviewer for *Sensors* (MDPI - Open Access Publishing)
- Paper reviewer for *IEEE Transactions on Robotics*
- Book reviewer for *Feature Extraction and Image Processing*, Mark S. Nixon (Elsevier)
- Paper reviewer for *International Journal of Robotics Research* (SAGE)
- Paper reviewer for *ISRN Machine Vision*
- Paper reviewer for *Recent Patents on Electrical Engineering*
- Paper reviewer for *IEEE Transaction on Signal Processing*
- Paper reviewer for *Central European Journal of Computer Science*
- Paper reviewer for *Robotics and Autonomous Systems* (Elsevier)
- Paper reviewer for *IEEE Transaction on Industrial Informatics*
- Paper reviewer for *Safety Science* (Elsevier)
- Paper reviewer for *Sensor Review* (Emerald)
- Book reviewer for *Communicating Pictures: A Course in Image and Video Compression*, D.R. Bull (Elsevier)
- Paper reviewer for *Advances in Artificial Intelligence* (Hindawi)
- Paper reviewer for *WSEAS Transactions on Computers*
- Paper reviewer for *The Computer Journal* (Oxford University Press)
- Paper reviewer for *International Journal of Advanced Robotic Systems* (Intech)
- Paper reviewer for *Journal of AI and Data Mining*
- Paper reviewer for *Journal of Theoretical and Applied Computer Science*
- Paper reviewer for *Journal of Theoretical and Applied Computer Science*
- Paper reviewer for *PLOS ONE*
- Paper reviewer for the *IROS '99* (IEEE/RSJ International Conference on Intelligent Robots and Systems, 17-21 October 1999, Kyongju, Korea).
- Paper reviewer for the *ECCV 2000* (Sixth European Conference on Computer Vision, 26th June - 1st July 2000, Trinity College Dublin, Ireland).
- Paper reviewer for the *VIIIP 2002* (2nd IASTED International Conference Visualization, Imaging and Image Processing, 9-12 September 2002, Malaga, Spain).
- Paper reviewer for the *AMS 2002* (Applied Modelling and Simulation, 4-6 November 2002, Cambridge, MA, USA).
- Paper reviewer for the *MIC 2003* (22nd IASTED International Conference Modelling, Identification and Control, 10-13 February 2003, Innsbruck, Austria).
- Paper reviewer for the *MS 2003* (IASTED International Conference Modelling and Simulation, 24-26 February 2003, Palm Springs, California, USA).

- Paper reviewer for the *IMSA 2003* (7th IASTED International Conference on Internet and Multimedia Systems and Applications, 13-15 August 2003, Honolulu, Hawaii, USA).
- Paper reviewer for the *ALA 2003* (3rd IASTED International Conference on Artificial Intelligence and Applications, 8-10 September 2003, Benalmádena, Spain).
- Paper reviewer for the *SIP 2004* (The 6th IASTED International Conference on Signal and Image Processing, 23-25 August 2004, Honolulu, Hawaii, USA).
- Paper reviewer for the *ICTA'05* (5th International Conference on Technology and Automation, 15-16 October 2005, Thessaloniki, Greece).
- Paper reviewer for the *ALA 2006* (IASTED International Conference on Artificial Intelligence and Applications, 13-16 February 2006, Innsbruck, Austria).
- Paper reviewer for the *SPPRA 2006* (3rd IASTED International Conference on Signal Processing, Pattern Recognition and Applications, February 15– 17, 2006, Innsbruck, Austria).
- Paper reviewer for the *2nd Workshop on Applications of Computer Vision*, 12 May 2006, Graz, Austria, in conjunction with *ECCV 2006*.
- Paper reviewer for the *ASC 2006* (10th IASTED International Conference on Artificial Intelligence And Soft Computing, 28-30 August 2006, Palma de Mallorca, Spain).
- Paper reviewer for the *ALA 2007* (IASTED International Conference on Artificial Intelligence and Applications, 12-14 February 2007, Innsbruck, Austria).
- Paper reviewer for the *MS 2007* (18th IASTED International Conference on Modelling and Simulation, 30 May – 1 June, 2007, Montreal, Quebec, Canada).
- Paper reviewer for the *MUSP '07* (7th WSEAS Int. Conf. on Multimedia Systems and Signal Processing, 15 to 17 April 2007, Hangzhou, China).
- Paper reviewer for the *ROCOM '07* (7th WSEAS Int. Conf. on Robotics, Control and Manufacturing Technology, 15 to 17 April 2007, Hangzhou, China).
- Paper reviewer for the *IMCAS '07* (6th WSEAS Int. Conf. on Instrumentation, Measurement, Circuits and Systems, 15 to 17 April 2007, Hangzhou, China).
- Paper reviewer for the *ACOS '07* (6th WSEAS Int. Conf. on Applied Computer Science, 15 to 17 April 2007, Hangzhou, China).
- Paper reviewer for the *AMTA '07* (8th WSEAS Int.Conf. on Acoustics & Music: Theory and Applications, 19-21 June 2007, Vancouver, Canada).
- Paper reviewer for the *ICIG 2007*, (Fourth International Conference on Image and Graphics, 22-24 August 2007, Chengdu , China).

- Paper reviewer for the *RA 2007* (International Conference on Robotics and Applications, 29-31 August 2007, Wuerzburg, Germany).
- Paper reviewer for the *ISC 2007* (International Conference on Intelligent Systems and Control, 19-21 November 2007, Cambridge, USA).
- Paper reviewer for the *ACST 2008* (Advances in Computer Science and Technology, 2 – 4 April 2008 Langkawi, Malaysia).
- Paper reviewer for the *ACACOS'08* (7th WSEAS International Conference on Applied Computer & Applied Computational Science, 6-8 April 2008 Hangzhou, China).
- Paper reviewer for the *ACC'08* (American Computing Conference 2008, MIT, Cambridge, USA, 21-23 April 2008).
- Paper reviewer for the 9th WSEAS International Conference on Fuzzy Systems, Sofia, Bulgaria, 2-4 May 2008.
- Paper reviewer for the *IEEE CIS2008* (7th Conference on Cybernetic Intelligent Systems, Middlesex University, London, United Kingdom, 9-10 September 2008).
- Paper reviewer for the *ICPR2008* (19th International Conference on Pattern Recognition, Tampa, Florida, USA, 8-11 December 2008).
- Paper reviewer for *1st Hellenic Conference on Robotics* (Athens, 23-24 February 2009).
- Paper reviewer for *IEEE CASE 2009* (5th Annual IEEE Conference on Automation Science and Engineering, Bangalore, India, 22-25 August 2009).
- Paper reviewer for *IEEE CIS2009* (8th IEEE International Conference on Cybernetic Intelligent Systems, University of Birmingham, Birmingham, United Kingdom, 9-10 September 2009).
- Paper reviewer for *ICVS2009* (7th International Conference on Computer Vision Systems, Liège, Belgium, 12-15 October 2009).
- Paper reviewer for *ICIG'2009* (5th International Conference on Image and Graphics, Xi'an, China, 21-24 September 2009).
- Paper reviewer for *ISC 2009* (IASTED International Conference on Intelligent Systems and Control, 4-6 November 2009, Cambridge, MA, USA).
- Paper reviewer for *VISAPP 2010* (5th International Conference on Computer Vision Theory and Applications, 17-21 May 2010, Angres, France).
- Paper reviewer for *ICISP 2010* (4th International Conference on Image and Signal Processing, 30 June – 2 July 2010, Trois-Rivières, Québec, Canada).
- Paper reviewer for *ICPR 2010* (20th International Conference on Pattern Recognition, 23-26 August 2010, Istanbul, Turkey).

- Paper reviewer for *IVPCV-10* (International Conference on Image and Video Processing and Computer Vision, 12-14 July 2010, Orlando, Florida, USA).
- Paper reviewer for *ECCV 2010* (11th European Conference on Computer Vision, 5-11 September 2010, Heraklion, Greece)
- Paper reviewer for *CASE 2010* (6th IEEE Conference on Automation Science and Engineering, 21-24 August, Toronto Canada).
- Paper reviewer for *AIM 2010* (IEEE/ASME International Conference on Advanced Intelligent Mechatronics, 6-9 July 2010, Montreal, Canada).
- Paper reviewer for *IST 2010*, (IEEE International Conference on Imaging Systems and Techniques, 1-2 July 2010, Thessaloniki, Greece).
- Paper reviewer for *ICIRA 2010*, (International Conference on Intelligent Robotics and Applications, 10-12 November 2010, Shanghai, China).
- Paper reviewer for *VISAPP 2011* (6th International Conference on Computer Vision Theory and Applications, 6-7 March 2011, Algavre, Portugal).
- Paper reviewer for *MED'11* (19th Mediterranean Conference on Control and Automation, 20-23 June 2011, Corfu, Greece).
- Paper reviewer for *ISC 2011* (13th IASTED International Conference on Intelligent Systems and Control, (*ISC 2011*), 11-13 July 2011, Cambridge, UK).
- Paper reviewer for *ICIG 2011*, (The Sixth International Conference on Image and Graphics, 12-15 August, 2011, Hefei, Anhui, P.R.China).
- Paper reviewer for *VISAPP 2012* (7th International Conference on Computer Vision Theory and Applications, 24-27 February 2011, Rome, Italy).
- Paper reviewer for *CIP 2012* (3rd International Workshop on Cognitive Information Processing, May 28 to 30, 2012, Parador de Baiona, Pontevedra, Spain).
- Paper reviewer for *ISCAS 2012* (IEEE International Symposium on Circuits and Systems, 20-23 May 2012, COEX, Seoul, Korea)
- Paper reviewer for *FutureTech 2012* (7th International Conference on Future Information Technology, 26-28 June 2012, Vancouver, Canada).
- Paper reviewer for *CompIMAGE 2012* (Conference- Computational Modeling of Objects Presented in Images: Fundamentals, Methods and Applications, 5-7 September 2012, Rome, Italy).
- Paper reviewer for *CA 2012* (The 14th IASTED International Conference on Control and Applications, June 18 – 20 2012, Crete, Greece).
- Paper reviewer for *AIM 2012* (IEEE/ASME International Conference on Advanced Intelligent Mechatronics, 11-14 July 2012, Taipei, Taiwan).

- Paper reviewer for *ACRI 2012* (International Conference on *Cellular Automata* for Research and Industry, 24-27 September 2012, Santorini, Greece).
- Paper reviewer for *APMS 2012* (International Conference on Advances in Production Management Systems, 24-26 September 2012, Rhodes, Greece).
- Paper reviewer for *CISS 2012* (2012 Symposium on Communications and Information System Security)
- Paper reviewer for *ISIEA 2012* (2012 IEEE Symposium on Industrial Electronics and Applications)
- Paper reviewer for *ACSA 2012* (2012 FTRA International Symposium on Advances in Cryptography, Security and Applications for Future Computing, Jeju, Korea, November 22-25, 2012)
- Paper reviewer for *Humanoids 2012* (2012 IEEE-RAS International Conference on Humanoid Robots, 29 November - 1 December, 2012, Osaka, Japan)
- Paper reviewer for *ICEED2012* (4th International Congress on Engineering Education, 5-6 December 2012, Batu Ferringhi, Penang, Malaysia)
- Paper reviewer for *ICCVE 2012* (International Conference on Connected Vehicles & Expo, 12-12 December, Beijing, China)
- Paper reviewer for *ICRA 2013* (2013 IEEE International Conference on Robotics and Automation, 6-10 May 2013, Karlsruhe, Germany)
- Paper reviewer for *ICVS 2013* (9th International Conference on Computer Vision Systems, July 16 - 18, 2013, St. Petersburg, Russia)

Project Participation

Director and Primary Investigator

1. "Improvement of the Emergency Risk Management through Secure Mobile Mechatronic Support to Bomb Disposal (RESCUER), FP6-IST-511492", (2004 -2008), ~263k€ + 65k€ matching funds.
2. "Development of New Techniques for Recognition and Categorization", Bilateral Cooperation of Greece and Slovenia, Greek General Secretariat of Research and Technology (2005-2007), ~12k€.
3. "Development and Implementation of New Algorithms for Pattern Recognition based on Biological Inspired Models and Intelligent Systems", Greek General Secretariat of Research and Technology (2005-2008), ~54k€.
4. "Autonomous Collaborative Robots to Swing and Work in Everyday EnviRonment (ACROBOTER), FP6-IST-2006-045530", (2007-2010), ~387k€ + 30k€ matching funds.

5. "Vision and Chemiresistor Equipped Web-connected Finding Robots (View-Finder), FP6-IST-2006-045541", (2007-2010), ~269k€ + 22.5k€ matching funds.
6. "Study of Stereo Robot Vision Systems", Internal DUTh project, (2006-2011) ~70k€.
7. "Innovative and Novel First Responders Applications (INFRA), FP7-ICT-SEC-2007-1-225272" (2009-2011), ~207k€ +17k€ matching funds.
8. "Improvement of the international recognition of the Department of Production and Management Engineering in Mechatronics and Artificial Vision and Attraction of New Research Funding", Internal DUTh project, (2011-2013) ~23.5k€.
9. "SPARing Robotics Technologies for Autonomous Navigation", ESA 10.164.05, (2011-2012), ~65k€.
10. "Autonomous Vehicle Emergency Recovery Tool, (AVERT), FP7-SEC-2011-1-285092" (2012-2015), ~355k€.
11. "Hellenic Civil Unmanned Air Vehicle", GSRT, Synergasia 2011, 216k€.

Experienced Researcher

1. "Robust vision for sensing in industrial operations and needs (ROBVISION), ESPRIT Project 28867", Director Prof. Giulio Sandini, (1999 - 2000).
2. "Babybot: Sensorimotor Development in Artificial Systems", MURST (Ministero dell'Universita' e della Ricerca Scientifica e Tecnologica), Director Prof. Giulio Sandini, (1998 - 2000).
3. "Vision-Based Robot Navigation Research Network (VIRGO), TMR Project ERBFMRXCT960049", Director Prof. Giulio Sandini, (1999 - 2000).
4. "Navigation of Autonomous Robots via Active Environmental Perception (NARVAL), Esprit LTR - Project 30185", Director Prof. Giulio Sandini, (1999 - 2000).
5. "Semi-autonomous Monitoring and Robotics Technology, SMART II TMR", Director Prof. Giulio Sandini, (2000 - 2001)
6. "Omni-directional Visual System (OMNIVIEWS), IST-1999-29017", Director Prof. Giulio Sandini, (2000-2001).
7. "Actions for Support of the School Information Systems (Help-Desk Implementation) at the Prefectures of Drama, Kavala, Xanthi, Rodopi and Evros", Director Associate Prof. Ioannis Andreadis (2003-2004).
8. "Improvement of the Infrastructure of the Department of Production and Management Engineering", TSMEDE 2003, (internal DUTh project)", Director Prof. Athanasios Karambinis, (2004).
9. "INTERREG IIC/Zone Sud – Subprogram 4, Communications and New Technologies", INTERREG initiative, Director Associate Prof. Prodromos Chatzoglou, (2006-2007).

10. "Techniques of Image Processing with Applications to Stereo Vision and Surveillance Systems", EPEAEK (Greek national project), Director Prof. D. Manolakis (2007).
11. "Computational Algorithms for Uniform and non-Uniform Flux in Gravity Tubes and Open Stanks. Implementation on Solving Draining and Straining Networks", Greek national project, Director Prof. Michael Bekakos.
12. "Air Quality Monitoring and Forecasting in China (AMFIC), FP6-2005-SPACE-1-030940", Director Assist. Prof. Kostasntinos Kourtidis.
13. "Development of an intelligent, dynamic information system for detection and forecasting of misses and inefficiencies in industrial environments", Greek national project, Director Prof. Georgios Tagaras.

Researcher

1. "Design of a subsystem for image processing, using morphological operators, TSMEDE 95, (internal DUTH project)", Director Prof. Philippos Tsalides, (1995-1996).
2. "Industrial microelectronic products, EPET II – 476 (Greek national project)", Director Prof. Andonios Thanailakis, (1996-1998).
3. "Development of new laboratory exercises for the lessons Electronics I, II and III, TSMEDE 96, (internal DUTH project 360)", Director Prof. Philippos Tsalides, (1996-1997).
4. "Design and implementation of a stochastic digital to analogue converter (DAC), PRENED 96, (internal DUTH project 426)", Director Assistant Prof. Ioannis Andreadis, (1996-1998).
5. "Development of a new framework for image processing - Fuzzy soft mathematical morphology, TSMEDE 97, (internal DUTH project 480)", Director Assistant Prof. Ioannis Andreadis, (1997).
6. "Expanding/Integration of the internal Network of Democritus University of Thrace – Detente (Greek national project)", Director Prof. Philippos Tsalides, (1997).
7. "Training project on informatics EPEAEK (Greek national project)", Director Lecturer Demetrios Diamantides, (1998).
8. "Network technologies – Satellite Communications DIAVLOS (Greek national project)", Director Prof. Emmanouel Sarris (1998).

International cooperations

As responsible of the Department of Production and Management Engineering for the Erasmus Project, he developed the following cooperations:

- Department of Production, University of Aalborg, Denmark.

- Department of Manufacturing Engineering, Budapest University of Technology and Economics, Hungary.
- The University of the Basque Country, Spain.
- Department of Industrial Engineering, Bilkent University, Ankara, Turkey.
- Ecole Nationale d'Ingénieurs de Tarbes, France
- Department of Mechanical Engineering, Lund University, Sweden.

Cooperation through European and Bilateral Projects:

research institutes

- Faculty of Mechanical Engineering, Budapest University of Technology and Economics, Hungary.
- Department of Manufacturing Engineering, University of Rousse, Bulgaria.
- Manufacturing Engineering Centre, School of Engineering, University of Cardiff, U.K.
- Department of Communication, Computer and System Sciences, School of Engineering, University of Genoa, Italy.
- Faculty of Computer and Information Science, University of Ljubljana, Slovenia.
- Department of Mechanical Engineering, Lund University, Sweden.
- Fraunhofer-Institute für Produktionsanlagen und Konstruktionstechnik, Berlin, Germany.
- School of Systems Engineering, University of Reading, U.K.
- Materials and Engineering Research Institute, Sheffield Hallam University, U.K.
- Patrimony Royal Military Academy, Belgium.
- Department of Computer and System Sciences, University of Rome "La Sapienza", Italy.
- Industrial Research Institute for Automation and Measurements, Poland.
- University of Limerick, EIRE.
- Athens Institute of Technology, Greece.
- National Technical University of Athens, Greece.
- Zurcher Hochschule für Angewandte Wissenschaften, Switzerland.
- Aristotle University of Thessaloniki, Greece.

companies

- Robotnik Automation, SLL, Spain.
- Intelligence for Environment and Security Solutions spa, Italy.
- Robosoft SA, France.
- Space Applications Services, Belgium.
- Galileo Avionica, Italy.

- Athena CS3, Israel.
- ARTTIC, Belgium.
- ISDEFE Ingenieria de Sistemas S.A, Spain.
- Rinicom Ltd, U.K.
- Hopling Technologies, The Netherlands.
- Opgal, Israel.
- GMV Aerospace and Defence S.A.u., Spain.
- TRASYS, Belgium.
- CNES, France.
- IDUS Consultancy Ltd, U.K.
- BB-Ingenieure Ingenieurbüro, Germany.
- Marshall System Design Group Ltd, U.K.
- Force Ware GmbH, Germany.
- Onex S.A., Greece
- MLS S.A., Greece

Professional Experience

1991: Hellenic Public Electricity Company SA, Trainee Electrical Engineer.

1994–1998: ANADELTA-SOFTWARE Ltd, Testing and Publication Department.

1994- : Self-employed Professional Electrical Engineer.

2001 – 2002: Military Service with the Corps of Research and Informatics, Greek Military.

2002 : Contract with the Mechanorganosi Thrakis Ltd, (computerisation applications).

2002 – 2003 : High school teacher: "Informatics", "Multimedia", "Multimedia applications" and "Communications Technology".

2004 – 2006 : Trainer at the Regional Centre of Training, Kavala.

Honours and Awards

1989, Democritus University of Thrace: Scholarship from I.K.Y. (State Foundation of Scholarships, Greece).

1999, Università degli studi di Genova: TMR (Training and Mobility of Researchers) grant.

Professional Society Membership

- Member of the Technical Chamber of Greece (TEE) (since 1995).

- Member of the Pan-Hellenic Society of Electrical and Mechanical Engineers (since 1995).
- Member of the IEEE (since 1999, **Senior Member** since 2011); member of the IEEE Computer Society (1999); member of the IEEE Robotics and Automation Society (since 2010); member of the IEEE Instrumentation and Measurement Society (since 2011).
- Member of the Greek Society of Artificial Intelligence (EETN) (ECCAI member)(since 2000).
- Member of the Greek Society for Digital Media (member of the IAPR) (since 2002).
- Member of the European Association for Signal, Speech and Image Processing (EURASIP), (2005).

Other activities

- President of the Union of the Postgraduate Students at the Department of Electrical and Computer Engineering, Democritus University of Thrace, 1996-1997 and 1997-1998.
- Member of the Senate of the Democritus University of Thrace 1996-1997 and 1997-1998.
- Member of the Assembly of the Department of Electrical and Computer Engineering, Democritus University of Thrace, 1995-1998.
- Member of the Board of the Department of Electrical and Computer Engineering, Democritus University of Thrace, 1995-1998.
- Member of the Assembly of the Section of Electronics and Information Systems Technology, Departments of Electrical and Computer Engineering, Democritus University of Thrace, 1993-1994.
- Member of the Assembly of the Department of Production and Management Engineering, Democritus University of Thrace, 2003-2004.

Citation Index

as per 30/3/2013:

- 142 citations in *ISI Web of Knowledge* (without self citations)
- 246 citations in *Scopus* (self citations of all authors excluded)
- 699 citations in *Google Scholar*
- 717 citations in *Harzing Publish or Perish*