

CURRICULUM VITAE

First name: Antonios

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Father's name: Christos

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Place of birth: Athens, Greece

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Current Position

Full Professor: “Robotics, Mechatronics, Industrial Automation, Machine Vision and Machine Learning” (since 2016) and Deputy Head (since 2020) of Department of Production and Management Engineering, Democritus University of Thrace.

Affiliated Professor at “ATHENA Research Centre”.

Positions Held

2015 – 2020: Head of Department at Production and Management Engineering, Democritus University of Thrace.

2012 – 2016: Associate Professor: “Mechatronics and Artificial Vision”, Department of Production and Management Engineering, 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).

2003 – 2007: Lecturer: “Robotics”, Department of Production and Management Engineering, Democritus University of Thrace.

2001 – 2003: Visiting Lecturer & Assistant Professor (non-permanent position), Department of Electrical and Computer Engineering; Department of Educational Sciences in Early Childhood, Democritus University of Thrace (spring semester).

1999 – 2000: Post –Doctoral Fellow, LIRA-Lab, DIST, University of Genoa, Italy.

Studies

- Ph.D., Democritus University of Thrace, Greece, Dec. 1998.
- Diploma (integrated master) in Electrical and Computer Engineering, Democritus University of Thrace, Greece, Nov. 1994.

Languages

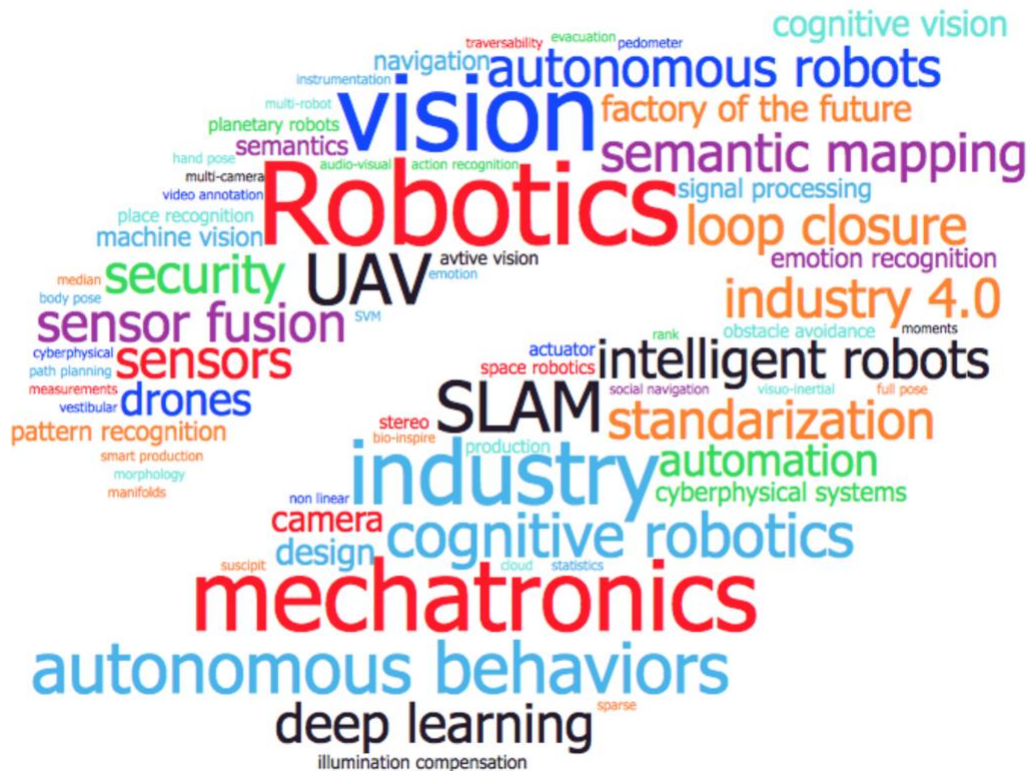
Greek, mother tongue.

English, excellent.

Italian, very good.

Research Interests

Robotics/mechatronics with emphasis on artificial vision systems, inertial and hearing and their fusion. Autonomous behaviors. Machine learning and deep learning architectures with application to cognitive vision and cognitive robotics. Intelligent and autonomous robotics. Data and sensor fusion with applications in robotics and automation. Industrial automation, applications in the factory of the future. Safety in industrial and mechatronics systems. Design and implementation of electronic systems with applications in 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

- A2. 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).

Textbooks

- B1. Antonios Gasteratos, *Mechatronic Design: Vol. 2 Microcontrollers, Sensors, Actuators*, Tsiotras Publications, Athens, 2018 (in Greek).
- B2. Antonios Gasteratos, *Mechatronic Design: Vol. 1 Electronics Elements*, Tsiotras Publications, Athens, 2016 (in Greek).
- B3. Antonios Gasteratos, Spyridon Mouroutsos and Ioannis Andreadis, *Measurement Techniques*, Giourdas Publishing, Athens 2008. (in Greek).

Edited Books

- B4. Lazaros Nalpantidis, Volker Krüger, Jan-Olof Eklundh, Antonios Gasteratos (Eds.), *Computer Vision Systems*, ICVS 2015, Lecture Notes in Computer Science **Vol. 9163**, Springer-Verlag, Berlin-Heidelberg, 2015.
- B5. 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.

Book Chapters

- B6. Konstantinos Charalampous, Ioannis Kostavelis, Evangelos Boukas, Angelos Amanatiadis, Lazaros Nalpantidis, Christos Emmanouilidis, Antonios Gasteratos, "Autonomous Robot Path Planning Techniques Using Cellular Automata", in *Robots and Lattice Automata*, Georgios Ch. Sirakoulis and Andrew Adamatzky (Eds), *Emergence, Complexity and Computation*, **Vol 13**, 2015, pp 175-196.
- B7. Dimitrios Portokalidis, Ioakeim G. Georgoudas, Antonios Gasteratos and Georgios Ch. Sirakoulis, "A Full-scale Hardware Solution for Crowd Evacuation via Multiple Cameras", in *Human Behavior Understanding in Networked Sensing: Theory and Applications of Networks of Sensors*, Paolo Spagnolo, Pier Luigi Mazzeo, Cosimo Distanto (Eds), Springer-Verlag, Berlin-Heidelberg, 2014.

- B8. 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.
- B9. 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*, Ch. 12, pp 192-209, Jose García-Rodríguez and Miguel Cazorla (Eds), IGI Global, Hershey PA, USA, 2013, (ISBN 978-1-46662-672-0), doi: 10.4018/978-1-4666-2672-0.
- B10. 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).
- B11. 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).
- B12. 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).
- B13. Angelos Amanatiadis and Antonios Gasteratos, "Stereo Vision System for Remotely Operated Robots" in *Remote and Telerobotics*, Ch. 4, pp 59-72, Nicolas Mollet (Ed.), IN-TECH Publishing, Vienna, 2010, (ISBN: 978-953-307-081-0).
- B14. Angelos Amanatiadis, Antonios Gasteratos, Vassilios G. Kaburlasos and Stelios E. Papadakis, "Image Stabilization in Active Robot Vision" in *Robot Vision*, Ch. 14, pp 261-274, Ales Ude (Ed.), IN-TECH Publishing, Vienna, 2010, (ISBN 978-953-307-077-3).
- B15. Konstantinos Konstantinidis, Antonios Gasteratos and Ioannis Andreadis, "The Impact of Low-Level Features in Semantic-Based Image Retrieval", Invited

contribution with review, *Semantic-Based Visual Information Retrieval*, (Idea Group), Ch. 2, pp 23-45, Yu-Jin Zhang (Ed.), 2007.

- B16. 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.
- B17. 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.

Editorials

- E1. Konstantinos Marias, George Giakos, Lijun Xu, Mihalis Zervakis, and Antonios Gasteratos, "Multidisciplinary advancement of Imaging Technologies: From Medical Diagnostics and Genomics to Cognitive Machine Vision, and Artificial Intelligence", *IET Image Processing*, Vol 14, No 9, 2020, doi: 10.1049/iet-ipr.2020.1020
- E2. 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.

Journal Papers

- J1. Loukas Bampis and Antonios Gasteratos, "Sequence-based Visual Place Recognition: A Scale-Space Approach for Boundary Detection", *Autonomous Robots*, (Springer), accepted for publication.
- J2. Konstantinos Tsintotas, Loukas Bampis and Antonios Gasteratos, "Modest-Vocabulary Loop-Closure Detection with Incremental Bag of Tracked Words", *Robotics and Autonomous Systems*, (Elsevier), accepted for publication.
- J3. Konstantinos Tsintotas, Loukas Bampis and Antonios Gasteratos, "Tracking-DOSeqSLAM: A Dynamic Sequence-Based Visual Place Recognition Paradigm", *IET Computer Vision*, accepted for publication, doi: 10.1049/cvi2.12041.

- J4. Loukas Bampis, Evangelos Boukas and Antonios Gasteratos, "CNN-based Novelty Detection for Terrestrial and Extra-Terrestrial Autonomous Exploration", *IET Cyber-systems and Robotics*, accepted for publication, doi: 10.1049/csy2.12013
- J5. Ioannis Kansizoglou, Loukas Bampis and Antonios Gasteratos, "An Active Learning Paradigm for Online Audio-Visual Emotion Recognition", *IEEE Transactions on Affective Computing*, in press 2020, doi: 10.1109/TAFFC.2019.2961089
- J6. Nicholas Santavas, Ioannis Kansizoglou, Loukas Bampis, Evangelos Karakasis and Antonios Gasteratos, "Attention! A Lightweight 2D Hand Pose Estimation Approach", *IEEE Sensors Journal*, **Vol 21**, No 10, pp 11488-11496, 2021, doi: 10.1109/JSEN.2020.3018172.
- J7. Vasiliki Balaska, Loukas Bampis, Ioannis Kansizoglou and Antonios Gasteratos, "Enhancing Satellite Semantic Maps with Ground-Level Imagery", *Robotics and Autonomous Systems*, (Elsevier), **Vol 139**, 2021, doi: 10.1016/j.robot.2021.103760.
- J8. Eleftherios Lygouras and Antonios Gasteratos, "A Novel Moving-Base RTK-GPS-Based Wearable Apparatus for Precise Localization of Humans in Peril", *Microprocessors and Microsystems*, (Elsevier), **Vol 82**, 2021, doi: 10.1016/j.micpro.2021.103833.
- J9. Fotios Konstantinidis, Ioannis Kansizoglou, Nicholas Santavas, Spyridon G. Mouroutsos, Antonios Gasteratos, "MARMA: A Mobile Augmented Reality Maintenance Assistant for fast-track repair procedures in the context of Industry 4.0", *Machines*, (MDPI), **Vol. 8**, No 4, 2020, doi:10.3390/machines8040088.
- J10. Vasiliki Balaska, Loukas Bampis, Moses Boudourides and Antonios Gasteratos, "Unsupervised Semantic Clustering and Localization for Mobile Robotics Tasks", *Robotics and Autonomous Systems*, (Elsevier), **Vol 131**, No 3, 2020, pp 23-31 doi: 10.25103/jestr.133.04
- J11. A. Konstantoglou, Dimitris Folinas, Thomas Fotiadis, Stelios Rallis and Antonios Gasteratos, "Development of a holistic framework for the key packaging elements of agri-food products", *Journal of Engineering Science and Technology Review*, **Vol 13**, No 3, 2020, pp 23-31 doi: 10.25103/jestr.133.04

- J12. Aggeliki Zacharaki, Ioannis Kostavelis, Antonios Gasteratos and Ioannis Dokas, "Safety Bounds in Human Robot Interaction: A Survey", *Safety Science*, (Elsevier) **Vol 127**, 2020, doi: 10.1016/j.ssci.2020.104667.
- J13. Eleftherios Lygouras, Nicholas Santavas, Anastasios Taitzoglou, Konstantinos Tarchanidis, Athanasios Mitropoulos and Antonios Gasteratos, "Unsupervised Human Detection with an Embedded Vision System on a Fully Autonomous UAV for Search and Rescue Operations", *Sensors*, (MDPI), **Vol 19**, No 16, pp 3542, 2019, doi: 10.1109/LRA.2019.2897151.
- J14. Konstantinos Tsintotas, Loukas Bampis and Antonios Gasteratos, "Probabilistic Appearance-Based Place Recognition through Bag of Tracked Words", *IEEE Robotics and Automation Letters*, **Vol 4**, No 2, pp 1737-1744, 2019, doi: 10.1109/LRA.2019.2897151.
- J15. Loukas Bampis and Antonios Gasteratos, "Revisiting the Bag-of-Visual-Words Model: A Hierarchical Localization Architecture for Mobile Systems", *Robotics and Autonomous Systems*, (Elsevier), **Vol. 113**, pp. 104-119, 2019, doi: 10.1016/j.robot.2019.01.004
- J16. Angelos Amanatiadis, Evangelos Karakasis, Loukas Bampis, Stylianos Ploumpis and Antonios Gasteratos, "ViPED: On-road Vehicle Passenger Detection for Autonomous Vehicles", *Robotics and Autonomous Systems*, (Elsevier), **Vol. 112**, pp. 282-290, 2019, doi: 10.1016/j.robot.2018.12.002.
- J17. Maria Dimoula, Thomas Fotiadis, Dimitris Folinas, Antonios Gasteratos "Tackling the Selection Criteria for Pharmaceutical Products: A comparative survey of consumers in Greece, France and Bulgaria", *International Journal of Business and Economic Sciences and Applied Research*, **Vol. 11**, No 2, pp. 23-35, 2018.
- J18. Eleftherios Lygouras, Antonios Gasteratos, Konstantinos Tarchanidis and Athanasios Mitropoulos, "ROLFER: A fully autonomous aerial rescue support system", *Microprocessor and Microsystems*, (Elsevier), **Vol. 61**, pp. 32-42, 2018.
- J19. Ichraf Lahouli, Evangelos Karakasis, Rob Haelterman, Zied Chtourou, Geert De Cubber, Antonios Gasteratos and Raban Attia, "A Novel Hot Spot Method for Pedestrian Detection Using Saliency Maps, Discrete Chebyshev Moments and SVM", accepted for publication, *IET Image Processing*
- J20. Loukas Bampis, Angelos Amanatiadis and Antonios Gasteratos, "Fast Loop Closure Detection using Visual-Word-Vectors from Image Sequences", accepted for publication, *International Journal of Robotics Research*, (SAGE).

- J21. Robert A. Hewitt, Evangelos Boukas, Martin Azkarate, Marco Pagnamenta, Joshua A. Marshall, Antonios Gasteratos and Gianfranco Visentin, "The Katwijk Beach Planetary Rover Dataset", accepted for publication, *International Journal of Robotics Research*, (SAGE).
- J22. Chingiz Kenshimov, Loukas Bampis, Beibut Amirgaliyev, Marat Arslanov and Antonios Gasteratos, "Deep Learning Features Exception for Cross-Season Visual Place Recognition", *Pattern Recognition Letters*, article in press, doi.org/10.1016/j.patrec.2017.10.028
- J23. Evangelos Boukas, Antonios Gasteratos and Gianfranco Visentin, "Introducing a Globally consistent Orbital-based Localization System", available on-line, *Journal of Field Robotics*, (Wiley), doi: 10.1002/rob.21739
- J24. Vasilios Vonikakis, Rigas Kouskouridas and Antonios Gasteratos, "On The Evaluation of Illumination Compensation Algorithms", available on-line, *Multimedia Tools and Applications*, (Springer), doi: 10.1007/s11042-017-4783-x
- J25. Loukas Bampis, Savvas Chatzichristofis, Chryssanthi Iakovidou, Angelos Amanatiadis, Yiannis S. Boutalis and Antonios Gasteratos, "A LoCATE-based Visual Place Recognition System for Mobile Robotics and GPGPUs", *Concurrency and Computation: Practice and Experience*, (Wiley), available on-line, doi: 10.1002/cpe.4146
- J26. Angelos Amanatiadis, Loukas Bampis, Evangelos Karakasis, Antonios Gasteratos and Georgios Ch. Sirakoulis, "Real-time Surveillance Detection System for Medium-altitude Long-endurance Unmanned Aerial Vehicles", *Concurrency and Computation: Practice and Experience*, (Wiley), available on-line, doi: 10.1002/cpe.4145
- J27. Konstantinos Charalampous, Ioannis Kostavelis, Antonios Gasteratos, "Recent Trends in Social Aware Robot Navigation: A survey", *Robotics and Autonomous Systems*, (Elsevier), **Vol. 93**, pp. 85-104, 2017, doi: 10.1016/j.robot.2017.03.002
- J28. Alexandros S. Xanthopoulos, Dimitrios E. Koulouriotis and Antonios Gasteratos, "Adaptive Card-based Production Control Policies", *Computers and Industrial Engineering*, (Elsevier), **Vol. 103**, pp. 131-144, 2017, doi: 10.1016/j.cie.2016.11.019

- J29. Ioannis Kostavelis and Antonios Gasteratos, "Semantic Maps from Multiple Visual Cues", *Expert Systems With Applications*, **Vol. 68**, pp. 45-57, 2017, (Elsevier), doi:10.1016/j.eswa.2016.10.014.
- J30. Konstantinos Charalampous, Ioannis Kostavelis, Antonios Gasteratos, "Robot Navigation in Large-scale Social Maps: An Action Recognition Approach", *Expert Systems With Applications*, **Vol. 66**, pp. 261-273, 2016, (Elsevier), doi:10.1016/j.eswa.2016.09.026.
- J31. Angelos Amanatiadis, Konstantinos Charalampous, Ioannis Kostavelis, Bernd Birkicht, Benjamin Andel, Vincent Meiser, Christopher Henschel, Stephen Baugh, Martin Paul, Richard May and Antonios Gasteratos, "Autonomous Vehicle Emergency Recovery Tool: A Cooperative Robotic System for Car Extraction", *Journal of Field Robotics*, (Wiley), **Vol. 33**, No 8, pp. 1058-1086, 2016, doi: 10.1002/rob.21593.
- J32. Evangelos Boukas and Antonios Gasteratos, "Modeling Regions of Interest on Orbital and Rover Imagery for Planetary Exploration Missions", *Cybernetics and Systems: An International Journal*, (Elsevier), **Vol. 47**, No 3, pp. 180-205, 2016, doi: 10.1080/01969722.2016.1154771.
- J33. Konstantinos Charalampous and Antonios Gasteratos, "On-line Deep Learning Method for Action Recognition", *Pattern Analysis and Applications*, (Springer), **Vol. 19**, No 2, pp. 337-354, 2016, doi: 10.1007/s10044-014-0404-8
- J34. Alexandros S. Xanthopoulos, Dimitrios E. Koulouriotis, Antonios Gasteratos and Stratos Ioannidis, "Efficient priority rules for dynamic sequencing with sequence-dependent setups", *International Journal of Industrial Engineering Computations*, (Growing Science), **Vol. 7**, pp. 367-384, 2016, doi: 10.5267/j.ijiec.2016.2.002
- J35. Ioannis Kostavelis, Evangelos Boukas, Lazaros Nalpantidis and Antonios Gasteratos, "Stereo Based Visual Odometry for Autonomous Robot Navigation", *International Journal of Advanced Robotic Systems*, (Intech), **Vol. 13**, No 21, pp. 1-19, 2016, doi: 10.5772/62099
- J36. Ioannis Kostavelis, Konstantinos Charalampous, Antonios Gasteratos and John K. Tsotsos, "Robot Navigation via Spatial and Temporal Coherent Semantic Maps", *Engineering Applications of Artificial Intelligence*, (Elsevier), **Vol. 48**, pp. 173-187, 2016, doi: 10.1016/j.engappai.2015.11.004

- J37. Rigas Kouskouridas, Angelos Amanatiadis, Savvas A. Chatzichristofis and Antonios Gasteratos, "What, Where and How? Introducing Pose Manifolds for Industrial Object Manipulation", *Expert Systems with Applications* (Elsevier), **Vol. 42**, No 21, pp. 8123–8133, 2015, doi: 10.1016/j.eswa.2015.06.039.
- J38. Stylianos Ploumpis, Angelos Amanatiadis and Antonios Gasteratos, "A stereo matching approach based on particle filters and scattered control landmarks", *Image and Vision Computing*, (Elsevier), **Vol. 38**, pp. 13-23, 2015, doi:10.1016/j.imavis.2015.04.001.
- J39. Konstantinos Charalampous, Ioannis Kostavelis and Antonios Gasteratos, "Thorough Robot Navigation based on SVM Local Planning", *Robotics and Autonomous Systems*, (Elsevier), **Vol. 70**, pp. 166-188, 2015, doi:10.1016/j.robot.2015.02.010
- J40. Evangelos Boukas, Ioannis Kostavelis, Antonios Gasteratos and Georgios Ch. Sirakoulis, "Robot Guided Crowd Evacuation", *IEEE Transactions on Automation Science and Engineering*, **Vol. 12**, No 2, pp. 739-751, 2015, doi: 10.1109/TASE.2014.2323175
- J41. Angelos Amanatiadis, Loukas Bampis and Antonios Gasteratos, "Accelerating Single-Image Super-Resolution Polynomial Regression in Mobile Devices", *IEEE Transactions on Consumer Electronics*, **Vol. 61**, No 1, pp. 63-71, 2015, doi: 10.1109/TCE.2015.7064112
- J42. John A. Tsanakas, Dimitrios Chrysostomou, Pantelis N. Botsaris and Antonios Gasteratos, "Fault Diagnosis of Photovoltaic Modules through Image Processing and Canny Edge Detection on Field Thermographic Measurements", *International Journal of Sustainable Energy* (Taylor & Francis), **Vol 34**, No 6, pp. 351-372, 2015, doi: 10.1080/14786451.2013.826223
- J43. Evangelos G. Karakasis, Angelos Amanatiadis, Antonios Gasteratos and Savvas A. Chatzichristofis, "Image Moment Invariants as Local Features for Content Based Image Retrieval using the Bag-of-Visual-Words Model", *Pattern Recognition Letters*, (Elsevier), **Vol. 55**, pp 22-27, 2015, doi: 10.1016/j.patrec.2015.01.005.
- J44. Ioannis Kostavelis and Antonios Gasteratos, "Semantic Mapping for Mobile Robotics Tasks: A Survey", *Robotics and Autonomous Systems*, (Elsevier), **Vol. 66**, No 2, pp 86-103, 2015, doi: 10.1016/j.robot.2014.12.006.

- J45. Konstantinos Charalampous and Antonios Gasteratos, "A Tensor-Based Deep Learning Framework", *Image and Vision Computing*, **Vol. 32**, No 11, pp 916-929, 2014, doi: 10.1016/j.imavis.2014.08.003
- J46. Konstantinos Charalampous, Ioannis Kostavelis, Angelos Amanatiadis and Antonios Gasteratos, "Real-time Robot Path Planning for Dynamic Obstacle Avoidance", *Journal of Cellular Automata*, **Vol. 9**, No (2/3), pp 195-208, 2014.
- J47. Rigas Kouskouridas, Konstantinos Charalampous and Antonios Gasteratos, "Sparse Pose Manifolds", *Autonomous Robots*, (Springer), **Vol 37**, No 2, pp 191-207, 2014, doi: 10.1007/s10514-014-9388-x.
- J48. Dimitrios Chrysostomou, Georgios Ch. Sirakoulis and Antonios Gasteratos, "A Bio-inspired Multi-camera System for Dynamic Crowd Analysis", *Pattern Recognition Letters*, (Elsevier), **Vol. 44**, pp 141-151, 2014, doi: 10.1016/j.patrec.2013.11.020.
- J49. Ioannis Kostavelis, Lazaros Nalpantidis, Evangelos Boukas, Marcos Aviles Rodrigalvarez, Ioannis Stamoulias, George Lentaris, Dionysios Diamantopoulos, Kostas Siozos, Dimitrios Soundris and Antonios Gasteratos, "SPARTAN: Developing a Vision System for Future Autonomous Space Exploration Robots", *Journal of Field Robotics*, (Wiley), **Vol. 13**, No 1, pp 107-140, 2014, doi: 10.1002/rob.21484.
- J50. Ioannis Kostavelis and Antonios Gasteratos, "Learning Spatially Semantic Representations for Cognitive Robot Navigation", *Robotics and Autonomous Systems*, (Elsevier), **Vol. 61**, No 12, pp 1460-1475, 2013, doi: 10.1016/j.robot.2013.07.008.
- J51. Angelos Amanatiadis, Savvas A. Chatzichristofis, Konstantinos Charalampous, Lefteris Doitsidis, Elias B. Kosmatopoulos, Philippos Tsalides, Antonios Gasteratos and Stergios I. Roumeliotis, "A Multi-Objective Exploration Strategy for Mobile Robots under Operational Constraints", *IEEE Access*, **Vol 1**, pp 691 – 702, 2013, doi: 10.1109/ACCESS.2013.2283031.
- J52. Rigas Kouskouridas, Antonios Gasteratos and Christos Emmanouilidis, "Efficient Representation and Feature Extraction for Neural Network-based 3D Object Pose Estimation", *Neurocomputing*, (Elsevier), **Vol 120**, pp 90-100, 2013, *Special Issue on Image Feature Detection and Description*, doi: 10.1016/j.neucom.2012.11.047

- J53. Vasilios Vonikakis, Dimitrios Chrysostomou, Rigas Kouskouridas and Antonios Gasteratos, "A Biologically Inspired Scale-space for Illumination Invariant Feature Detection", *Measurement Science and Technology* (IOP), **Vol 24**, 074024, (13pp), 2013, *Special Issue on Imaging Systems and Techniques*, doi:10.1088/0957-0233/24/7/074024.
- J54. 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.
- J55. 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
- J56. 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.
- J57. 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.
- J58. 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.
- J59. 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.
- J60. Nikolaos Kyriakoulis and Antonios Gasteratos, "On Visuo-inertial Fusion for Robot Pose Estimation Using Hierarchical Fuzzy Systems", *International Journal*

- of *Optomechatronics* (Taylor & Fransis), **Vol 6**, No 1, pp 17-36, 2012, doi: 10.1080/15599612.2012.664241.
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01. Antonios Gasteratos, "An Innovative Robot for Risk Management", Bulletin of Panellenic Assosiation of Mechanical and Electrical Engineers, No 396, March 2007, pp 42-47
02. Antonios Gasteratos and Giulio Sandini, "On the accuracy of the Eurohead", LIRA - TR 2/00, July 2000.
03. 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.
04. 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.
05. 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.

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€ + 68k€ 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), ~57k€.
4. "Autonomous Collaborative Robots to Swing and Work in Everyday EnviRonment (ACROBOTER), FP6-IST-2006-045530", (2007-2010), ~388k€ + 74k€ matching funds.

5. "Vision and Chemiresistor Equipped Web-connected Finding Robots (View-Finder), FP6-IST-2006-045541", (2007-2010), ~269k€ + 52k€ matching funds.
6. "Study of Stereo Robot Vision Systems", Internal DUTH project, (2006-2011) ~20k€.
7. "Innovative and Novel First Responders Applications (INFRA), FP7-ICT-SEC-2007-1-225272" (2009-2011), ~276k€ +14k€ 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) ~67k€.
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), ~470k€+8k€ matching funds.
11. "Armour and Protection STC - PARIS SIM (Protection Assessment Environment for Integrated Soldier System - Simulator)" (2012-2013), British Ministry of Defense, ~25k€
12. "Hellenic Civil Unmanned Air Vehicle", Greek Secretariat of Research and Technology, Synergasia 2011, (2013-2015), 216k€.
13. "Methods to Refine the Self-Localization of Planetary Rovers Using Orbital Imaging, NPI 289-2013" ESA-NPI, (2013-2016), 90k€.
14. "Improvement of the infrastructure and promotion activities for the Department of Production and Management Engineering", Internal DUTH project, (2016-2019) ~80k€.
15. "Cloud-based Simulation of Page Curling from Straight Images and Correction using Neural Networks (CURLO)", Fortissimo 2 H2020 Project (third party), (2016-2018), ~29k€.
16. "Novelty Or Anomaly Hunter (NOAH)", ESA (subcontractor), (2016-2018), ~35k€.
17. "Democritus Industrial Robotics", (2017-2020), Industry, ~5k€.
18. "Multirole Portable UAS", Greek Secretariat of Research and Technology, T1EAK-00737, (2018-2021), ~130k€.
19. "Combination of conventional and machine vision sensing and failure mode prediction models, for optimal risk management and increased operating life of

production assets, in the Factory of the Future", Greek Secretariat of Research and Technology, T1EAK-02433, (2018-2021), ~205k€.

20. "Democritus Racing Team", (2018-2020), Industry, ~12k€.
21. "Wearable systems for the safety and wellbeing applied in security guards", (SAFE.IT), Greek General Secretariat for Research and Technology, T2EAK-01862, (2020-2022) 149,5k€.

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 IIIC/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. Kostsntinos 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).

Teaching

Interests

- Computer Vision

- Robotics
- Mechatronics
- Electronics
- Instrumentation and Measurements
- Simulation
- Embedder Systems
- Image Processing
- Pattern Recognition
- Control Systems

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.
- 2003-2020: "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.
- 2003-2020: "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.
- 2005-2020: "Electronics", Department of Production and Management Engineering, Democritus University of Thrace.
- 2013-2020: "Mechatronics", Department of Production and Management Engineering, Democritus University of Thrace.
- 2013-2015: "Simulation", 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.

2015-2020: "Computer Vision", Department of Production and Management
Engineering, 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

Supervisor - Completed theses

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.
5. Ioannis Kostavelis: *Spatiotemporal Coherent Semantic Maps with Mobile Robots*, Xanthi 2014.
6. Konstantinos Charalampous: *Cognitive Human-Robot Interaction with Social Maps*, Xanthi 2016.
7. Evangelos Boukas: *Methods to Refine the Self-Localization of Planetary Rovers Using Orbital Imaging*, Xanthi 2016.
8. Loukas Bampis: *Hardware Accelerated Visual Place Recognition Based on Image and Sequence Descriptors for Real-Time Robotics Applications*, Xanthi 2018.

9. Eleftherios Lygouras: *Study and Implementation of an Innovative Fully Autonomous Flying Robotic System for Life-Saving Services*, Xanthi 2020.

Supervisor - Ongoing theses

1. Konstantinos Tsintotas
2. Vasiliki Balaska
3. Ioannis Kansizoglou
4. Vasilios Sevetlidis
5. Nikolaos Santavas
6. Fotios Konstantinidis
7. Anastasios Taitzoglou
8. Nikolaos Nalmpantis
9. Ioannis Tsampikos Papapetros
10. Christoforos Tsompanoglou

Co-Supervisor - Completed theses

1. Ioannis Tsanakas: *Advanced Fault Diagnosis Technologies in Mechanical Structures Using Supervisory Methods: The case of infrared thermography*, Xanthi 2013.
2. Efstratios Tsougenis: *Development of intelligent methods for watermarking using moment functions*, Xanthi 2013.
3. Evangelos Karakasis: *Development of efficient algorithms for the computation of moment functions and their applications in Image Processing and Pattern Recognition*, Xanthi 2013.
4. Georgios Tairidis: *Optimal design of smart structures with intelligent control*, Chania 2016.
5. Chingiz Kenshimov (Joint Educational Program with the Institute of Information and Computational Technologies and the Al-Farabi National University, Kazakhstan), *Large-scale classification and categorization of visual data*, Almaty, 2019

Co-Supervisor - Ongoing theses

1. Maria Ketipi, Department of Production and Management Engineering, DUTH
2. Maria Charalampidou, Department of Electrical and Computer Engineering, DUTH

3. Angeliki Zacharaki, Department of Civil Engineering, DUTH

Supervision of Diploma (MSc) theses

1. Konstantinos Mpampos: "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 Belagiannis, "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 Boukas, "Implementation of SLAM Algorithms on a Robotic Rover", Xanthi 2010.
22. Alexandros Boukas, "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", Xanthi 2012.
26. Ioannis Kazatzidis, "Using Learning Techniques to Classify Medical Signals", Xanthi, 2013.
27. Stelios Ploumbis, "Control of a Flying Robotics Platform Using Inertial and Visual Information", Xanthi 2013.
28. Loukas Peppas, "A Survey of the Robot Missions Sent to Mars", Xanthi 2013.
29. Georgios Parnasas, "Scene Traversability with Machine Learning for Autonomous Robot Navigation", Xanthi 2013.
30. Agis Kothalis, "Design and Implementation of a Mechatronics System for Target Tracing and Tracking", Xanthi 2014.
31. Christos Neofytidis, "Simulation of Human Model", Xanthi 2014.
32. Eleftherios Stefanis Volanis, "Symmetry Detection in Point Clouds", Xanthi 2015.
33. Nikolaos Beleskas, "Background Subtraction Techniques Using Pixel Analysis Methods", Xanthi 2015.
34. Panagiotis Keramaris, "AGVs: A survey of design and control methods", Xanthi 2016.
35. Charalampos Eleftheriadis, "Object Recognition with Covariance Descriptor on 3D Data", Xanthi 2016.
36. Panteleimon Myriokefalitakis, "Autonomous Robotic Tasks under No-Light Conditions ", Xanthi 2016.
37. Panagiotis Alexandros Sevdalis, "Study of of Instalation of an Assembly Line for a Greek UAV ", Xanthi 2016.

38. Ioannis Tsiklitaris Kambakis, "Phonetics Model Training for Speech Recognition Systems Using CMU SPHINX", Xanthi 2016.
39. Maria Kyrou, "Implementation of a Place Recognition System Using Scale and Rotation Invariant Features ", Xanthi 2017.
40. Chrysostomi Vogiatzi, "Location of Activity Owed to Attention to Optical Movement ", Xanthi 2017.
41. Vasilios Liatsos, "3D Geometry for Reconstruction and Robot Navigation", Xanthi 2017
42. Vasiliki Balaska, "Map and Position Estimation for Drone Swarm", Xanthi 2017.
43. Spyridon Bellias, "Image Sequence Recognition Using Graph Based Clustering for Loop-closure Detection", Xanthi 2017.
44. Konstantinos Mitsopoulos, "Exploring Unknown Space for a Robot Agent Using Genetic Algorithms", Xanthi 2017.
45. Chryssanthi Apostolou, "Educational Robotics as an Innovative Training Tool", Xanthi 2017.
46. Kekis Dimitrios, "Optical Parcel Measurement in an Aluminum Production Line", Xanthi 2017.
47. Anatoli Tziola, "Comparison of local features for place recognition applications", Xanthi 2017.
48. Eleni Tsekou, "Design, application and assessment of algorithms for pedometers place on the center of mass of a body ", Xanthi 2018.
49. Aliko-Maria Makri, "Categorization and visual recognition by sorting characteristics on lexical trees ", Xanthi 2018.
50. Dimitrios Charisis, "Internet of Things: Remotely control and running of an irrigation instalment ", Xantih 2018.
51. Kleopatra Markou, "Comparative study of algorithms for feature detection for visual place recognition", Xanthi 2018.
52. Konstantinos Voulgaridis, "IoT application for medical drug transportation", Xanthi 2018.
53. Nikolaos Petsios, "Emotion change recognition of a talker for robotics applications", Xanthi 2018.
54. Nikolaos Santavas and Anastasion Taitzoglou, "Study and implementation of a quadropter and implementation of a deep learning algorithm on an embedding system for its autonomous landing", Xanthi 2018.

55. Despina Mati, " Data collection to track the number of passengers in a vehicle using CNN", Xanthi 2018.
56. Stavros Moutsis, "Digital image processing algorithms on DE1-SoC development board", Xanthi 2019.
57. Dimitra Zotou, " Study and implementation of a prototype shade control device based on IoT technology", Xanthi 2019.
58. Vasilis Lagopoulos, " Indoor comfort assessment system with IoT technology", Xanthi 2019.
59. Nikolaos Nalmpantis, "Behavior adjustment using emotions and reinforcement learning ", Xanthi 2019.
60. Ioannis Tsampikos Papapetros, "Semantic map construction for a flying robot and its positioning with community detection techniques", Xanthi 2019.

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: Jan Wedekind; PhD, Sheffield Hallam University, UK.
- 10/2012 Reviewer for the PhD thesis of Mr. Leonardo De-Maeztu, Public University of Navarre, Pamplona, Spain.
- 3/12/2012: Evangelos Boukas, MSc, Department of Electrical and Computer Engineering, DUTH.
- 11/11/2015: Vassilios Plakandaras, PhD, Department of Economics, DUTH.
- 24/4/2017: Ioannis Varvoulakis, PhD, Department of Electrical and Computer Engineering, DUTH.

- 6/6/2017: Francesco Rovida, PhD, Department of Mechanical and Manufacturing Engineering, University of Aalborg.
- 26/7/2017: Nuno Miguel Banheiro Moutinho, PhD, Department of Electrical and Computer Engineering, Universidade de Lisboa.
- 17/11/2017: Bjarne Grossman, PhD, Department of Mechanical and Manufacturing Engineering, University of Aalborg.
- 13/12/2017: Athanasios Kapoutsis, PhD, Department of Electrical and Computer Engineering, DUTH.
- 5/2018-5/2021 Referent of the Individual Monitoring Committee (CSI) for the PhD thesis of Mr. Andrei Mitriakov, Université Bretagne-Loire, France.
- 19/6/2018 Fotis Konstantinidis, MSc, Department of Electrical and Computer Engineering, DUTH.
- 19/6/2018 Konstantinos Zioudas, MSc, Department of Electrical and Computer Engineering, DUTH.
- 10/1/2019 Berkan Höke, MSc, Department of Electrical and Electronic Engineering, Boğaziçi University, Turkey.
- 21/2/2020 Eleftheria Mitka, PhD, Department of Electrical and Computer Engineering, DUTH.
- 29/4/2020 Elisa Maiettini, PhD, Department of Informatics, Bioengineering, Robotics and Systems Engineering, University of Genoa, Italy.
- 29/4/2020 Massimiliano Iacono, PhD, Department of Informatics, Bioengineering, Robotics and Systems Engineering, University of Genoa, Italy.
- 10/6/2020 Athanasios Tramountanis, MSc, Department of Electrical and Computer Engineering, DUTH.
- 21/5/2021: Tajudeen Badmos, PhD, Sheffield Hallam University, UK.

Talks - Seminars

- Antonios Gasteratos: "An Introduction to Non-Linear Image Processing", LIRA-Lab, DIST, Università 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.
- Antonios Gasteratos: "Artificial vision with mobile robots", 4th Industrial Informatics Festival, ATEI, Kavala, 19 October, 2013.
- Antonios Gasteratos: "Semantic Maps for High Level Robot Navigation", Dagstuhl Seminar 15461, *Vision for Autonomous Vehicles and Probes*, Schloss Dagstuhl, International Conference and Research for Computer Science, 10 November 2015.

- Antonios Gasteratos: "Semantic Maps for Robot Navigation", Department of Mechatronics, Chungnam National University , Daejeon, Korea, 14 October 2015.
- Antonios Gasteratos: "The Role of Semantic and Social Maps in Robot Navigation", Instituto Superior Técnico, Lisbon, Portugal, 26 July 2017.
- Antonios Gasteratos: "Image-based place recognition", International School of Imaging, Krakow, Poland, 18 October 2018.
- Antonios Gasteratos: "4th Industrial Revolution", Energy & Hubs, Xanthi, 10 May 2019.
- Antonios Gasteratos: "Audio-Visual modalities fusion for efficient emotion recognition with active learning capabilities", 2020 Intelligent Sensing Summer School, Queen Mary University, London, 1 September 2020.

Scientific Reviewer Service

Reviewer in all the major Journals in his field (Robotics and Computer Vision) and in many major Journals in Electrical and Computer Engineering discipline (more than 80 Journals), including

International Journal of Robotics Research (SAGE), IEEE Transactions on Robotics, IEEE/ASME Transactions on Mechatronics, Autonomous Robots (Springer), Robotics and Autonomous Systems (Elsevier), IEEE Transactions on Automation Science and Engineering

Reviewer for many Elsevier Books for Computer Vision, including

Machine Vision: Theory, algorithms, practicalities, 5th Edition, (Elsevier), E.R. Davies.

Reviewer in all major conferences in his field, since 1999, including:

ICRA, IROS, AIM, ECCV, CASE, CIS

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 & EUCogIII, Funded by European Commission – ICT (2009 -).
- Member of ETPIS (European Platform on Industrial Safety).

Member in Editorial Boards and Program Committees

- **Subject Editor-in-chief (Image Processing): IET Electronics Letters, since 2020, (Subject Editor since 2016), (Associate Editor since 2015).**
- **Guest Editor: Measurement Science and Technology (2012): Special Issue on Imaging Systems and Techniques.**
- **Guest Editor: IET Image Processing (2020): Special Issue on Multidisciplinary advancement of Imaging Technologies: From Medical Diagnostics and Genomics to Cognitive Machine Vision, and Artificial Intelligence.**
- **Guest Editor: Machines (2020): Special Issue on Intelligent Mechatronics Systems.**
- **Member of the Editorial Board: International Journal of Optomechatronics, (Taylor & Fransis), since 2007.**
- **Associate Editor: International Journal of Advanced Robotic Systems (SAGE), since 2014 and member of the Editorial Board since 2011**
Member of the Editorial Board: Journal of Computers, (Academy Publishers), (2007-2013).
- **Member of the Editorial Board: Machines (MDPI), since 2018.**
- **Member of the Editorial Board: Journal of Engineering Science & Technology Review, (2007-2012).**
- **Member of the Editorial Board: ISRN Machine Vision (Hindawi), (2011-2014).**
- **Member of the Editorial Board: Advances in Robotics & Automation (OMICS), (2013-2014).**
- **Associate Editor: Human-centric Computing and Information Sciences (Springer), (2012-2014).**
- **General Chair: 6th International Conference on Computer Vision Systems, (ICVS 2008) 12-15 May 2008, Santorini, Greece.**

- **Member of the Steering Committee: International Conference on Computer Vision Systems (ICVS), since 2008.**
- **Program Chair: 10th International Conference on Computer Vision Systems, 6-9 July, 2015, Copenhagen, Denmark.**
- **Member of the International Board of Directors and Co-Chair: IEEE International Conference on Imaging Systems and Techniques (IST), (2011-2015).**
- **Member of the Program Committee and Session Chair in numerous international conferences since 2004.**

Other committees

- IASTED Technical Committee Reviewer for Image Processing (2002-2012).
- Member of the IAPR Technical Committee for Discrete Geometry (TC18).
- Member of the Editorial Board of the Greek Edition of Scientific American.
- 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, since 2007.
- Member of the IEEE I&M Society Technical Committee on Imaging Measurements (TC-19), since 2009.
- EURON (European Robotics Network) Board Member (2010-2012).
- Member of the IEEE RAS Technical Committee on Computer and Robot Vision, since 2013.
- Member of the IEEE RAS Technical Committee on Space Robotics, since 2013
- Member of IEEE-RAS Standards Development Working Group ORA - Ontologies for Robotics and Automation.

Other appointments

- Member of the Plenary of the Hellenic Telecommunications and Post Commission (2018-2022).
- Delegate Member of Hellenic NARIC (2016-2019)
- 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).
- Reviewer for the Italian National Agency for the Evaluation of Universities.
- 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, Space).
- 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).
- Peer-reviewer for the Italian National Agency for the Evaluation of Universities and Research Institutes (ANVUR) (2013).
- Proposal reviewer for the Croatian Ministry of Science, Education and Sports (2014).
- Proposal reviewer for the New Zealand Ministry of Business, Innovation & Employment (2014).
- Proposal reviewer for the Swiss National Science Foundation (2014).
- Proposal reviewer for the Russian Science Foundation (2015).
- Proposal reviewer for Eurostars (2017).
- Proposal reviewer for Netherlands Organisation for Scientific Research (NWO) (2018).
- Proposal reviewer/rapporteur for Romanian Executive Agency for Higher Education, Research, Development and Innovation Funding (2019-2020).
- Proposal reviewer for Research Coordination Office, KU Leuven (2020)

International co-operations

As responsible of the Department of Production and Management Engineering for the Erasmus Project, he developed 6 international co-operations with other European Universities.

Through European and Bilateral Projects he has co-operated with more than 40 *research institutes and companies around Europe.*

Professional Society Membership

- **Fellow member** of the Institute of Engineering and Technology (IET), (since 2020).
- 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 Technical Chamber of Greece (TEE) (since 1995).
- Member of the Pan-Hellenic Society of Electrical and Mechanical Engineers (since 1995).
- 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).