

Apostolos Tsagaris

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Nationality	Hellenic		
Date of birth	07/12/1970 in Germany		

Education

- 2014-2018, MBA Master of Business Administration, Open University of Patra, Greece
- 2014-2016, PostDoc, Development of a knowledge collection methodology by capturing and processing finger-movements / gestures and voice commands, through multimodal physical interaction interfaces using recognition technologies as well as integration of data from signal recording through sensors.
- 2010-2014, Phd, Real Time Finger Gesture Recognition for Human Robot Interaction: Application on control of mechatronic system, University of Macedonia – Economics and social sciences - Department of applied informatics
- 2007-2010, Med in Adult Education, Open University of Patra, Greece
- 2005-2007, Msc in Mechatronics, University Polytechnic of Catalonia (UPC), Spain
- 2003-2005, MSc in Design of Interactive and Industrial product and systems, Aegean University, Greece
- 2004-2005, Dipl. in School of Pedagogical and Technological Education, School of Pedagogical and Technological Education, Greece
- 1989- 4/1994, Automation Engineer, Technological Institute of Thessaloniki

Career

- **December '23 – Today, Professor in Human Mechatronic Systems – Robotics at Department of Industrial Engineering and Management in International Hellenic University - IHU**
- **December '19 – November '23, Associate Professor in Human Mechatronic Systems – Robotics at Department of Industrial Engineering and Management in International Hellenic University - IHU**
- **November '15 – December '19, Assistant Professor in Human Mechatronic Systems – Robotics Interaction at Department of Automation in A.T.E.I. of Thessaloniki**
- 19/11/2018 – 22/11/2018, 24/02/2020-28/02/2020: France - Mines ParisTech - CAOR - Centre de Robotique, Teaching Introduction on Mechatronics systems, programming of PLC and SCADA and offline robot programming.
- October '21 – February '22, March '22- September '22, October '22 – Today, Assistant Professor teaching on master course of Department of Industrial Engineering and Management in International Hellenic University - IHU
- March '17- September '17, October '17 – February '18, Assistant Professor teaching at Department of Mechanical Engineering in TEI of West Macedonia, Kozani, Greece
- October '16 –September '22, Teaching on master course of Department of Business Administration in A.T.E.I. of Thessaloniki and IHU.
- March '17- September '17, March '17- September '17, Assistant Professor teaching at Department of Agriculture in A.T.E.I. of Thessaloniki

- October '15 - February '22, Teaching on master course at Department of applied informatics in University of Macedonia
- March '08 – November '15, Lecturer in Robotics and CAD/CAM/CAE systems at Department of Automation in A.T.E.I. of Thessaloniki
- September '06 – September '07, Part – time Lecturer in CIM systems at Department of Industrial Design in T.E.I. of West Macedonia (Kozani)
- July '02 – March '08, Technical staff specialized on automation systems at Automation Department in A.T.E.I. of Thessaloniki
- March '99 – July '02, TITAN Cement Company, Automation Engineer - Responsible for automation systems and Information technology
- January '96 – March '99, SATO Office furniture company, Automation Engineer – Industrial Designer - Responsible for design of new product and system in R&D Department

Activities

- 09/2021-Today: Head of Department of Industrial Engineering and Management in International Hellenic University - IHU
- 25/11/2020 -Today: Director on Master course «Advanced Automation Systems»
- 12/2017- 05/2019: Head of the Industrial Automation and Mechatronic Sector of Courses in the Automation Department of the TEI of Thessaloniki.
- Member of Greek Computer Society (Registration Number 3593)
- Member of Scientific Union of Technological Education Mechanics
- Member of the Greek Logistics Society
- Certified Educator ECDL CTP and CTP TUTOR
- 09/2010-08/2011: Deputy Head of the Electronic Sector of Courses in the Automation Department of the TEI of Thessaloniki.
- 2009-today: Head of course and exams programming for the Automation Department of the TEI of Thessaloniki
- 2005-today: Scientific coordinator of the TEI of Thessaloniki for the education and certification in computer skills organized by the Automation Department which leads to the Computer Certificate Skills of Cambridge University.
- 2009-2010: Member of the Supplies Committee for the School of Technological Applications of the TEI of Thessaloniki

Fields of expertise

Human interaction with mechatronic systems, PLC, SCADA, CAD/CAM/CAM, Robotics, Artificial Intelligent,STEAM education.

Patents:

Tsagaris A., Manitsaris S., Manitsaris A. (2014), Methodology for real time gesture control of mechatronic systems with semi-closed palm. (Patent No. 1008335)

Supervision of doctoral theses

- 21/12/2015, Design and development of an interactive sensorymotor learning system for the teaching of microtone music, Stergiaki Athanasia, University of Macedonia – Economics and social sciences - Department of applied informatics
- 01/02/2023 – today, International University of Greece – Department of Production and Management Engineering - Papakostas Alexandros - Development of a methodology for using tactile programming in teaching
- 01/02/2023 – today, International University of Greece – Department of Production and Management Engineering - Ilias Chouridis - Optimization of navigation of mechatronic systems using evolutionary algorithms

- 01/02/2022 – today, International University of Greece – Department of Production and Management Engineering - Tzouros Theodoros - Optimization of the production process and the result, with the use of artificial intelligence techniques in the context of customer-centric services in the field of health with application to the measurement of the workload and the lean (re)organization of the services provided
- 01/02/2021 – today, International University of Greece – Department of Production and Management Engineering - Konstantinos Kamoutsis - Metrology and automation of ionizing radiation detection systems in the environment
- 01/02/2021 – 02/2026, International University of Greece – Department of Production and Management Engineering - Chatzikyrouk Maria - Teaching robotics and new technologies through a new approach: Gamification as a tool to enhance discovery learning

Participation in committees for the examination of doctoral theses

- 07/12/2018, Queensland University of Technology, Australia, Faleh Mohammed A Alqahtani, Three-Dimensional Facial Tracker Using Stereo Camera
- 20/06/2017, Human-Computer Interaction for the transmission of knowledge by utilizing mechanical learning and sensorymotor learning techniques in a multimodal signal, Kokkinidis Konstantinos, University of Macedonia – Economics and social sciences - Department of applied informatics
- 28/11/2016, Mechanical learning in the expression of expressive gesture using stochastic models, Volioti Christina, University of Macedonia – Economics and social sciences - Department of applied informatics
- 24/02/2016, Utilization of gesture recognition technologies in motor skills management. Sensory-motor feedback as a gaming device, Gloukova Alina, University of Macedonia – Economics and social sciences - Department of applied informatics

Books

- Apostolos Tsagaris, Xanthos Stelios, Maria Chatzikyrouk, Kamoutsis Konstantinos (2022), Educational Robotics, Broken Hill Publishers Ltd, ISBN 9789925351091, Evdoxos code 112690749
- Apostolos Tsagaris, Maria Chatzikyrouk (2022), The teaching of new technologies, Broken Hill Publishers Ltd, ISBN 9789925350933, Evdoxos code 112690754
- Apostolos Tsagaris (2022), PLC and SCADA, Broken Hill Publishers Ltd, ISBN 9789925588558, Evdoxos code 102070240
- Apostolos Tsagaris (2016), Robotics introduction with Lego Mindstorms ISBN 978-960-93-8488-9

Publications:

Book Chapter

1. Maria Chatzikyrouk, Athanasios Manavis, and **Apostolos Tsagaris**, (2025) Gamification in teaching of 3D design, scanning, and printing, CAD CAM, Chapter 10, De Gruyter Brill, <https://doi.org/10.1515/9783111585062-010>
2. **Apostolos Tsagaris**, Vasilis Samaras, Athanasios Manavis, Panagiotis Kyratsis (2023), The Design of Human Robotic Interaction System, Computer-Aided Design: Advances in Research and Applications, Chapter 4
3. **Tsagaris A.**, Economou M., Manavis A., Kyratsis P. (2022), Design of Gesture-Controlled Interface for Mechatronic Systems: A Computational Approach, *Computational Design and Digital Manufacturing*, Chapter 3, ISBN 978-3-031-21166-9, DOI : 10.1007/978-3-031-21167-6

4. **Tsagaris Á.**, Chatzikyrkou M., Mansour G. (2019) *The Impact of Robotics in Children Through Education Scenarios*. In: Aspragathos N., Koustoumpardis P., Moulianitis V. (eds) *Advances in Service and Industrial Robotics*. RAAD 2018. Mechanisms and Machine Science, vol 67. Springer, Cham
5. **Tsagaris Á.**, Sagris D., Mansour G. (2019) *Off-line Robot Optimization with Hybrid Algorithm*. In: Aspragathos N., Koustoumpardis P., Moulianitis V. (eds) *Advances in Service and Industrial Robotics*. RAAD 2018. Mechanisms and Machine Science, vol 67. Springer, Cham

Journal Papers

1. Maria Chatzikyrkou, **Apostolos Tsagaris**, (2026) «The integration of gamification in educational robotics as a tool to enhance discovery learning: teachers' perceptions», *International Journal of Evaluation and Research in Education (IJERE)*, vol 15 (3), pp 2239-2248, <http://doi.org/10.11591/ijere.v15i3.36557>
2. **Tsagaris A.**, Chatzikyrkou M. (2026) «Integrating Gamification with ADDIE Instructional Design for Educational Robotics: A Usability Evaluation», (2026) *European Journal of Educational Research*, 15 (2), pp. 465 - 480, DOI: 10.12973/eu-jer.15.2.465
3. Chatzikyrkou M., Manavis A., Simeli I. **Tsagaris A.** (2025). «Incorporating gamification principles into adult education for teaching 3d printing: a pedagogical framework», *Journal of Contemporary Education, Theory & Research*, Vol. X, No. X, pp. XX-XX, 2025, ISSN: 2654-0274,
4. Chouridis, I., Mansour, G., Papageorgiou, V., Mansour, M. T., & **Tsagaris, A.** (2025). Measurement Optimization from CAD Using Artificial Intelligence. *Metrology*, 5(4), 64. <https://doi.org/10.3390/metrology5040064>
5. Chouridis, I., Mansour, G., Chouridis, A., Papageorgiou, V., Mansour, M. T., & **Tsagaris, A.** (2025). Digital Twin Driven Four-Dimensional Path Planning of Collaborative Robots for Assembly Tasks in Industry 5.0. *Robotics*, 14(7), 97. <https://doi.org/10.3390/robotics14070097>
6. Chouridis, I.; Mansour, G.; Papageorgiou, V.; Mansour, M.T.; **Tsagaris, A.** (2025) Four-Dimensional Path Planning Methodology for Collaborative robots' application in Industry 5.0. *Robotics* 2025, 14, 48. <https://doi.org/10.3390/robotics14040048>
7. Chouridis, I.; Mansour, G.; Papageorgiou, V.; Mansour, M.T.; **Tsagaris, A.** (2025) Enhanced Hybrid Artificial Fish Swarm Algorithm for Three-Dimensional Path Planning Applied to Robotic Systems. *Robotics* 2025, 14, 32. <https://doi.org/10.3390/robotics14030032>
8. Chouridis, I., Mansour, G., & **Tsagaris, A.** (2024). Three-Dimensional Path Planning Optimization for Length Reduction of Optimal Path Applied to Robotic Systems. *Robotics*, 13(12), 178. <https://doi.org/10.3390/robotics13120178>
9. **Apostolos Tsagaris**, Margarita Taousani, Georgios Mylonas (2024), INTELLIGENT RADIOACTIVE WASTE INACTIVATION AUTOMATION SYSTEM, *Journal of Applied Engineering Science* Vol. 22, No. 3, 2024
10. Athina Theocharidou, Sylvie Lousinian, **Apostolos Tsagkaris**, Ioannis Mourtzinis, Christos Ritzoulis (2024), Interactions between xanthan gum and phenolic acids, *International Journal of Biological Macromolecules*, Volume 273, Part 2, 2024, 133175, ISSN 0141-8130, <https://doi.org/10.1016/j.ijbiomac.2024.133175>.
11. **Apostolos Tsagaris**, Charalampos Polychroniadis, Anastasios Tzotzis, Panagiotis Kyratsis, (2024) "Cost-effective Robotic Arm Simulation and System Verification", *International Journal of Intelligent Systems and Applications (IJISA)*, Vol.16, No.2, pp.1-12, 2024. DOI:10.5815/ijisa.2024.02.01
12. Chouridis I., Mansour G., **Tsagaris A.** (2024), Finding the optimal path in a 3D environment with predefined obstacles, *Int. J. of Advanced Mechatronic Systems*, (Accepted)

13. **Apostolos Tsagaris**, Intelligent Robotic Chess System, *International Journal of Intelligent systems and applications in engineering*, ISSN:2147-67992147 (**submitted**)
14. Volioti C, **Tsagaris A**, Trigkas D, Iliou T, Katsantonis MN, Mavridis I. (2023) HapticSOUND: An Interactive Learning Experience with a Digital Musical Instrument. *Applied Sciences*. 2023; 13(12):7149. <https://doi.org/10.3390/app13127149>
15. **Tsagaris A.** (2023), Mechatronic system usability evaluation, *Journal of Technology and Science Education*, JOTSE, 2023 – 13(1): 65-72 – Online ISSN: 2013-6374 – Print ISSN: 2014-5349, <https://doi.org/10.3926/jotse.1349>
16. **A. Tsagaris**, P. Kyratsis, and G. Mansour, (2023) “The Integration of Genetic and Ant Colony Algorithm in a Hybrid Approach ”, *Int J Intell Syst Appl Eng*, vol. 11, no. 2, pp. 336 –342, Feb. 2023.
17. Theocharidou A., Lousinian S., **Tsagaris A.**, Ritzoulis Ch. (2022), «Interactions and rheology of guar gum–mucin mixtures», *Food Hydrocolloids*, Elsevier, Volume 133, December 2022, ISSN 0268-005X, DOI:10.1016/j.foodhyd.2022.107903
18. Tzotzis A., **Tsagaris A.**, Tapoglou N. and Kyratsis P. (2022), High-precision CAD-based simulation for turning considering tool microgeometry, *Int. J. Mechatronics and Manufacturing Systems*, Vol. X, No. Y, xxxx
19. A. Manavis, A. Tzotzis, A. **Tsagaris**, P. Kyratsis (2022), « A Novel Computational-based Visual Brand Identity (CbVBI) product design methodology », *Machines*, Volume XX, 2022, Pages XXX-XXX, ISSN 2075-1702
20. A. **Tsagaris** (2022), «Mechatronic system usability evaluation», *Journal of Technology and Science Education*, Volume XX, 2022, Pages XXX-XXX, ISSN 2013-6374
21. A. Theocharidou, S. Lousinian. A. **Tsagaris**, Ch. Ritzoulis (2022), «Interactions and rheology of guar gum–mucin mixtures», *Food Hydrocolloids*, Elsevier, Volume XX, 2022, Pages XXX-XXX, ISSN 0268-005X
22. K. Theodoridis, F. Stergiopoulos, D. Bechtsis, N. Nikolaidis, D. Triantafillides, A. **Tsagaris** , A. Filelis (2020), «An innovative and fully automated system for gel electrophoresis», *Computer Aided Chemical Engineering*, Elsevier, Volume 48, 2020, Pages 847-852, ISSN 1570-7946, ISBN 9780128233771, <https://doi.org/10.1016/B978-0-12-823377-1.50142-7>.
23. A. **Tsagaris**, M. Chatzikyrkou, I. Simeli (2019). «Educational Robotics-The pleasure of participation», *Journal of Contemporary Education, Theory & Research*, Vol. 3, No. 1, pp. 31-35, 2019, ISSN: 2654-0274, <http://doi.org/10.5281/zenodo.3598726>
24. **Tsagaris A.**, Chatzikyrkou M., Mansour G. (2019) The Impact of Robotics in Children Through Education Scenarios. In: Aspragathos N., Koustoumpardis P., Moulitanitis V. (eds) *Advances in Service and Industrial Robotics*. RAAD 2018. Mechanisms and Machine Science, vol 67. Springer, Cham
25. **Tsagaris A.**, Sagris D., Mansour G. (2019) Off-line Robot Optimization with Hybrid Algorithm. In: Aspragathos N., Koustoumpardis P., Moulitanitis V. (eds) *Advances in Service and Industrial Robotics*. RAAD 2018. Mechanisms and Machine Science, vol 67. Springer, Cham
26. A. **Tsagaris**, M. Chatzikyrkou, I. Simeli (2018). «Train the Robotic Trainers methodology», *Journal of Contemporary Education, Theory & Research*, Vol. 2, No. 1, pp. 38-42, 2018, ISSN: 2654-0274, <http://doi.org/10.5281/zenodo.3598476>
27. A. **Tsagaris**, D. Trigkas. (2018), Mobile Gesture Recognition, *ACM Proceedings of the International Conference on Machine Vision and Applications*. ISBN 978-1-4503-6381-5, Doi.10.1145/3220511.3220519
28. **Tsagaris A.**, (2018), The design of finger gestures vocabulary, *Academic journal of manufacturing engineering*, Vol. 17, Issue 2/2018, ISSN 1583-7904
29. **Tsagaris A.**, Mansour G., (2017), Optimizing the control of spatial mechanisms using genetic algorithms and ant colony, *Fiability & Durability*, No 2/ 2017, ISSN 1844 – 640X
30. **Tsagaris A.**, Stampoulis K., Kyratsis P. (2017), Hand Finger Gesture Modeling In Advanced Cad System, *Journal Computer-Aided Design and Applications*, Vol: 15, No: 3, <http://dx.doi.org/10.1080/16864360.2017.1397880>
31. **Tsagaris A.**, Mansour G., Sagris D. (2017), CMM path planning, position and orientation optimization by means of a hybrid algorithm, *International Review of Mechanical Engineering (IREME)*, Vol:11, No:02

32. Kyratsis Panagiotis, Efkolidis Nikolaos, Manavis Athanasios, and **Tsagaris Apostolos**, (2015), Design for Skin and Shape: An Innovative Design Approach, *Applied Mechanics and Materials*, Vols. 809-810 (2015) pp 1311-1316.
33. Kyratsis P., Taousanidis N., **Tsagaris A.**, Kakoulis K. (2015), Drilling Mathematical Models Using the Response Surface Methodology, *International Journal of Mechanical & Mechatronics Engineering IJMME-IJENS*, Vol:15, No:06
34. Mansour G., **Tsagaris A.**, Mansour T.M.. (2015), Intelligent interaction with CMM, *International Journal of Mechanical & Mechatronics Engineering IJMME-IJENS*, Vol:15, No:03
35. **Tsagaris A.**, Tzetzis D, Mansour G., Hatzikos E. and Kyratsis P. (2015), Improving the Tensile Strength of a Novel Double Hook Design Manufactured by Nanosilica Epoxy Reinforced Aramid/Carbon Composites, *Applied Mechanics and Materials* Vol. 760 (2015) pp 3-8
36. Manitsaris S., **Tsagaris A.**, Dimitropoulos K., Manitsaris A., Denby B., (2015), "A visual perception of finger musical gestures in 3D space without any tangible instrument for performing arts", *The International Journal of Art and Technology*, Vol:8, No:01
37. **Tsagaris A.**, Kokkinidis K., Manitsaris A. (2015), Intelligent speech interaction with Mechatronic system using HMM, *International Journal of Mechanical & Mechatronics Engineering IJMME-IJENS*, Vol:15, No:01
38. **Tsagaris A.**, Hatzikos E. (2014), "Implementation of Enviromental Monitoring System with PLC and SCADA", *International Journal of Mechanical & Mechatronics Engineering IJMME-IJENS*, Vol:14, No:06
39. Sotiris Manitsaris, **Apostolos Tsagaris**, Alina Glushkova, Fabien Moutarde and Frédéric Bevilacqua, (2014), "Fingers gestures recognition with a unified framework for optical or depth camera", *Pattern Recognition letters* (submitted)
40. **Tsagaris A** (2013) "Integration of Robot ARM Into CAD/CAM and CNC Machining Systems", *International Journal of Product Design (IJPd)*, Jul-Dec. 2013 issue.
41. **Tsagaris A**, Manitsaris S., (2013) "Color space comparison for skin detection in finger gesture recognition", *International Journal of Advances in Engineering & Technology (IJAET)*, Volume 6 Issue 4, pp. 1431-1441, Sept. 2013.
42. Mansour G., **Tsagaris A.**, Sagris D., (2013), CNC machining optimization by genetic algorithms using CAD based system, *International Journal of Modern Manufacturing Technologies*, Vol. V, No. 1 / 2013
43. Kyratsis P., Efkolidis N., Sirganis K. and **Tsagaris A.**, (2012), Environmental friendly material selection using advanced cad systems, *Academic Journal of Manufacturing Engineering*, Vol. 10, Issue 3/2012, PP.44-50
44. **Tsagaris A.**, Efkolidis N., Stampoulis K. and Kyratsis P., (2012), Reverse Engineering techniques integrated into Robotic system for surface reconstruction, *Academic Journal of Manufacturing Engineering*, Vol. 10, Issue 3/2012, PP.113-118
45. Efkolidis N., Kyratsis P., Theoharidis S., **Tsagaris A.**, (2012), "CAD based material selection for sustainable", *The International Journal of Engineering Research and Development (IJERD)*, ISSN: 2278-067X, Volume 1, Issue 8 (June 2012), PP.54-59
46. **Tsagkaris, A.** (2012), "Incentives for senior citizens to participate in an educational program on the use of technology " , *Journal of Educational Technology & Society*, (submitted - under evaluation)
47. **Tsagaris, A.**, Kyratsis, P., Stamboulis K., Dinopoulou, V., (2011), "Optimization of automatic storage system using genetic algorithms controlled by PLC and SCADA" , *The Cyprus Journal of Sciences*, Vol. 9, 2011/59-69.
48. **Tsagaris, A.**, (2011), 'Familiarity of older adults with the new technologies', *The International Journal of Medicine*, Vol. 4 , 2011/29. (In Greek)
49. Kyratsis, P.- Chatzigeorgiou, Ch.- **Tsagkaris, A.** - Dinopoulou, V., (2010), 'Failure mode and effect analysis (FMEA) implementation in conference tourism services', *The Cyprus Journal of Sciences*, Vol. 8, 2010/119-13.1

Refereed International Conference Publications

- Chatzikyriakou M., Fountoukidou E. **Tsagaris A.** (2025). «Educators' Digital Competencies: From Theory to Practice», 1st International Conference AI-education2025, Artificial Intelligence and Innovation in Education: Ethical and Technological Dimensions, December 12–13, 2025, Thessaloniki, Greece.
 - Chatzikyriakou M., Fountoukidou E. **Tsagaris A.** (2025). «Exploring Cognitive Styles: Differentiating Students as Field-Independent and Field-Dependent Learners», 1st International Conference AI-education2025, Artificial Intelligence and Innovation in Education: Ethical and Technological Dimensions, December 12–13, 2025, Thessaloniki, Greece.
 - **A. Tsagaris.**(2025) «Gesture control for HMI and usability», *25th International Conference on Control, Automation, and Systems (ICCAS 2025)*, November 04–07, 2025, Incheon, Korea.
 - **Tsagaris A.,** Chatzikyriakou M. (2025). « Comparative usability evaluation of mechatronic systems », *1st Conference on Digital Media in Modern Educational Reality*, Preveza, Greece.
 - Chatzikyriakou M., **Tsagaris A.** (2025). «A new approach to teaching new technologies based on FI and FD cognitive styles », *1st Conference on Digital Media in Modern Educational Reality*, Preveza, Greece.
 - **A. Tsagaris.,** S. Mourelatos (2025) «Mosquito Electronic Counting Device», *8th International Conference on Advanced Algorithms and Control Engineering(ICAACE 2025)*, Shanghai, China, 10.1109/ICAACE65325.2025.11020399
 - Chatzikyriakou M., Manavis A., Simeli I., **Tsagaris A.,** (2024). « Incorporating gamification principles into adult education for teaching 3D printing: A pedagogical framework », *6th International Conference on Management of Educational Units*, Thessaloniki, Greece, 2024.
 - Chatzikyriakou M., Pavlidou Ch., Manavis A., Kyratsis P., **Tsagaris A.** (2024). « Improving teaching practices in adult education: A pedagogical scenario for 3D scanning practices », *6th International Conference on Management of Educational Units*, Thessaloniki, Greece, 2024.
 - **A. Tsagaris.** (2024). Intelligent Robotic Chess System. In Proceedings of the 2024 2nd International Conference on Robotics, Control and Vision Engineering (RCVE '24). Association for Computing Machinery, New York, NY, USA, 1–6. <https://doi.org/10.1145/3685073.3685074>
1. N. Efklidis, **A. Tsagaris**, A. Manavis, A. Tzotzis, P. Kyratsis, (2023). « Using 3d Digital Tools to Create a Digital Musical Instrument For A System Called HapticSOUND », The 7th International Symposium on Innovative Approaches in Smart Technologies, ISAS 2023, Nov 23–25, 2023, Istanbul, Turkey
 2. **A. Tsagaris**, M. Chatzikyriakou, (2023). «Usability Evaluation of Educational Robotics », The 7th International Conference on Education and Multimedia Technology, ICEMT 2023, August 29–31, 2023, Tokyo, Japan, <https://doi.org/10.1145/3625704.3625719>
 3. M. Chatzikyriakou, **A. Tsagaris**, (2021). « The evaluation of educational Robotics in e-learning », 4th International Conference on Research in Education, Teaching, and Learning (ICETL), 22nd-24th of October, 2021 Vienna, Austria
 4. Ch. Andras, Th. St. Spyropoulos, **A. Tsagaris**, (2021). « Benefits of shift scheduling automation systems in healthcare systems», 2nd International Conference on Health Management, March 17-19, Thessaloniki, Greece, ICOHEMA 2021.
 5. M. Chatzikyriakou, **A. Tsagaris**, (2020). «The pedagogical method of Socrates in new technologies's teaching», 3rd International Conference on Management of Educational Units, Thessaloniki, Greece, 2020.
 6. A. Tsaridou, **A. Tsagaris**, (2020). «Usability evaluation of educational robotics systems for children 5-8 years old », 3rd International Conference on Management of Educational Units, Thessaloniki, Greece, 2020.

7. K. Veliou, M. Chatzikyrkou, A. **Tsagaris**, (2020). «The impact of covid-19 on after school centers», 3rd International Conference on Management of Educational Units, Thessaloniki, Greece, 2020.
8. **Tsagaris**, A., Theodoridis, K., Stergiopoulos, F., Bechtsis, D., Nikolaidis, N., Triantafyllidis, D., Papaoikonomou, A., and Filelis, A., (2020). «The design of mechatronic system for gel electrophoresis», 7th ICM MEN International Conference, July 2-3, 2020, Thessaloniki, Greece, ICM MEN 2020, pp. XX-XX.
9. Nikolaidis, N., Evgenidis, N., Bechtsis, D., Stergiopoulos, F., **Tsagaris**, A., Triantafyllidis, D., Papaoikonomou, A., and Filelis, A., (2020). «A microcontroller-based software framework for controlling a mechatronic system», 7th ICM MEN International Conference, July 2-3, 2020, Thessaloniki, Greece, ICM MEN 2020, pp. XX-XX.
10. **Tsagaris**, A, Chatzikyrkou, M. (2020). «Usability evaluation of mechatronic system by primary school children », 7th ICM MEN International Conference, July 2-3, 2020, Thessaloniki, Greece, ICM MEN 2020, pp. XX-XX.
11. D. Triantafyllidis, N. Nikolaidis, D. Bechtsis, A. **Tsagaris**, F. Stergiopoulos, (2019) «Two Prototype Power Supply Solutions for a Gel Electrophoresis Apparatus», 4th Workshop on Microsystems, Thessaloniki, Greece, 2019.
12. Th. Tzouros, A. **Tsagaris**, (2019). «Financial crisis and professional burnout of health professionals», 2st International Congress on Management of Health & Welfare Units, Thessaloniki, Greece, 2019, In Greek.
13. Ch. Andras, A. **Tsagaris**, (2019). «The present and the future of health information systems», 2st International Congress on Management of Health & Welfare Units, Thessaloniki, Greece, 2019.
14. Ch. Andras, Th. Tarasidis, G. Kouteranis, A. **Tsagaris**, (2019). «The adaption of an information system to the requirements of GDPR law in Greece», 2st International Congress on Management of Health & Welfare Units, Thessaloniki, Greece, 2019.
15. M. Chatzikyrkou, A. **Tsagaris**, (2019). «Children's Satisfaction with the Quality of Services provided by Children's Creative Employment Centers», 2st International Congress on Management of Educational Units, Thessaloniki, Greece, 2019, In Greek.
16. M. Thoma, A. **Tsagaris**, (2019). «Views of Primary and Secondary Teachers on the usability of the "myschool" information system they use at the school management level», 2st International Congress on Management of Educational Units, Thessaloniki, Greece, 2019, In Greek.
17. I. Theodoulidis, A. **Tsagaris**, (2019). « Adoption of ICTs in primary education in the western Thessaloniki region », 2st International Congress on Management of Educational Units, Thessaloniki, Greece, 2019, In Greek.
18. A. **Tsagaris**, M. Chatzikyrkou (2019). « The Education of Robotics in 9-15 Years Old Children», 11th Conference on Informatics in Education (11th CIE2019), Piraeus, Greece (2019), ISBN: 978-960-578-058-6, In Greek.
19. M. Thoma, A. **Tsagaris** (2019). «Tracing the usability of the myschool information system in education. Investigation at school unit management level», 11th Conference on Informatics in Education (11th CIE2019), Piraeus, Greece (2019), ISBN: 978-960-578-058-6, In Greek.
20. A **Tsagaris**, G Mansour (2019). «Path planning optimization for mechatronic systems with the use of genetic algorithm and ant colony», 23rd INNOVATIVE MANUFACTURING ENGINEERING & ENERGY INTERNATIONAL CONFERENCE (IManEE 2019), Pitesti, Romania, 2019, doi:10.1088/1757-899X/564/1/012051
21. A. **Tsagaris** (2019). «A Gesture approach of Interaction with Mechatronic Systems», 2019 IEEE 4th International Conference on Advanced Robotics and Mechatronics (ICARM), Toyonaka, Japan, 2019, pp. 366-371. doi: 10.1109/ICARM.2019.8834273
22. E. Doumanakis, Ch. Samaras, A. **Tsagaris**, B. Verikios (2018). «Results of Research on the way equipment inventory of Laboratory Centers-School Laboratories in Greece», In Greek, 1st International Congress on Management of Educational Units, Thessaloniki, Greece, 2018.
23. Ch. Samaras, E. Doumanakis, A. **Tsagaris**, B. Verikios, D. Iliopoulos, B. Koutsoukos, M. Niari (2018) «The Laboratory Center Information System», 2nd International Experiential Conference on Applied Teaching, Drama, Greece 2018.

24. A. **Tsagaris**, M. Chatzikyrkou, M. Th. Mansour, K. Tsongas, G. Mansour (2018). The impact of education in 3D product design and printing to primary and high school students, 1st Conference in 3D printing in education, science and industry, 18-19 June 2018 Warsaw
25. K. Kokkinidis, T. Mastoras, A. **Tsagaris**, P. Fotaris. (2018). An empirical comparison of machine learning techniques for chant classification. In *Proceedings of the 3rd International Symposium on Movement and Computing (MOCO '18)*. 7 - 9 May, Thessaloniki, Greece
26. **Tsagaris A.**, Mansour G. (2017), Implementation of hybrid genetic and ant colony algorithm for CMM path planning, 6th International Conference on Manufacturing Engineering (ICMEN2017), 5-6/10/2017, Thessaloniki, Greece
27. Sotiris Manitsaris, **Apostolos Tsagaris**, Alina Glushkova, Fabien Moutarde, and Frédéric Bevilacqua. 2016. Fingers gestures early-recognition with a unified framework for RGB or depth camera. In *Proceedings of the 3rd International Symposium on Movement and Computing (MOCO '16)*. ACM, New York, NY, USA, , Article 26 , 8 pages. DOI: <http://dx.doi.org/10.1145/2948910.2948947>
28. K. Kokkinidis, A. Stergiaki, and A. **Tsagaris**. 2016. Error proving and sensorimotor feedback for singing voice. In *Proceedings of the 3rd International Symposium on Movement and Computing (MOCO '16)*. ACM, New York, NY, USA, , Article 32 , 4 pages. DOI: <http://dx.doi.org/10.1145/2948910.2948952>
29. Ioanna Simelli, **Apostolos Tsagaris**, (2015), The use of Unmanned Aerial Systems (UAS) in Agriculture, 7th International Conference on Information and Communication Technologies in Agriculture, Food and Environment (HAICTA 2015), September 17-20, 2015, Kavala, Greece.
30. Chrysoula Chatzigeorgiou, Ioanna Simelli, **Apostolos Tsagaris**, (2015), Bird watching and ecotourism: An innovative monitoring system to project the species of Lesvos island to potential ecotourists, 7th International Conference on Information and Communication Technologies in Agriculture, Food and Environment (HAICTA 2015), September 17-20, 2015, Kavala, Greece.
31. Kyratsis Panagiotis, Efkolidis Nikolaos, Manavis Athanasios, and **Tsagaris Apostolos**, (2015), Design for Skin and Shape: An Innovative Design Approach, Innovative Manufacturing Engineering International Conference - IManE 2015 International Conference, May 21-22, 2015, Iași, Romania.
32. **Tsagaris A.**, Tzetzis D, Mansour G., Hatzikos E. and Kyratsis P. (2014), Improving the Tensile Strength of a Novel Double Hook Design Manufactured by Nanosilica Epoxy Reinforced Aramid/Carbon Composites, 7th International Conference on Advanced Manufacturing Technologies - ICAMaT & Robotics & Polcom 2014, 23-24/10/2014, Bucharest, Romania
33. **Tsagaris A.**, Mansour G. (2014), Optimizing mechatronic system with the use of genetic algorithm's, 5th International Conference on Manufacturing Engineering (ICMEN2014), 1-3/10/2014, Thessaloniki, Greece
34. **Tsagaris A.**, (2014), Optimal control of storage system based on intelligent techniques, 19th International Conference on Methods and Models in Automation and Robotics (MMAR2014), 2-5/9/2014, Międzyzdroje, Poland
35. **Tsagaris A.**, Triantafyllidis D., (2012), Data Monitoring System for Supervising the Performance Assessment of a Photovoltaic Park , 13th IEEE International Symposium on Computational Intelligence and Informatics (CINTI 2012), 20-22/11/2012, Budapest, Hungary
36. **Tsagaris A.**, Manitsaris S., Hatzikos E., Manitsaris A., (2012), Methodology for Finger gesture control of Mechatronic systems, 15th International Conference Mechatronika 2012, December 5 – 7, 2012, Prague, Czech Republic.
37. **Tsagaris A.**, Sagris D., Mansour G., (2012), Intelligent CAD based system for CNC machine controlling by genetic algorithms, 16th International Conference on Intelligent Engineering Systems (INES 2012), 13/06 – 15/06/2012, Lissabon, Portugal.
38. Efkolidis N., Kyratsis P., **Tsagaris A.**, Kaleas G., Mexi E., Simelli I., (2012), Packaging and labeling design for touristic promotion of Greek products, 2nd Advances in Hospitality and Tourism Marketing & Management Conference (AHTMMC 2012), 31/05 – 03/06/2012, Corfu, Greece .
39. Mansour G., **Tsagaris A.**, Sagris D., (2012), CNC machining optimization by genetic algorithms using CAD based system, in *Procc. Intern. Conf. Diagnosis and Prediction in Mechanical*

Engineering Systems, DIPRE'12 (on CD), Galati, ROMANIA, May 31 st – June 1st 2012, ISSN 2285-1887.

40. S. Manitsaris, **A. Tsagaris**, V. Matsoukas, and A. Manitsaris, (2012) “Vision par ordinateur et apprentissage statistique : vers un instrument de musique immatériel,” in Actes des Journées d'Informatique Musicale (JIM 2012), Mons, Belgique, pp. 17-22. (In France)
41. **Tsagaris A.**, Manitsaris S., Dimitropoulos K., Manitsaris A., (2011), Intelligent invariance techniques for music gesture recognition based on skin modelling, 12th IEEE International Symposium on Computational Intelligence and Informatics (CINTI 2011), 21-22/11/2011, Budapest, Hungary
42. **Tsagaris A.**, Manitsaris S., Dimitropoulos K., Manitsaris A., (2011), Scale and Rotation invariance for the recognition of finger musical gestures performed in space, European Workshop on Visual Information Processing (EUVIP 2011), 4-6/06/2011, Paris - France
43. Efkolidis N., Kyratsis P., Theoharidis S., **Tsagaris A.**, (2011), Product design for sustainability using advanced CAD systems, 2nd International Exergy, Life Cycle Assessment, and Sustainability Workshop & Symposium (ELCAS2), 19-21/06/2011, NISYROS – GREECE
44. **Tsagaris A.**- Tsirona E., (2010), Working with older adults in Human Relationships and the use of Technology, First Conference of the ESREA Network on Education and Learning of Older Adults (ELOA), Munich.
45. **Tsagkaris A.** - Tzouros Th. –Kyratsis P. –Tolis D. , (2010), Logistics in Health. Implementation management of medicines in a psychiatric clinic, 1st International Conference in logistics, Katerini
46. **Tsagkaris A.** - Tzouros Th.–Patelis A. –Tolis D., (2010), Logistics service in Greek Public Hospital. Myth or Reality? , 1st International Conference in logistics, Katerini
47. Tolis D.– Kiriakidis G. -**Tsagkaris A.**, (2010), A new training approach in Logistics Training. The Blended learning method, 1st International Conference in logistics, Katerini
48. Tzouros Th.-**Tsagkaris A.** – Patelis A. , (2010), Analysis and optimization of supply costs in Trikala General Hospital, 1st International Conference in logistics, Katerini
49. Tzouros Th.-**Tsagkaris A.** – Zamika Ch. , (2010), Comparative costs of public hospitals supply in region of Thessaly, 1st International Conference in logistics, Katerini
50. Chatzigeorgiou Ch.- Kyratsis P. - **Tsagkaris A.**- Dinopoulou V., (2009), Failure Mode and Effect Analysis (FMEA) implementation in agrotourism: A useful tool in services sector, 4th International Scientific Conference, Rhodes.
51. **Tsagkaris A.**- Simelli I., (2009), E-learning in Agrotourism: Is it possible?, 4th International Scientific Conference, Rhodes

Invited Teacher :

- 08/05/2022-12/05/2022: France - Mines ParisTech - CAOR - Centre de Robotique, Teaching Introduction on Mechatronics systems, programming of PLC and SCADA and offline robot programming.
- 07/02/2011 – 11/02/2011: Visitor professor in HAMK University of Applied Sciences at Riihimäki-Finland, *Introduction on Mechatronics systems and programming of PLC and SCADA.*
- 24/05/2010 – 27/05/2010: Visitor Professor in University Polytechnic of Catalonia, *Introduction in Automation Control Systems and PLC and SCADA programming.*

MEMBER OF RESEARCH PROGRAMS:

- 13/03/2025 – 31/12/2025: Scientific project manager entitled “Monitoring and recording of RTO indicators” with KE “82103”, funded entirely from private resources by the company “TITAN Cements S.A.”.
- 13/03/2025 – 31/12/2025: Scientific project manager entitled “Optibat-CemAI” with KE “82102”, funded entirely from private resources by the company “TITAN Cements S.A.”.

- 13/03/2025 – 31/12/2025: Scientific project manager entitled “Advanced robotic inspection applications in the TITAN cement industry (ARChIe)” with KE “82101”, funded entirely from private resources by the company “TITAN Cement S.A.”.
- 20/02/2025 – 31/12/2025: Scientific project manager entitled “Development of new predictive models” with KE “82072”, which is financed entirely from private resources by the company “Ecodevelopment S.A.”.
- 13/02/2025 – 31/12/2027: Scientific project manager entitled “Robotics and new technologies in industry and education” with KE “82062”, which is entirely self-financed.
- 14/11/2024 – 13/11/2025: Scientific project manager entitled “Optimization of predictive models” with KE “81974”, funded entirely by private resources from the company “Ecodevelopment S.A.”.
- 14/11/2024 – 13/11/2025: Scientific project manager entitled “Energy upgrade of a standard mosquito counting device and creation of a network of devices” with KE “81973”, funded entirely by private resources from the company “Ecodevelopment S.A.”.
- 14/11/2024 – 13/11/2025: Scientific project manager entitled “Development of IoT network of water level sensors” with KE “81972”, funded entirely by private resources from the company “Ecodevelopment S.A.”.
- 01/09/2024 – 30/04/2025: Scientific project manager entitled “Evaluation of a real-time production optimization system” with KE “81835”, funded entirely by private resources from the company “TITAN Cement S.A.”.
- 27/06/2024 – 26/02/2025: Scientific project manager entitled “Design of a KDAP - STEM educational program” with KE “81767”, funded entirely by private resources by the company “DRASIS CAMP SINGLE-PERSON IKE”.
- 13/06/2024 – 13/12/2024: Scientific project manager entitled “Study, Design and Construction of a standard mosquito counting device” with KE “81723”, funded entirely by private resources by the company “Oikoanaptyxi S.A.”.
- 23/03/2024 – 31/12/2024: Participation in a program entitled "Master's Program Smart Sustainable ENVIRONMENT" and KE "80756", with participation in the work packages WP2, WP3 and WP4 of the project, within the framework of the IPs: "Academic Curriculum Development, Application Requirements and Specifications, Development of Reconfigurable Laboratory Apparatus"
- 01/11/2023 – 30/04/2024: Participation in a research program entitled "Network of Excellence for the Development, Dissemination and Application of Digital Transformation Technologies in the Greek Manufacturing Industry" - "Greece4.0" and Action code TAEDR-0535864 in National Center for Research and Technological Development (EKETA)/ Institute of Information Technology and Communications (IPTIL). The tasks "Coordination and design of project subsystems related to internet of things, digital twins and robotics/mechatronics systems".
- 16/05/2023 – 15/05/2023: Participation in a research project entitled "Hymnodos - Recognition and direct characterization of Cultural documents for the education and promotion of Byzantine Music using artificial intelligence", [KMP6-0078938], MIS 5179219, Action "Investment innovation plans" of the E.P. Central Macedonia 2014-2020 (D.2.1).
- 27/05/2022 – 31/12/2023: Participation in a research project entitled "Classification and characterization of embryo images for assisted reproduction using artificial intelligence and machine vision", which is implemented by the University of Macedonia in the role of "Partner" ("beneficiary"), and is financed by the REGION OF CENTRAL MACEDONIA with a project duration from 27/05/2022 to 31/12/2023.
- 06/2020 – 05/2023: Participation in research project entitled "Analysis, documentation and demonstration system of traditional musical instruments of the Museum of Cretan Ethnology (HapticSOUND)" with code T6YBP-00397 within the framework of the "Competitiveness, Entrepreneurship and Innovation (EPANEK) Operational Program" with responsibilities, Analysis, design and implementation of the interaction subsystem.
- 09/2022 – 10/2022: Research program “Surveying & MARiTime internet of thingS EducAtion – SMARTSEA” - "Integration, deployment and benchmarking"

- 03/08/2018 – 27/10/2020: Research program «Innovative and full automated system for gel electrophoresis»
- 01/07/2018 – 18/12/2020: Safe Cross-Border Transportation of Hazardous Materials: Orphan Radioactive Sources (STRASS)
- 17/10/2017–28/02/2018: Research program from Aristoteles University of Thessaloniki (AUTH) with corporation of TITAN SA Cement Company titled Education on 3D design and 3D printing”.
- 24/11/2016 – 31/12/2017: Research program from Technological Educational Institute of Thessaloniki with title «Train the trainers in Robotic Education»
- 01/12/2016 – 30/11/2017: Research program from Technological Educational Institute of Thessaloniki with 3 companies. Scientific Manager of the program titled “Improving Human Mechatronic System Interaction through educational robotics training”.
- 15/11/2016 – 14/11/2017: Research program from Aristoteles University of Thessaloniki (AUTH) with corporation of TITAN SA Cement Company. Scientific Manager of the program titled “The educational robotics role in human interaction with mechatronic systems”
- 01/08/2014 – 31/01/2016: Research program from Technological Educational Institute of Thessaloniki with title « Creating Smart Energy-saving Apps Applying and Learning through Human Behavior ».
- 01/09/2014 – 30/08/2015: i-Treasures (Intangible Treasures - Capturing the Intangible Cultural Heritage and Learning the Rare Know-How of Living Human Treasures FP7-ICT-2011-9-600676-i-Treasures) is an Integrated Project (IP) of the European Union's 7th Framework Programme 'ICT for Access to Cultural Resources'. The project started on February 1, 2013, and will last 48 months. Multimedia Lab of Department of Applied Informatics, University of Macedonia, Greece
- 28/03/2014 – 30/06/2015: «Archimides III- Strengthening Research Groups at TEI of Western Macedonia » with code ΟΠΣ 383583 and title « 3D Simulation of drilling, based on CAD system planning »
- 01/07/2011 – 30/06/2015: Research program from Technological Educational Institute of Thessaloniki with title «Measurement of energy efficiency of photovoltaic park under real operating conditions in the Region of Central Macedonia».
- 14/06/2012 – 13/06/2013: Program name “ArtiMuse” - «Tangible Interface and Intangible Cultural Heritage: Hybrid Gesture Recognition in Interactive Space and Surface for Contemporary Music and Traditional Handicraft» - Institute for Research and Coordination Acoustic/Music (IRCAM - Paris) - Laboratory of Rural Space (DYNTAR - Volos) at the University of Thessaly (UTH) – Multimedia Lab of Department of Applied Informatics, University of Macedonia, Greece
- 01/01/2012 – 30/06/2013: Research program from Technological Educational Institute of Thessaloniki. Scientific Manager of the program with title “Design and Manufacture of a fibre reinforced nano-composite safety snap-hook using CAD/CAM/CAE techniques”.
- 01/07/2011 – 30/06/2014: Research program from Technological Educational Institute of Thessaloniki with title “Supervising the Performance Assessment of a Photovoltaic Park in Central Macedonia - Greece”.
- 01/01/2012 – 30/06/2013: Research program from Technological Educational Institute of Thessaloniki. Scientific Manager of the program with title “Design and Manufacture of a fibre reinforced nano-composite safety snap-hook using CAD/CAM/CAE techniques”.
- 13/03/2008 – 13/03/2010: Leonardo da Vinci - LIFELONG LEARNING PROGRAMME - Virtual Pre-Incubator Accelerator II – WP: Technical Realisation, Securing new domain for the website, developing an initial platform of communication for the project partners, Initial Design of the website, Multimedia Consultation to ensure the compatibility of module structure with Internet, Inclusion of best practice profiles on the website, Online Learning Platform available only for the partners, Online Learning Platform, Uploading of electronic modules for everyone
- 2008: Aristotle University of Thessaloniki - Development of distance learning system.

Editor in International Journal

1. Editorial Board & Regional Associate Editor of ACTA TECHNICA CORVINIENSIS - Bulletin of Engineering (ISSN:2067-3809)
2. Editorial Board Member of the International Journal of Engineering
3. Reviewer and Editorial Board Member of **Applied Sciences** (ISSN 2076-3417)
4. Reviewer and Editorial Board Member of **Sensors** (ISSN 1424-8220)
5. Reviewer and Editorial Board Member of *Electronics* (ISSN 2079-9292; CODEN: ELECGJ)
6. Editorial Manager of **Applied Artificial intelligence** (ISSN: 0883-9514)

Technical Committee and paper reviewer of Conferences

1. MOCO 2016 - 3rd International Symposium On Movement & Computing, Thessaloniki, Greece, 2016
2. ICOMEU – 2nd International Conference on Management of Educational Units, Thessaloniki, Greece, 2019
3. ICOMEU - 3rd International Conference on Management of Educational Units, Thessaloniki, Greece, 2020
4. ICMMEN 2020 - 7th ICMMEN International Conference, July 2-3, 2020, Thessaloniki, Greece,
5. ICMVA 2021 - The 4th International Conference on Machine Vision and Applications, Singapore, February 20-22, 2021
6. ICFCC 2022 - The 14th International Conference on Future Computer and Communication (ICFCC 2022), Singapore, February 18-20, 2022