#### CURRICULUM VITAE

#### <u>Name:</u>

Tatiana Tambouratzis

#### Nationality:

Greek (brought up in Northern England, namely Manchester and Sheffield).

#### Home address:

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http://www.tex.unipi.gr/dep/tambouratzis/main.htm http://www.nephy.chalmers.se/staff/tatiana.html Orchid ID : 0000-0002-8666-1381

#### Languages:

- 1. Greek.
- 2. English.
- 3. French.
- 4. Italian.

## **Education**

Arsakion/Tositsion all-girls public school (March 1970-June 1982; three months kindergarten, 12 years of primary and secondary schooling).

## Professional qualifications:

- 1. BSc in Mathematics, University of Athens, Greece, June 1986.
- 2. MSc in Intelligent Systems, Brunel University, U.K., October 1988.
- 3. PhD in Neural Networks and Artificial Vision, Brunel University, U.K., April 1991.
- Postdoctoral Research Fellow, Institute of Informatics and Telecommunications of NCSR "Demokritos" (August 1992-August 1995).

- 5. Postdoctoral Research Fellow, Institute of Nuclear Technology Radiation Protection of NCSR "Demokritos" (August 1995-December 1995).
- 6. Researcher III (equivalent to University Assistant Professor), Institute of Nuclear Technology Radiation Protection of NCSR "Demokritos" (December 1995-August 1999).
- 7. Researcher II (equivalent to University Associate Professor), Institute of Nuclear Technology Radiation Protection, NCSR "Demokritos" (August 1999-October 2004).
- 8. Assistant Professor at the Department of Industrial Management & Technology, University of Piraeus (October 2004-January 2011).
- 9. Associate Professor at the Department of Industrial Management & Technology, University of Piraeus (January 2011-today).
- 10. Visiting Researcher at the Department of Nuclear Engineering, Chalmers University of Technology, SE-412 Göteborg, Sweden (January 2009-December 2012).

## Declined positions:

- Research Fellow, Department of Psychology, Birkbeck College, University of London, London, U.K. (July 1992-June 1995). Due to my obligation to the Greek Scholarship Foundation return to Greece for a period of five years following the completion of my postgraduate studies {3} of the Section <u>Awards</u> below}, I accepted the offer of NCSR "Demokritos" instead {4} of Section <u>Professional qualifications</u>}.
- Adjunct Professor at the Department of Nuclear Engineering, Chalmers University of Technology, SE-412 Göteborg, Sweden (July 2008-December 2013). As the Department of Industrial Management & Technology, University of Piraeus, did not approve of a second affiliation, I accepted a Visiting Researcher position instead {10} of the Section *Professional Qualifications*}.

## <u>Awards:</u>

- 1. Scholarship from the Greek Scholarship Foundation during the 2nd year of my undergraduate studies, due to my outstanding performance (1984).
- 2. Scholarship from the Greek Scholarship Foundation during the 3rd year of my undergraduate studies, due to my outstanding performance (1985).
- 3. Competitive Scholarship from the Greek State Scholarship Foundation, covering tuition fees for 3 years and living expenses for 3<sup>1/2</sup> years of postgraduate studies, leading to a PhD degree (1987).
- 4. SERC award (fees-only) for the last year of my postgraduate studies (1990).
- 5. Postdoctoral Research Scholarship from the National Research Institute (Greece) and the Royal Society (U.K.), towards a two-month stay at Brunel University (London, U.K.) for collaborating with Professor M.J.Wright in the fields of natural vision, artificial vision and robotics (July-August 1995).
- 6. Visiting Fellowship from the Fulbright Scholar Program (U.S.A.), towards a two-month stay at North Carolina State University (Raleigh, NC, U.S.A.) for collaborating with Professor C.W.Mayo in the fields of nuclear engineering and loose part monitoring in nuclear power plants (July 15th-September 15<sup>th</sup>, 2002).
- Teaching Mobility Scholarship from the Greek Scholarship Foundation which funded a post-graduate course teaching visit to Erasmus partner Department of Environmental Sciences (Professor Mikko Kolehmainen), University of Eastern Finland, Kuopio, Finland (August 19<sup>th</sup>-23<sup>rd</sup>, 2013).

## Memberships:

- 1. Fellow of the Institute of Mathematics and its Applications (IMA), membership no. 23668, (2014 -today).
- 2. Member of the Institute of Electrical and Electronics Engineers (IEEE), membership no. 93994512 (2016-today).

## Invitations made:

1. Successful application for a 2008-2009 U.S. Fulbright Scholar Award. Subsequent visit of Professor Jim MacGregor III Smith (Department of Mechanical & Industrial Engineering, the College of Engineering, University of Massachusetts at Amherst, U.S.A.) at the Department of Industrial Management & Technology (September 24th, 2008-January 23rd, 2009). Collaboration with Professor MacGregor Smith during the elective course "Artificial Intelligence in Production Systems", culminating in the assignment of undergraduate students entitled "Evacuation from а building region" (URL or http://www.tex.unipi.gr/undergraduate/studentswork.htm, click on "Το πρόβλημα της εκκένωσης από ένα <u>κτήριο ή μια περιοχή</u>").

## Invitations received:

- 1. Invited visitor by Professor N.Glynos at the Department of Mathematics, University of Ioannina, Ioannina, Greece. Invited tutorial presentation at the undergraduate students of the Department on artificial and computational intelligence applications in vision (24<sup>th</sup>-25<sup>th</sup>, October, 1994).
- Invited visitor at the Center für Digitale Systeme, Freie Universität Berlin (Berlin, Germany) for collaborating with Professor N.Apostolopoulos in the field of e-learning in statistics (8<sup>th</sup>-13<sup>th</sup> September 2005).
- Invited visitor at the Department of Informatics, Indiana University in Bloomington (Bloomington, Indiana, U.S.A.) for collaborating with Associate Professor C.Raphael in the field of music informatics (1<sup>st-14<sup>th</sup></sup> June, 2008).
- 4. Invited visitor at the Department of Nuclear Physics, Chalmers University of Technology (Goteborg, Sweden) for collaborating with Professor Imre Pázsit and Assistant Professor D.Chernikova in the field of pulse shape identification and the pile-up effect (October 15<sup>th</sup> December 15<sup>th</sup>, 2013).
- Invited speaker at the 2008 Annual Staff Conference of the Division of Control, Institute of Control and Industrial Electronics, Faculty of Electrical Engineering, Warsaw University of Technology, Warsaw, Poland (Cedzyna Conference Venue, Poland, June 26<sup>th</sup>-29<sup>th</sup>, 2008).
- 6. Invited tutorial at the common elective classes of the M.Sc. Courses in Techno-Economical Systems, in Automation Systems, in Digital Forms of Art, in Linguistic Technology, and in Logic, Algorithms and Computation, Department of Electrical and Computer Engineering, National Technical University of Athens, Athens, Greece, January 26<sup>th</sup>, 2012, on the subject of optical music recognition.
- Invited tutorial entitled "Identification of Key Music Symbols for Optical Music Recognition and On-Screen Presentation", "2012 Eighth AIAI (Artificial Intelligence Applications and Innovations) Conference, Halkidiki, Greece, September 27<sup>th</sup>-30<sup>th</sup>, 2012.
- Invited tutorial at the SNEC (Sustainable Nuclear Energy Centre) Seminar Series entitled "Computational Intelligence-Based Identification of Maximally Sustainable Materials: The Case of Liquid Containers", Chalmers University of Technology (Goteborg, Sweden) November 12<sup>th</sup>, 2013 (available online URL <u>http://www.chalmers.se/en/centres/snec/calendar/Pages/SNEC-Seminar.aspx;</u>

https://mediasite.portal.chalmers.se/Mediasite/Play/73f73eb36f984f61ae87a3529d628dbe1d?catalog=5cabe0 24-f607-435c-ae01-f2294e0bd9da)

## <u>Research</u> interests:

# PRINCIPLES

- 1. Artificial, Computational and Swarm Intelligence.
- 2. Brain function.
- 3. Natural and Artificial Vision.
- 4. Psychophysics and Cognitive Psychology.
- 5. Engineering Mathematics.
- 6. Signals and systems.
- 7. Wavelets.
- 8. Decision Trees.
- 9. Data Mining/Big Data.

# TOPICS

- 10. Optimisation.
- 11. System Identification.
- 12. Analysis and Verification.
- 13. Monitoring and prediction.

# APPLICATIONS

- 14. Energy systems (especially nuclear power plant operation, monitoring, safety).
- 15. Environmental sustainability (especially index creation and evaluation).
- 16. Music informatics.

# Selected instances of acting as an evaluator of:

- 1. The "Basic Research Scientific Programme K.Karathodori", University of Patras, in the field of Artificial Intelligence and Machine Learning (2008).
- 2. The Greek Scholarship Foundation postgraduate scholarships (2011-2012, 2012-2013).
- 3. FP7-ICT-2011-9, FET Objective 9.11 "Neuro-Bio-Inspired Systems (NBIS)" (remote expert/evaluator, May 2012; on-site evaluator, June 3<sup>rd</sup> -7<sup>th</sup>, 2012; on-site member of the hearings committee, June 22<sup>nd</sup>, 2012).
- 4. ARTEMIS & ENIAC Joint Technology Initiatives (JTIs) 2007-2013, European Commission & the Greek Secretariat of Science & Technology (external evaluator, 2015).
- 5. H2020-FET OPEN-2014-2015-RIA\_29-09-2015 (remote expert/evaluator, November-December 2015).
- 6. H2020-FET Proactive (remote expert/evaluator, May 2016; on-site panelist and rapporteur, June 13<sup>th</sup>-17<sup>th</sup>, 2016).
- 7. H2020-FET OPEN RIA Call 2016-1\_05-11-2016 (remote expert/evaluator, June 2016).
- 8. e-COST Open Call OC-2016-1 (remote review panel member, July-August 2016; on-site review panel member, September 13th-15th, 2016).
- 9. MSCA-ITN-2017 'Innovative Training Networks'(remote expert/evaluator, remote consensus report evaluator, January-February 2017).
- 10. H2020-FET OPEN RIA Call 2017 (remote expert/evaluator, March-April 2017).

# Member of journal editorial advisory boards:

1. "Progress in Nuclear Energy" (area: Fission Technology).

# Member of journal editorial review boards:

- 1. "Aloy Journal of Soft Computing and Applications"
- 2. "Artificial Intelligence Research" (SCIEDU), Editorial Review Board.
- 3. "International Journal of Energy Optimization and Engineering" (IJEOE), Associate Editor.

# <u>Reviewer</u> of peer-reviewed international scientific journals (distinct submissions only, no revised manuscript reviews):

- 1. "African Journal of Pure and Applied Chemistry" (2010).
- 2. "Aloy Journal of Soft Computing and Applications" (2013 twice, 2014 three times, 2015).
- 3. "Annals of Nuclear Energy", Elsevier Science, the Netherlands (1995, 2001 thrice, 2002, 2003, 2004 five times, 2005 twice, 2006 twice, 2007 thrice, 2009, 2011, 2012 thrice, 2014, 2015, 2016, 2017, 2018).
- 4. "Applied Radiation and Isotopes" (2015).
- 5. "Artificial Intelligence Research" (2017).
- 6. "Computer Methods and Programs in Biomedicine" (2018).
- 7. "Computers and Electronics in Agriculture" (2007).

- 8. "Engineering Intelligent Systems" (2013).
- 9. "Expert Systems with Applications" (2016).
- 10. "Geomorphology" (2009).
- 11. "IEEE Transactions on Evolutionary Computation", IEEE Press, U.S.A. (2013 twice).
- 12. "IEEE Transactions on Knowledge and Data Engineering", IEEE Press, U.S.A. (2006).
- 13. "IEEE Transactions on Neural Networks and Leaening Systems", IEEE Press, U.S.A. (2017).
- 14. "IEEE Transactions on Nuclear Science", IEEE Press, U.S.A. (2013, 2014).
- 15. "IEEE Transactions on Signal Processing", IEEE Press, U.S.A. (1996 twice).
- 16. "IEEE Transactions on Systems, Man, and Cybernetics Part B", IEEE Press, U.S.A. (2005 twice).
- 17. "Image Vision & Computing Journal", Elsevier Science, the Netherlands (1998).
- "Indian Journal of Engineering & Materials Science", NISCAIR & the Indian National Science Academy, India (2010).
- 19. "Indian Journal of Science and Technology, Informatics", India Ltd. (2013).
- 20. "International Journal of Energy Optimization and Engineering" (IJEOE), IGI Global (2011, 2012 thrice, 2013 thrice, 2014 four times, 2015 four times, 2016 seven times, 2017 eight times, 2018 four times).
- "International Journal of Artificial Intelligence Tools", World Scientific, Singapore (2013, 2014, 2015 thrice, 2016).
- 22. "International Journal of Heat Mass Transfer", Elsevier Science, the Netherlands (2011).
- 23. "International Journal of Multiphase Flow", Elsevier Science, the Netherlands (2013).
- 24. "International Journal of Neural Systems", World Scientific Publishing, U.S.A. (2010).
- 25. "International Journal on Artificial Intelligence Tools", World Scientific, U.S.A. (2013).
- 26. "Journal of Discrete Mathematics", Hindawi Publishing Corporation (2014).
- 27. "Journal of Engineering and Computer Innovations", Academic Journals (open access) (2010 twice).
- 28. "Journal of Environment and Waste Management", Premier Publishers (2017).
- 29. "Journal of Intelligent Systems", Freund Publishing House, Israel (1996, 2004).
- 30. "Journal of Nuclear Energy Science & Power Generation Technology", Henderson, NV, U.S.A. (2013).
- 31. "Journal of Visual Communication and Image Representation", Elsevier Science, the Netherlands (2015).
- "KES (Knowledge-based and Intelligent Engineering Systems) Journal", IOS Press, the Netherlands (2013 five times, 2014 thrice, 2015 twice, 2016, 2017 twice, 2018 once).
- 33. "Knowledge Based Systems", Elsevier Science, the Netherlands (2009 twice, 2013).
- 34. "Mathematical Problems in Engineering", Hindawi Publishing Corporation (2015).
- 35. "Measurement and Control", Sage Journals (2018).
- 36. "Mechanical Systems and Signal Processing", Elsevier Science, the Netherlands (2014).
- 37. "Neurocomputing", Elsevier Science, the Netherlands (2016).
- 38. "Neural Processing Letters", Springer (2013 twice, 2014).
- 39. "Nuclear Engineering and Design", Elsevier Science, the Netherlands (2009, 2017).
- 40. "Nuclear Instruments and Methods in Physics Research A", Elsevier Science, the Netherlands (2009).
- 41. "Nuclear Technology", Elsevier Science, the Netherlands (2013).
- 42. "Progress in Nuclear Energy", Elsevier Science, the Netherlands (2009 twice, 2010 twice, 2012 thrice, 2017 twice, 2018 thrice).
- 43. "The Computer Journal", Oxford University Press, U.K. (1998).
- 44. "The Open Electrical & Electronic Engineering Journal" (2016).

# Reviewer of international scientific conferences:

- 1. "Eighth Portuguese Conference on Artificial Intelligence", Coimbra, Portugal, October 6<sup>th</sup>-9<sup>th</sup>, 1997.
- 2. "24<sup>th</sup> EUROMICRO Conference", Vasteras, Sweden, August 25<sup>th</sup>-27<sup>th</sup>, 1998.
- 3. "1999 International Conference on Artificial Neural Networks and Genetic Algorithms", Portoroz, Slovenia, April 6<sup>th</sup>-9<sup>th</sup>, 1999.
- 4. "2001 International Conference on Artificial Neural Networks and Genetic Algorithms", Prague, Czech Republic, April 22<sup>nd</sup>-25<sup>th</sup>, 2001.

- "2003 International Conference on Artificial Neural Networks and Genetic Algorithms", Roanne, France, April 23<sup>rd</sup>-25<sup>th</sup>, 2003.
- 6. "2005 International Conference on Adaptive and Natural Computing Algorithms", Coimbra, Portugal, March 21<sup>st</sup>-23<sup>rd</sup>, 2005.
- "2007 International Conference on Adaptive and Natural Computing Algorithms", Warsaw, Poland, April 11<sup>th</sup>-14<sup>th</sup>, 2007.
- 8. "1<sup>st</sup> International Symposium on Intelligent Interactive Multimedia Systems and Services", Piraeus, Greece, July 9<sup>th</sup>-11<sup>th</sup>, 2008.
- 9. "15<sup>th</sup> International Conference on Neural Information Processing (ICONIP) of the Asia-Pacific Neural Network Assembly (APNNA)", Auckland, New Zealand, November 25<sup>th</sup>-28<sup>th</sup>, 2008.
- "2009 International Conference on Adaptive and Natural Computing Algorithms", Kuopio, Finland, April 23<sup>rd</sup>-25<sup>th</sup>, 2009.
- "2009 IADIS (International Association on Computer Science and Information Systems) Multi Conference on Computer Science and Information Systems, Algavre, Portugal, June 17<sup>th</sup>-23<sup>rd</sup>, 2009.
- 12. "2010 IADIS (International Association on Computer Science and Information Systems) Multi Conference on Computer Science and Information Systems, Freiburg, Germany, July 26th-31st, 2010.
- "KES'2010: 14th International Conference on Knowledge-Based and Intelligent Information & Engineering Systems", Cardiff, UK, September 8-10<sup>th</sup>, 2010.
- "2011 International Conference on Adaptive and Natural Computing Algorithms", Ljubljana, Slovenia, April 14<sup>th</sup>-16<sup>th</sup>, 2011.
- "2011 IADIS (International Association on Computer Science and Information Systems) Multi Conference on Computer Science and Information Systems", Rome, Italy, July 20th-26th, 2011.
- "KES'2011: 15th International Conference on Knowledge-Based and Intelligent Information & Engineering Systems", Kaiserslautern, Germany, September 12<sup>th</sup>-14<sup>th</sup>, 2011.
- "IWSSIP 2012", the 19th International Conference on Systems, Signals and Image Processing, Vienna, Austria, April 11<sup>th</sup>-13<sup>th</sup>, 2012.
- "2012 IADIS (International Association on Computer Science and Information Systems) Multi Conference on Computer Science and Information Systems", Lisbon, Portugal, July 17th-23rd, 2012.
- "2012 Eighth AIAI (Artificial Intelligence Applications and Innovations) Conference, Halkidiki, Greece, September 27<sup>th</sup>-30<sup>th</sup>, 2012.
- 20. "2013 International Conference on Adaptive and Natural Computing Algorithms", Lausanne, Switzerland, April 4<sup>th</sup>-6<sup>th</sup>, 2013.
- "2013 IADIS (International Association on Computer Science and Information Systems) Multi Conference on Computer Science and Information Systems", Prague, Czech Republic, July 22<sup>th</sup>-24<sup>rd</sup>, 2013.
- 22. "14th EANN ("Engineering Applications of Neural Networks") Conference. Halkidiki, Greece, September 13<sup>th</sup>-16<sup>th</sup>, 2013.
- The "Second International Conference on Data Analytics 2013" (IARIA), Porto, Portugal, September 29<sup>th</sup>-October 3<sup>rd</sup>, 2013.
- 24. The "Third International Conference on Advances in Information Mining and Management" (IMMM 2013), Lisbon, Portugal, November 17<sup>th</sup>-22<sup>nd</sup>, 2013.
- 25. The "2014 European Conference on Data Mining" (ECDM 2014), Lisbon, Portugal, July 15th-17th, 2014.
- 26. The "Fourth International Conference on Advances in Information Mining and Management" (IMMM 2014), Paris, France, July 20<sup>th</sup> -24<sup>th</sup>, 2014.
- 27. The "Third International Conference on Data Analytics 2014" (IARIA), Rome, Italy, August 24th-28th, 2014.
- The "Fifth International Conference on Advances in Information Mining and Management" (IMMM 2015), June 21<sup>st</sup> – 26<sup>th</sup>, 2015, Brussels, Belgium.
- The "2015 IEEE International Joint Conference on Neural Networks" (IEEE IJCNN'15), Killarney, Ireland, July 12<sup>th</sup>-17<sup>th</sup>, 2015.
- 30. The "Fourth International Conference on Data Analytics 2015" (IARIA), Nice, France, July 19<sup>th</sup>- 24<sup>th</sup>, 2015.
- 31. The "9<sup>th</sup> European Conference on Data Mining" (ECDM 2015), Las Palmas de Gran Canaria, Spain, July 22<sup>th</sup>-24<sup>th</sup>, 2015.

- 32. "Workshop on Numerical and Symbolic Computation in Computer Vision and Data Management", the "International Conference of Numerical Analysis and Applied Mathematics" (ICNAAM 2015), Rhodes, Greece, 23<sup>rd</sup>-29<sup>th</sup> September 2015.
- The "2015 IEEE International Joint Conference on Neural Networks" (IEEE IJCNN'15), Killarney, Ireland, July 12<sup>th</sup>-17<sup>th</sup>, 2015.
- The Sixth International Conference on Advances in Information Mining and Management (IMMM 2016), Valencia, Spain, May 22<sup>nd</sup>-26<sup>th</sup>, 2016.
- 35. International Conference on Big Data Analytics, Data Mining and Computational Intelligence 2016, (BigDaCi 2016), Madeira, Portugal, July 2<sup>nd</sup>-4<sup>th</sup>, 2016, Part of the Multi Conference on Computer Science and Information Systems (MCCSIS 2016), Madeira, Portugal, July 1<sup>st</sup>-4<sup>th</sup> 2016.
- 36. The "2016 IEEE World Congress on Computational Intelligence" (IEEE WCCI'16), Vancouver, Canada, July 25<sup>th</sup>-29<sup>th</sup>, 2016. Reviewer for both the IJCNN (the annual International Joint Conference on Neural Networks, the flagship conference of the IEEE Computational Intelligence Society and the International Neural Network Society) and the IEEE CEC (the annual IEEE Congress on Evolutionary Computation).
- The "Fifth International Conference on Data Analytics 2016" (IARIA), Venice, Italy, October 9<sup>th</sup>-13<sup>th</sup>, 2016.
- The "First EAI (European Alliance for Innovation) International Conference on Computer Science and Engineering (COMPSE 2016)", Penang, Malaysia, November 11<sup>th</sup> –12<sup>th</sup>, 2016.
- 39. The "2016 IEEE Symposium Series on Computational Intelligence" (IEEE SSCI'16), Athens, December 6th-9th, 2016.
- 40. The "International Joint Conference on Neural Networks (IJCNN) 2017", Anchorage, Alaska, May 14th-19th, 2017.
- 41. The Seventh International Conference on Advances in Information Mining and Management (IMMM 2017), Venice, Italy, June 25th- 29th, 2017.
- 42. International Conference on Big Data Analytics, Data Mining and Computational Intelligence 2017, (BigDaCi 2017), Lisbon, Portugal, July 21<sup>st</sup>-23<sup>rd</sup>, 2017, Part of the Multi Conference on Computer Science and Information Systems (MCCSIS 2017), Madeira, Portugal, July 21<sup>st</sup>-23<sup>rd</sup> 2017.
- International Conference on Big Data Analytics, Data Mining and Computational Intelligence 2017, (BigDaCi 2017), Lisbon, Portugal, July 21<sup>st</sup>-23<sup>rd</sup>, 2017, Part of the Multi Conference on Computer Science and Information Systems (MCCSIS 2017), Madeira, Portugal, July 21<sup>st</sup>-23<sup>rd</sup> 2017.
- 44. The Second (2nd) International Conference on New Energy and Future Energy System (NEFES 2017), Kunming, Yunnan, China, September 22<sup>nd</sup> 25<sup>th</sup>, 2017.
- 45. The (a) 2017 IEEE Symposium Series on Computational Intelligence (IEEE SSCI 2017), Honolulu, Hawaii, U.S.A., November 27<sup>th</sup>-December 1<sup>st</sup>, 2017; (b) the 2017 IEEE Symposium on Computational Intelligence in Vehicles and Transportation Systems (IEEE CIVTS' 17), part of the IEEE-SSCI 2017, Honolulu, Hawaii, U.S.A., November 27<sup>th</sup>-December 1<sup>st</sup>, 2017.
- International Conference on Big Data Analytics, Data Mining and Computational Intelligence 2018 (BigDaCI 2018), Madrid, Spain, July 18<sup>th</sup>-20<sup>th</sup>, 2018.
- 47. The Third International Conference on New Energy and Future Energy Systems (NEFES 2018), Shanghai, China, August 21st 24th, 2018.
- 48. <u>The 2018 International Joint Conference on Computational Intelligence (IJCCI)'18 Seville, Spain, September</u> <u>18<sup>th</sup> -20<sup>th</sup>, 2018.</u>
- 49. The 2018 IEEE Symposium Series on Computational Intelligence (IEEE SSCI 2018), Bengaluru, India, November 18<sup>th</sup>-November 21<sup>st</sup>, 2018.

# Organisation of international scientific conferences:

- "1995 International Conference on Artificial Neural Networks and Genetic Algorithms", Ales, France, April 18<sup>th</sup>-21<sup>st</sup>, 1995. Chairperson at the session entitled *"Image, Motion and Recognition"*.
- 2. "Computational Engineering in Systems Applications 1996 IMACS Multiconference", Lille, France, July 9<sup>th</sup>-12<sup>th</sup>, 1996. Invited speaker at the *"Symposium on Discrete Events and Manufacturing Systems"*.
- 3. "1997 International Conference on Artificial Neural Networks and Genetic Algorithms", Norwich, U.K., April 1<sup>st</sup>-4<sup>th</sup>, 1997. Chairperson at the session entitled *"Artificial Neural Network Theory and Models"*.

- 4. "24<sup>th</sup> EUROMICRO Conference", Vasteras, Sweden, August 25<sup>th</sup>-27<sup>th</sup>, 1998. Member of the Program Committee.
- 5. "1999 International Conference on Artificial Neural Networks and Genetic Algorithms", Portoroz, Slovenia, April 6<sup>th</sup>-9<sup>th</sup>, 1999. Member of the Program Committee.
- 6. "2000 International Meeting on Reactor Noise", Athens, Greece, October 11<sup>th</sup>-13<sup>th</sup>, 2000. Member of the Program/Scientific & Organising Committee; co-editor of the "IMORN 28" Proceedings volume.
- "2001 International Conference on Artificial Neural Networks and Genetic Algorithms", Prague, Czechia, April 22<sup>nd</sup>-25<sup>th</sup>, 2001. Member of the Program Committee. Chairperson at the session entitled "Genetic Algorithms - Applications".
- "2003 International Conference on Artificial Neural Networks and Genetic Algorithms", Roanne, France, April 23<sup>rd</sup>-25<sup>th</sup>, 2003. Member of the Program Committee.
- 9. "2005 International Conference on Artificial Neural Networks and Genetic Algorithms", Coimbra, Portugal, March 21<sup>st</sup>-23<sup>rd</sup>, 2005. Member of the Program Committee. Chairperson at the session entitled *"Clustering and Unsupervised Learning"*.
- 10. "2007 International Conference on Adaptive and Natural Computing Algorithms", Warsaw, Poland, April 11<sup>th</sup>-14<sup>th</sup>, 2007. Member of the Program Committee. Organiser and Chairperson at the session entitled *"Biometrics"*. Organiser and Chairperson of the *"Hands-On/Workshop on Biometrics"*.
- "2008 IEEE SMC International Conference on Distributed Human-Machine Systems", Athens, Greece, March 9th-12th, 2008. Chairperson of the session entitled "Distributed Systems & Services".
- "2009 International Conference on Adaptive and Natural Computing Algorithms", Kuopio, Finland, April 23<sup>rd</sup>-25<sup>th</sup>, 2009. Member of the Program Committee.
- "2009 IADIS (International Association on Computer Science and Information Systems) Multi Conference on Computer Science and Information Systems, Algavre, Portugal, June 17<sup>th</sup>-23<sup>rd</sup>, 2009. Member of the Program Committee.
- "2010 IADIS (International Association on Computer Science and Information Systems) Multi Conference on Computer Science and Information Systems, Freiburg, Germany, July 26<sup>th</sup>-31<sup>st</sup>, 2010. Member of the Program Committee.
- 15. "WORLDCOMP'10 The 2010 World Congress in Computer Science, Computer Engineering, and Applied Computing/IKE'10 The 2010 International Conference on Information and Knowledge Engineering", Las Vegas, Nevada, U.S.A., July 12<sup>th</sup>-15<sup>th</sup>, 2010. Chairperson at the session entitled *"Knowledge Management and Performance Issues"*.
- "2011 International Conference on Adaptive and Natural Computing Algorithms", Ljubljana, Slovenia, April 14<sup>th</sup>-16<sup>th</sup>, 2011. Member of the Program Committee.
- "2011 IADIS (International Association on Computer Science and Information Systems) Multi Conference on Computer Science and Information Systems", Rome, Italy, July 20<sup>th</sup>-26<sup>th</sup>, 2011. Member of the Program Committee.
- "KES'2011: 15th International Conference on Knowledge-Based and Intelligent Information & Engineering Systems", Kaiserslautern, Germany, September 12<sup>th</sup>-14<sup>th</sup>, 2011. Member of the Program Committee.
- "WORLDCOMP'11 The 2011 World Congress in Computer Science, Computer Engineering, and Applied Computing", July 18<sup>th</sup>-21<sup>st</sup>, 2011. Member of the Program Committee of the following Conferences: GEM'11 The 2011 International Conference on Genetic and Evolutionary Methods, ICAI'11 The 2011 International Conference on Artificial Intelligence, IKE'11 The 2011 International Conference on Information and Knowledge Engineering, IPCV'11 The 2011 International Conference on Image Processing, Computer Vision, and Pattern Recognition.
  Chairperson at the sessions entitled "*3-GEM: Swarm Optimization, Ant Colony + Simulated Annealing*" and "*Genetic + Evolutionary Algorithms II*".
  "2012 IADIS (International Association on Computer Science and Information Systems) Multi Conference
- 20. "2012 IADIS (International Association on Computer Science and Information Systems) Multi Conference on Computer Science and Information Systems", Lisbon, Portugal, July 17<sup>th</sup>-23<sup>rd</sup>, 2012. Member of the Program Committee.
- 21. "FLINS (Fuzzy Logic in Nuclear Systems) 2012", Istanbul, Turkey, August 26<sup>th</sup>-29<sup>th</sup>, 2012. Co-organiser and track co-chair (with Professor Imre Pázsit) of the Special Session in memory of Professor Da Ruan entitled

"*Computational Intelligence in Power Plant Safery*", including the Da Ruan Memorial Award and Lecture. The Da Ruan Memorial Award was given to J.S. Benítez-Read, E. Rojas-Ramírez, and G. Quintana-Caparia, for their article entitled *"Neuro-Power Control of a Triga Mark III Reactor Using Stable Adaptive Fuzzy Control"*.

- 22. "2012 Eighth AIAI (Artificial Intelligence Applications and Innovations) Conference, Halkidiki, Greece, September 27<sup>th</sup>-30<sup>th</sup>, 2012. Member of the Program Committee. Chair of the session entitled "Artificial *Neural Network Classification and Pattern Recognition*".
- 23. "2013 International Conference on Adaptive and Natural Computing Algorithms", Lausanne, Switzerland, April 4<sup>th</sup>-6<sup>th</sup>, 2013. Member of the Program Committee. Chair of the sessions entitled "*Nature Inspired Algorithms I*" and "*Nature Inspired Algorithms II*".
- "2013 IADIS (International Association on Computer Science and Information Systems) Multi Conference on Computer Science and Information Systems", Prague, Czech Republic, July 22<sup>th</sup>-24<sup>rd</sup>, 2013. Member of the Program Committee.
- 25. "4th Intelligent Systems for Quality of Life Information Services Workshop, 14th EANN Conference. Engineering Applications of Neural Networks", Halkidiki, Greece, September 13<sup>th</sup>-16<sup>th</sup>, 2013. Member of the Program Committee.
- "2013 Ninth AIAI (Artificial Intelligence Applications and Innovations) Conference, Pafos, Cyprus, September 20<sup>th</sup>-October 2<sup>nd</sup>, 2013. Member of the Program Committee.
- 27. The "Second International Conference on Data Analytics" (IARIA), Porto, Portugal, September 29<sup>th</sup>– October 3<sup>rd</sup>, 2013. Member of the Technical Program Committee.
- The "Third International Conference on Advances in Information Mining and Management" (IMMM 2013), Lisbon, Portugal, November 17<sup>th</sup>-22<sup>nd</sup>, 2013. Member of the Technical Program Committee.
- 29. The "2014 European Conference on Data Mining" (ECDM 2014), Lisbon, Portugal, July 15<sup>th</sup>-17<sup>th</sup>, 2014. Member of the Program Committee.
- The "Fourth International Conference on Advances in Information Mining and Management" (IMMM 2014), Paris, France, July 20<sup>th</sup> -24<sup>th</sup>, 2014. Member of the Technical Program Committee.
- "IEEE World Congress on Computational Intelligence" (IEEE WCCI 2014), Beijing, China, July 6<sup>th</sup>-11<sup>th</sup>, 2014. Member of the Program Committee of the "International Workshop on Advances in Learning from/with Multiple Learners" (July 6<sup>th</sup>, 2014).
- The "Third International Conference on Data Analytics 2014 (IARIA), Rome, Italy, August 24<sup>th</sup>-28<sup>th</sup>, 2014. Member of the Technical Programme Committee.
- 33. The "Fifth International Conference on Advances in Information Mining and Management" (IMMM 2015), June 21<sup>st</sup> – 26<sup>th</sup>, 2015, Brussels, Belgium. Member of the Technical Program Committee.
- 34. The "2015 IEEE International Joint Conference on Neural Networks" (IEEE IJCNN'15), Killarney, Ireland, July 12<sup>th</sup>-17<sup>th</sup>, 2015. Member of the Program Committee. Organiser of the Special Session entitled "Computational Intelligence Methodologies for Environmental Sustainability and Sustainable Development: Theory and Applications"
- The "Fourth International Conference on Data Analytics 2015" (IARIA), Nice, France, July 19<sup>th</sup>- 24<sup>th</sup>, 2015. Member of the Technical Programme Committee.
- 36. The "9<sup>th</sup> European Conference on Data Mining" (ECDM 2015), Las Palmas de Gran Canaria, Spain, July 22<sup>th</sup>-24<sup>th</sup>, 2015. Member of the Program Committee.
- The Sixth International Conference on Advances in Information Mining and Management (IMMM 2016), Valencia, Spain, May 22<sup>nd</sup>-26<sup>th</sup>, 2016. Member of the Technical Programme Committee.
- 38. The "International Conference on Big Data Analytics, Data Mining and Computational intelligence" (BigDaCi 2016), Part of the Multi Conference on Computer Science and Information Systems (MCCSIS 2016), Madeira, Portugal, July 1<sup>st</sup>-4<sup>th</sup>, 2016. Member of the Program Committee.
- 39. The "2016 IEEE World Congress on Computational Intelligence" (IEEE WCCI'16), Vancouver, Canada, July 25<sup>th</sup>-29<sup>th</sup>, 2016. Organiser of the Special IEEE CEC and IJCNN'16 Sessions entitled "Computational Intelligence Methodologies for Environmental Sustainability and Sustainable Development: Theory and Applications" (CDCI-10) and "Computational Intelligence for Music, Art, and Creativity" (CDCI-06), respectively. Chairperson of the session entitled "Computational Intelligence Methodologies for Environmental Sustainable Development: Theory and Applications" (CDCI-10).

- 40. The "Fifth International Conference on Data Analytics 2016" (IARIA), Venice, Italy, October 9<sup>th</sup>-13<sup>th</sup>, 2016. Member of the Technical Program Committee.
- 41. The "First EAI (European Alliance for Innovation) International Conference on Computer Science and Engineering (COMPSE 2016)", Penang, Malaysia, November 11<sup>th</sup> –12<sup>th</sup>, 2016. Member of the Technical Program Committee.
- 42. The "16th UK Workshop on Computational Intelligence (UKCI 2016)", Lancaster, U.K., September 7<sup>th</sup>-9<sup>th</sup>, 2016. Chairperson of the Sessions entitled "Modelling and Simulation", and "Cognition and Control".
- 43. The "2016 IEEE Symposium Series on Computational Intelligence" (IEEE SSCI'16), Athens, December 6th-9th, 2016. Member of the International Programme Committee of the "Evolving and Autonomous Learning Systems" symposium; co-Chair (with Babagana Modu) of the Special Session entitled "Symposium on Computational Intelligence in Healthcare and e-health".
- 44. The "International Joint Conference on Neural Networks (IJCNN) 2017", Anchorage, Alaska, May 14th-19th, 2017. Member of the Organizing Committee, Special Sessions Co-chair (with Derong Liu, University of Illinois, Chicago); Chair of the Session entitled "Security and risk assessment".
- 45. The Seventh International Conference on Advances in Information Mining and Management (IMMM 2017), Venice, Italy, June 25th- 29th, 2017. Member of the Technical Program Committee.
- 46. The 2017 IEEE International Conference on INnovations in Intelligent SysTems and Applications (INISTA 2017), Gdynia, Poland, July 3rd-5th, 2017. Member of the Program Committee, Tracks "Machine Learning: Methodologies, Applications and Trends" (MLMAT 2017) and "Evolving and Autonomous Learning Systems" (EALS).
- 47. International Conference on Big Data Analytics, Data Mining and Computational Intelligence 2017, (BigDaCi 2017), Lisbon, Portugal, July 21<sup>st</sup>-23<sup>rd</sup>, 2017, Part of the Multi Conference on Computer Science and Information Systems (MCCSIS 2017), Madeira, Portugal, July 21<sup>st</sup>-23<sup>rd</sup> 2017. Member of the Program Committee.
- Ninth (9th) International Joint Conference on Computational Intelligence 2017 (IJCCI 2017), Funchal, Madeira, Portugal November 1<sup>st</sup>-3<sup>rd</sup>, 2017. Member of the Program Committee.
- 49. The 2017 IEEE Symposium on Computational Intelligence in Vehicles and Transportation Systems (IEEE CIVTS' 17), part of the 2017 IEEE Symposium Series on Computational Intelligence (IEEE SSCI 2017), Honolulu, Hawaii, U.S.A., November 27<sup>th</sup>-December 1<sup>st</sup>, 2017. Member of the Program Committee; Organiser of the Special Session entitled "Computational Intelligence Methodologies for Environmental Sustainability and Sustainable Development: Theory and Applications".
  - 50. International Conference on Big Data Analytics, Data Mining and Computational Intelligence 2018 (BigDaCI 2018), Madrid, Spain, July 18<sup>th</sup>–20<sup>th</sup>, 2018. Member of the Program Committee.
  - 51. The Third International Conference on New Energy and Future Energy Systems (NEFES 2018), Shanghai, China, August 21st 24th, 2018. Member of the Technical Program Committee.
  - 52. The 2018 International Joint Conference on Computational Intelligence (IJCCI)'18 Seville, Spain, September 18<sup>th</sup> -20<sup>th</sup>, 2018. Member of the Program Committee.
  - 53. The 2019 8<sup>th</sup> International Conference on Operations Research and Enterprise Systems (ICORES 2018), Prague, Czech Republic, February 19<sup>th</sup>-21<sup>st</sup>, 2019. Member of the Program Committee.

# Selected instances of participation in scientific programmes:

- Project leader of "Demoereyna'99" program (sponsored by NCSR "Demokritos") entitled "Correlating meteorological data for use in energy-driven systems", April 1999-March 2001. Under the same project, Ph.D. supervisor of the NCSR "Demokritos" postgraduate scholar Ms Myrsini Gazela (Ph.D Thesis entitled "Dynamic behaviour of energy-driven systems and optimal use of meteorological data").
- 2. Working Group Member of COST Action TD1105 EuNetAir.
- Member of the CORTEX "CORe monitoring Techniques and EXperimental validation and demonstration" consortium (Horizon 2020 – the Framework Programme for Research and Innovation 2017-2020). Responsible of Work Package 3.1. (2017-2018).

## Selected instances of involvement in Ph.D. theses:

- Supervisor, internal examiner and member of the Examination Board of the Ph.D. student Ms Myrsini Gazela (Ph.D. Thesis entitled "Dynamic Behaviour of Energy-Driven Systems and Optimal Use of Meteorological Data"), Department of Electrical Engineering, Aristotle University of Thessaloniki, Thessalonini, Greece, May 23<sup>rd</sup>, 2005.
- International reviewer of the International Ph.D. student Mr Piero Baraldi (Ph.D Thesis entitled "Soft Computing Methods for 'On Line' Diagnostics of Nuclear Components and Systems"), Department of Nuclear Engineering, Politecnico di Milano, Milano, Italy, May 25<sup>th</sup>, 2006.
- 3. International examiner of the Ph.D. student Mr Carl Sunde (Ph.D Thesis entitled "Noise Diagnostics of Stationary and Non-Stationary Reactor Processes"), Nuclear Engineering Department of Applied Physics, Chalmers University of Technology, Goteborg, Sweden, April 27<sup>th</sup>, 2007.

# Selected instances of involvement in M.Sc. dissertations:

- Co-supervisor (with Professor D.Karalekas) of M.Sc. student Mr Nikolaos G. Moustakas. M.Sc. Dissertation Thesis entitled "The Use of Computational Intelligence Techniques for Optimal Material Selection in Sustainable Packaging Design", Department of Industrial Management and Technology, University of Piraeus, Piraeus, Greece, March 10<sup>th</sup>, 2011. {https://gr.linkedin.com/in/nikolaos-g-moustakas-37026b42}; Mr Moustakas received his Ph.D. at the Institute of Nanoscience and Nanotechnology, Department of Physical Chemistry, National Centre of Sscientific Research "Demokritos", Athens, under the supervision of researcher Dr Polycarpos Falaras and is currently postdoctoral researcher at the Leibniz Institute for Catalysis, University of Rostock (LIKAT), Germany}
- 2. Supervisor of M.Sc. students Ms Kyriaki Bardi and Ms Angela Mathioudaki. Joint M.Sc. Dissertation Thesis entitled "An Investigation of the Pilot EPI Environmental Performance Index 2006"), Department of Industrial Management and Technology, University of Piraeus, Piraeus, Greece, July 24th, 2014. {Ms A.Mathioudaki is currently pursuing her Ph.D. at the Division of Computer Science, School of Electrical and Computer Engineering, National Technical University of Athens, under the supervision of Assistant Professor Dr Dimitris Fotakis}
- Co-supervisor (with Dr D.Souliou, Department of Electrical and Computer Engineering, National Technical University of Athens, Athens, Greece) of M.Sc. student Mr Sotirios Papoutsis. M.Sc. Dissertation Thesis entitled "The Use of Numerical Methods for Validating the Environmental Performance Index 2008", Department of Industrial Management and Technology, University of Piraeus, Piraeus, Greece, November 2<sup>nd</sup>, 2016.

# Selected instances of involvement in B.Sc. dissertations:

- Co-supervisor (with Professor S.Kollias, Department of Electrical and Computer Engineering, National Technical University of Athens, Athens, Greece) of B.Sc. student Ms Marianna Tzormpatzaki. B.Sc. Dissertation Thesis entitled "Towards the Digital Music Stand: Staff and Bar Line Detection and Localisation"), Department of Electrical and Computer Engineering, National Technical University of Athens, Athens, Greece, July 19<sup>th</sup>, 2012 (url <u>http://artemis.cslab.ntua.gr/el\_thesis/</u>. {Ms M.Tzormpatzaki completed her 3 1/2 year-long apprenticeship "Electronics for industrial engineering" (Elektronikerin für Betriebstechnik) at Siemens Professional Education (August 2012 – February 2016, Berlin Area, Germany), and was working at Siemens, Berlin Area, Germany, March 2016-September 2018}
- 2. Supervisor of B.Sc. student Mr Nikolaos Hatziefthimiou (B.Sc. Dissertation Thesis entitled "An Analysis of the Sustainability Index 2002"), Department of Industrial Management & Technology, University of Piraeus, Piraeus, Greece, June 8th, 2017.

## Teaching experience:

1. Tutor of the following undergraduate courses at the Department of Industrial Management & Technology, University of Piraeus

- (a) compulsory courses
- "Introduction to Computers" (first semester)

(http://www.tex.unipi.gr/undergraduate/notes/eisagogi\_comp/main.htm), with relevant examples and useful instructions appearing in (via hyperlinks to)

(I) XAMPP

(II) introductory information on (a) numerical systems, (b) computers and algorithms;

(II) HTML-related information in the form of (a) tutor notes, (b) guidelines on creating ready-to-upload Webpages, (c) the use of tables for formatting Webpage contact, (d) selected student Webpages (which is compulsory for passing the course).

• "Data Structures and Programming Languages" (fourth semester)

(<u>http://www.tex.unipi.gr/undergraduate/notes/diax\_dedomenon/main.htm</u>), ), with relevant examples and useful instructions and tools appearing in (via hyperlinks to)

(I) a set of four concise lessons covering the introductory coursework (with answers) on basic programming;

(II) tutor notes;

(III) five examples of students' programming & graphics assignments (n-queens, http://www.tex.unipi.gr/undergraduate/ergasies/Selidaqueens/arxiki.html, NIM the game (http://www.tex.unipi.gr/undergraduate/ergasies/Nim Game/selida1.htm), the knight's tour (http://www.tex.unipi.gr/undergraduate/ergasies/knight/index.htm), tic-tac-toe (http://www.tex.unipi.gr/undergraduate/ergasies/TRILIZA/Triliza.html) and and the Circle of Pennies game (M.Gardner, A.Ravielli, Entertaining Mathematical Puzzles, Dover Publications Inc., New York, U.S.A., 1986, pp. 54-56) http://www.tex.unipi.gr/undergraduate/ergasies/smiley\_face\_game/arxiki.htm

- (b) elective course
- "Artificial Intelligence" (seventh semester) http://www.tex.unipi.gr/undergraduate/notes/eisagogi\_comp/html\_notes\_2012.pdf
- 2. Co-tutor (with Professor Dimitris Karalekas) of the postgraduate elective course "Eco-Design Design for Environment" (first semester) at the Product Engineering and Environmental Protection MSc Course (direction Logistics) run jointly by the Department of Industrial Management & Technology, University of Piraeus and the Department of Chemical Engineering, National Technical University of Athens (2011-2012 & 2012-2013). The course was supplemented by electronic notes (teaching material, presentations and program files) which are available at the following URL:

http://www.tex.unipi.gr/master new/env new/notes/1/ecodesign/main.html

3. Co-tutor (with Dr Dora Souliou) of the postgraduate elective course "Programming Methods and Tools" (first semester) at the Project Management & Product Development MSc Course run by the Department of Industrial Management & Technology, University of Piraeus (2013-2015). The course was supplemented by electronic notes (teaching material, presentations and program files) which are available at the following URL:

http://www.tex.unipi.gr/master/PRImages/TimeTable/102\_Syllabus\_CM&PT.pdf

# Organisation of Curriculum/University Student Training & Learning:

- 1. Member of the Programme Revision Committee of the Department's curriculum updating (2010-today). Responsible for the revision/updating of the computer-oriented and informatics subjects; member of the committees for the revision/updating of the mathematics and statistics subjects as well as of the sustainability/ecology-oriented subjects.
- 2. Escort of the MSc students of the Department's postgraduate programme on Logistics at the Escola Europea de Short Sea Shipping Intermodal Logistics Training course (March, 2012).

# Publications:

# I. Dissertations/theses:

- 1. Tambouratzis T., (October 1988). *A harmony theory network for the interpretation of line-drawings*, **M.Sc. Dissertation**. Brunel University, U.K..
- 2. Tambouratzis T., (April 1991). *A neural network implementation of the constraint propagation paradigm in vision*, **Ph.D. Thesis**. Brunel University, U.K..

# II. In peer-reviewed international scientific journals:

- 1. Tambouratzis T., (1991). *An implementation of a harmony theory network* for *interpreting line-drawings*, **Network: Computation in Neural Systems**, Vol. 2, No. 4, pp. 443- 454.
- 2. Tambouratzis T., Wright M.J., (1993). *The relative effectiveness of serial and parallel viewing of linedrawings depicting possible and impossible objects*, **Perception**, Vol. 22, No. 11, pp. 1271-1285.
- 3. Tambouratzis T., (1994). *Node compression in simulated annealing networks an investigation with a scene analysis benchmark*, **Electronics Letters**, Vol. 30, No. 4, pp. 334-336.
- 4. Tambouratzis T., (1995). *Integrating artificial and psychophysical approaches for boundary finding in linedrawings*, **International Journal of Intelligent Systems**, Vol. 10, No. 5, pp. 443-457.
- 5. Antonopoulos-Domis M., Tambouratzis T., (1996). *Artificial neural networks for neutron source localization within sealed tanks*, **Annals of Nuclear Energy**, Vol. 23, No. 18, pp. 1477-1488.
- 6. Tambouratzis T., (1996). Using geometrical information for accurate scene understanding in an artificial vision system, International Journal of Intelligent Systems, Vol. 11, No. 10, pp. 833-863.
- Tambouratzis T., (1997). *Edge crossing minimisation via artificial neural networks*, Electronics Letters, Vol. 33, No. 19, pp. 1621-1623.
- 8. Tambouratzis T., (1997). *A simulated annealing artificial neural network implementation of the n-queens problem*, **International Journal of Intelligent Systems**, Vol. 12, No. 10, pp. 739-751.
- 9. Tambouratzis T., (1997). *Graph planarisation employing a harmony theory artificial neural network*, Neural Computing and Applications, Vol. 6, No. 4, pp. 116-124.
- Antonopoulos-Domis M., Tambouratzis T., (1998). System identification during a transient via wavelet multiresolution analysis followed by spectral techniques, Annals of Nuclear Energy, Vol. 25, No. 6, pp. 465-480.
- 11. Tambouratzis T., (1998). A decomposition-coordination artificial neural network for satellite broadcast scheduling, Electronics Letters, Vol. 34, No. 15, pp. 1503-1504.
- 12. Tambouratzis T., Antonopoulos-Domis M., Marseguerra M., Padovani E., (1998). *On-line estimation of transit time using artificial neural networks*, **Nuclear Science and Engineering**, Vol. 130, No.1, pp. 113-127.
- 13. Tambouratzis T., (1998). A consensus-function artificial neural network for map colouring, IEEE Transactions on Systems, Man, and Cybernetics, Vol. 28, No. 5, pp. 721-728.
- 14. Tambouratzis T., (1999). *A novel artificial neural network for sorting*, **IEEE Transactions on Systems, Man**, and Cybernetics, Vol. 29, No. 2, pp. 271-275.
- 15. Tambouratzis T., Antonopoulos-Domis M., (1999). *On-line stability monitoring of BWR's using artificial neural networks*, **Annals of Nuclear Energy**, Vol. 26, No. 14, pp.1287-1302.
- 16. Tambouratzis T., (2000). *Counter-clustering for training pattern selection*, **The Computer Journal**, Vol. 43, No. 3, pp.177-190.
- 17. Tambouratzis T., (2000). *Solving the Hamiltonian cycle problem via an artificial neural network*, **Information Processing Letters**, Vol. 75, No. 6, pp. 237-242.
- Tambouratzis T., (2001). A neural network approach to tiling problems, International Journal of Intelligent Systems, Vol. 16, No. 9, pp. 1037-1052.
- 19. Tambouratzis, T., (2001). *String matching artificial neural networks*, International Journal of Neural Systems, Vol. 11, No. 5, pp. 445-453.
- 20. Tambouratzis, T., (2001). Incremental bin packing, Neural, Parallel and Scientific Computations, Vol. 9, No. 2, pp. 175-186.
- 21. Tambouratzis T., (2001). An artificial neural network satisfiability tester, International Journal of Intelligent Systems, Vol. 16, No. 12, pp. 1357-1375.

- 22. Tambouratzis T., Antonopoulos-Domis M., (2002). *Instability localization with artificial neural networks*, Annals of Nuclear Energy, Vol. 29, No. 3, pp. 235-253.
- 23. Gazela, M., Tambouratzis T., (2002). *Estimation of hourly average solar radiation on tilted surface using ANNs*, **International Journal on Neural Systems**, Vol. 12, No. 1, pp. 1-14.
- 24. Tambouratzis T., Antonopoulos-Domis M., (2002). *A non-stationary signal correlator for on-line transit time estimation*, **Annals of Nuclear Energy**, Vol. 29, No. 11, pp. 1299-1313.
- 25. Tambouratzis, T., Gazela, M., (2002). *The accurate estimation of meteorological profiles employing ANNs*, **International Journal on Neural Systems**, Vol. 12, No. 3-4, pp. 319-337.
- 26. Tambouratzis, T., (2002). *A parallel approach to the Eulerian cycle problem*, International Journal of Intelligent Systems, Vol. 17, No. 12, pp. 1111-1119.
- 27. Tambouratzis, G., Tambouratzis, T., Tambouratzis, D., (2003). *Clustering with artificial neural networks and traditional techniques*, International Journal of Intelligent Systems, Vol. 18, No. 4, pp. 405-428.
- 28. Tambouratzis T., Xanthos, S., Antonopoulos-Domis M., (2004). *On-line channel instability localisation with fuzzy rule-based systems*, Annals of Nuclear Energy, Vol. 31, No. 7, pp. 773-788).
- 29. Tambouratzis T., Antonopoulos-Domis M., (2004). *On-line signal trend identification*, **Annals of Nuclear Energy**, Vol. 31, No. 14, pp. 1541-1553.
- 30. Tambouratzis T., Antonopoulos-Domis M., (2004). *Parameter estimation during a transient application to BWR stability*, **Annals of Nuclear Energy**, Vol. 31, No. 18, pp. 2077-2092.
- 31. Tambouratzis T., Wright, M.J., (2005). *Aspect graphs for 3-D object recognition machine vision systems*, **International Journal of Intelligent Systems**, Vol. 20, No. 1, pp. 47-72.
- 32. Tambouratzis T., (2006). *SOM-based estimation of climatic profiles*, International Journal of Intelligent Systems, Vol. 21, No. 5, pp. 503-522.
- 33. Tambouratzis T., Tambouratzis G., (2008). *Meteorological data analysis using self-organizing maps*, **International Journal of Intelligent Systems** Vol. 23, No. 6, pp. 735-759.
- 34. Tambouratzis T., Pázsit I., (2009). *Non-invasive on-line two-phase flow regime identification employing artificial neural networks*, **Annals of Nuclear Energy** Vol. 36, No. 4, pp. 464-469.
- 35. Tambouratzis T., (2009). *A parallel solution to the HIP game based on genetic algorithms*, **International Journal of Intelligent Systems**, Vol. 24, No. 9, pp. 976-988.
- 36. Tambouratzis T., Pázsit I., (2010). *A general regression artificial neural network for two-phase flow regime identification*, **Annals of Nuclear Energy**, Vol. 37, No. 5, pp. 672-680.
- 37. Tambouratzis T., (2010). *An artificial neural network-based approach for on-line string matching/filtering of large databases*, **International Journal of Intelligent Systems** Vol. 25, No. 4, pp. 365-385.
- Tambouratzis T., Pázsit I., (2010). A fuzzy inference system for two-phase flow regime identification from radiography images, International Journal of Nuclear Energy Science and Technology Vol. 5, No. 4, pp. 321-334.
- Tambouratzis T., Chernikova D., Pázsit I., (2013). Pulse shape discrimination of neutrons and gamma rays using Kohonen artificial neural networks, Journal of Artificial Intelligence and Soft Computing Research, Vol. 3, No. 2, pp. 77-88.
- Tambouratzis T., (2013). The digital music stand as a minimal processing custom-made optical music recognition system – part 1: key music symbol recognition, International Journal of Intelligent Systems, Vol. 28, No. 5, pp. 474-504.
- Tambouratzis T., Canellidis V., (2014). Reward-Penalty Assignments and Genetic Algorithms for Ordinal-Interval-Number Group Decision Making, International Journal of Intelligent Systems, Vol. 29, No. 8, pp. 727–750.
- 42. Tambouratzis T., Karalekas D., Moustakas N., (2014). *A methodological study for optimizing material selection in sustainable product design*, **Journal of Industrial Ecology**, Vol. 18, No. 4, pp. 508-516.
- 43. Tambouratzis T., Souliou D., Chalikias M., Gregoriades A., (2014). *Maximising accuracy and efficiency of traffic accident prediction combining information mining with computational intelligence approaches and decision trees*, Journal of Artificial Intelligence and Soft Computing Research, Vol. 4, No. 1, pp. 31-42.
- 44. Tambouratzis T. (2016). *Analysing the construction of the environmental sustainability index 2005,* **International Journal of Environmental Science and Technology**, vol. 13, No. 12, pp. 2817-2836.

# III. In peer-reviewed international scientific books:

- 1. Tambouratzis T., (1993). A neural network simulation of visual processes involved in scene analysis, Chapter 3, pp. 47-62, in M.J.Taylor, P.J.G.Lisboa (eds) **"Techniques and Applications of Neural Networks"**. Ellis-Horwood, Chichester, U.K..
- Tambouratzis T., (1994). Scene analysis for navigation tasks and robotics using a harmony theory network, "Image Processing" section, pp. 57-64, in P.J.G.Lisboa, M.J.Taylor (eds) "Proceedings of the Workshop on Neural Network Applications and Tools". IEEE Computer Society Press, Los Alamitos, California, U.S.A..
- Tambouratzis G., Tambouratzis T., Tambouratzis D., (1997). Neural network versus statistical clustering techniques: a pilot study in a phoneme recognition task, Chapter 62, pp. 355-360, in S.W.Ellacott, J.C.Mason, I.J.Anderson (eds) "Mathematics of Neural Networks: Models, Algorithms and Applications". Kluwer Academic Publishers, Massachusetts, U.S.A..
- Tambouratzis T., (1999). A harmony-maximisation network implementation of a compound labelling scheme for scene analysis, Chapter 5, pp. 119-160, in O.Omidvar (ed) "Progress In Neural Networks: Shape Recognition". Intellect Ltd, Exeter, U.K.. SBN: 9781567503289 | 1567503284(1st Edition, Format: Hardcover, Publisher: University of Chicago Publication Date: October 1st, 1999).
- Tambouratzis T., (2011). Progressive organization of co-operating colonies/collections of ants/agents (POOCA) for competent pheromone-based navigation and multi-agent learning, Chapter 1, pp. 1-50, in E.C.Sun (ed.) "Ant Colonies: Behavior in Insects and Computer Applications", Nova Publishers, New York, U.S.A.. (ISBN: 978-1-61122-023-0).
- Tambouratzis T., Pázsit I., (2013). A comparative analysis of three computational intelligence approaches for two-phase flow regime identification, Chapter 2, pp. 17-32, in C.Rocha, F.Akune, A.el-Shafie (eds.)
   "Artificial Intelligence and Hybrid Systems", Concept Press Ltd., ISBN 978-1-922227-06-5 (Hardcover), 978-1-477554-73-9 (Paperback).

# IV. Other Books:

 Scientific co-editor (with Dr D.Souliou) of the Greek translation of the book by Stormy Attaway entitled "Matlab, Third Edition: A Practical Introduction to Programming and Problem Solving", Butterworth-Heinemann (an imprint of Elsevier) Oxford, GB, 2013 (title of the translated book: "Πρακτική Εισαγωγή στον Προγραμματισμό και την Επίλυση Προβλημάτων", Εκδόσεις Κλειδάριθμος ΕΠΕ, ISBN: 978-960-461-663-3).

# V. In international scientific conferences:

- 1. Tambouratzis T., Wright M.J., (1990). *Interpretation of line-drawings in harmony machines*, in Proceedings of the **"Fifth International Symposium of the Northern Eye Institute"**, Bristol, U.K., July 17<sup>th</sup>-19<sup>th</sup>, 1989, published in **Perception**, Vol. 19, No. 2, pp. 275-276.
- Tambouratzis T., Wright M.J., (1991). Classification of possible and impossible objects from serial and parallel viewing of their line-drawings, in Proceedings of the "1991 Annual Conference of the British Psychological Society", Bournemouth, U.K., April 11<sup>th</sup>-14<sup>th</sup>, 1991, published in The Psychologist, Vol. 4, No. 8, (supplement) p. 69.
- Tambouratzis T., (1991). Harmony theory networks for scene analysis, in Proceedings of the "International Conference on Artificial Neural Networks 1991", Helsinki, Finland, June 14<sup>th</sup>-18<sup>th</sup>, 1991, pp. 1743-1746, T.Kohonen, K.Makisara, O.Simula, J.Kangas (eds) "Artificial Neural Networks". North- Holland, Amsterdam.
- 4. Tambouratzis T., (1991). Adding geometrical and psychophysical-based constraints for labelling of linedrawings, in Proceedings of the **"Euriscon-1991"**, Corfu, Greece, June 23<sup>rd</sup>-18<sup>th</sup>, 1991, p. 192.
- Tambouratzis T., (1992). A parallel translation of the Waltz algorithm for analysing line-drawings, in Proceedings of the "International Conference on Artificial Neural Networks 1992", Brighton, U.K., September 4<sup>th</sup>-7<sup>th</sup>, 1992, pp. 533-536, I.Aleksander, J.Taylor (eds) "Artificial Neural Networks-II". North-Holland, Amsterdam.

- Tambouratzis T., (1992). *The economy/performance issue in harmony theory networks*, in Proceedings of the "International Conference on Artificial Neural Networks 1992", Brighton, U.K., September 4<sup>th</sup>-7<sup>th</sup>, 1992, pp. 537-540, I.Aleksander, J.Taylor (eds) "Artificial Neural Networks-II". North-Holland, Amsterdam.
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