

**RESUME of
Ioannis G. Tsoulos**

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A. Personal Data

Name :Ioannis
Surname :Tsoulos
Date of birth :8/1/1977
Place of birth :Laganas Ilias
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B. Academic Studies

- 1994 – 1998** :BSC in Information Technology from the Department of Computer Science at the University of Ioannina, Greece.
- 1999 – 2001** :MSC in Information Technology from the Department of Computer Science at the University of Ioannina, Greece. The title of MSC was “Parallel neural networks”.
- 2001 – 2006** :PHD in Information Technoly from the Department of Computer Science at the University of Ioannina, Greece. The title of PHD was “Global Optimization: methods and software”.

C. Teaching Experience

- 1. Semptember 2001 – March 2012:** Research Associate at Department of Informatics and Telecommunications of the Technological Institution of Epirus, Greece, teaching the following courses
 1. Programming in Pascal
 2. Programming in C++
 3. Network programming in Java
 4. E-Commerce (PHP, MYSQL).
- 2. October 2006 – September 2008:** Visiting Lecturer at the Department of Computer Science of the University of Ioannina, Greece, teaching the following courses
 1. Programming in C
 2. Genetic Algorithms
 3. Introduction to Informatics (UNIX, HTML).
- 3. September 2009 – August 2010:** Visiting Lecturer at the Department of Cultural Environment and New Technology of the University of Ioannina, Greece, teaching the following courses
 1. Object oriented programming (Java)
 2. Introcuction to programming (C++)
- 4. October 2011- March 2012:** Visiting Lecturer at the Department of Informatics and Telecommunications of the University of Western Macedonia, Greece, teaching the following courses

1. Object oriented programming (Java)
2. Topics in algorithms.
5. **March 2014-Today:** Associate professor at the Department of Informatics and Telecommunications, University of Ioannina

D. Working Experience

1. **January 1999 – May 1999:** Researcher for the program “Expanding and Upgrading Education” of the University of Patras, Greece.
2. **October 1999 – May 2000:** Researcher for the program “EKSAPSIS” of the University of Crete, Greece.
3. **March – August 2001:** Researcher for the program “Transportation and mobility” of the University of Ioannina, Greece.
4. **November 2001 – October 2002:** Researcher for the program “Parallel neural networks” of the University of Ioannina, Greece.
5. **January – February 2002:** Researcher for the program “CHILDCARE: INTELLIGENT COLLABORATIVE ENVIRONMENT FOR OUT-OF-HOSPITAL CHILDREN HEALTHCARE (IST-2001-33383)” of the University of Ioannina, Greece.
6. **June – December 2003:** Researcher for the program “Expanding Education” of Technological Educational Institute of Epirus, Greece.
7. **May 2005 – August 2006:** Researcher for the program “Reinforcement of Education” of the Technological Educational Institute of Epirus, Greece.
8. **December 2006 – January 2008:** Researcher for the program “New earth” of the Technological Educational Institute of Epirus, GREECE.

E. Papers on Scientific Journals

- 1) I. G. Tsoulos, I.E. Lagaris and A. Likas, Neural Splines: exploiting Parallelism for Function Approximation Using Modular Neural Networks, *Neural Parallel and Scientific Computations* **13**, pp. 161 - 178, 2005.
- 2) I. G. Tsoulos, I. E. Lagaris, Solving differential equations with genetic Programming, *Genetic Programming and Evolvable Machines* **7**, pp. 33 -54, 2006.
- 3) I. G. Tsoulos and I. E. Lagaris, Genetically Controlled Random Search: A global optimization method for continuous multidimensional functions, *Computer Physics Communications* **174**, pp. 152-159, 2006.
- 4) I. G. Tsoulos and I. E. Lagaris, GenAnneal: Genetically modified Simulated Annealing, *Computer Physics Communications* **174**, pp. 846-851, 2006.
- 5) I. G. Tsoulos and I. E. Lagaris, MinFinder: Locating all the local minima of a function, *Computer Physics Communications* **174**, pp. 166-179, 2006.
- 6) I. G. Tsoulos, D. Gavrilis and E. Dermatas, GDF: A tool for function estimation through grammatical evolution, *Computer Physics Communications* **174**, pp. 555-559, 2006.
- 7) George Georgoulas, Dimitris Gavrilis, Ioannis G. Tsoulos, Chrysostomos Stylios, João Bernardes and Peter P. Groumpos, “Novel approach for fetal heart rate classification introducing grammatical evolution”, *Biomedical Signal Processing and Control* **2**, pp. 69-79, 2007.
- 8) I. G. Tsoulos, D. Gavrilis , E. Dermatas , GDF v2.0, an enhanced version of GDF,

- Computer Physics Communications* **177**, pp. 976-977, 2007.
- 9) I. E. Lagaris and I. G. Tsoulos, “ Stopping Rules for Box-Constrained Stochastic Global Optimization”, *Applied Mathematics and Computation* **197**, pp. 622-632, 2008.
 - 10) I.G. Tsoulos and I.E.Lagaris, “ GenMin: An enhanced genetic algorithm for global optimization”, *Computer Physics Communications* **178**, pp. 843-851, 2008.
 - 11) I.G. Tsoulos, D. Gavrilis, E. Glavas, “Neural Network Construction and Training using Grammatical Evolution”, *Neurocomputing* **72**, pp. 269-277, 2008.
 - 12) D. Gavrilis, I.G. Tsoulos, E. Dermatas, “Features Selection and Construction using Grammatical Evolution”, *Pattern Recognition Letters* **29**, pp. 1358-1365, 2008.
 - 13) G.S. Paschos, I.G. Tsoulos, E.D. Vagenas, S.A. Kotsopoulos, G.K. Karagiannidis, Deterministic Simulation Model for Sojourn Time in Urban Cells with square street geometry, *International Journal of Vehicular Technology* **2008**, Article Id 721386, 2008.
 - 14) I. G. Tsoulos, I.E. Lagaris, MinFinder v2.0: An improved version of MinFinder, *Computer Physics Communications* **179**, pp. 614-615, 2008.
 - 15) I. G. Tsoulos, Modifications of real code genetic algorithms for global optimization, *Applied Mathematics and Computation* **203**, pp. 598-607, 2008.
 - 16) V.A. Tatsis, I.G. Tsoulos, A. Stavrakoudis, Molecular dynamics simulations of the TSSPSAD peptide antigen in free and bound with CAMPATH-1H Fab antibody states: the importance of the β -turn conformation. *International Journal of Peptide Research and Therapeutics* **15**, pp. 1-9, 2009.
 - 17) I.G. Tsoulos, Solving constrained optimization problems using a novel genetic algorithm, *Applied Mathematics and Computation* **208**, pp. 273-283, 2009.
 - 18) I.G. Tsoulos, D. Gavrilis, E. Glavas, Solving differential equations with constructed neural networks, *Neurocomputing* **72**, pp. 2385-2391, 2009.
 - 19) Athanassios Stavrakoudis, Ioannis G. Tsoulos, Zakhar O. Shenkarev, Tatiana V. Ovchinnikova, Molecular dynamics simulation of antimicrobial peptide arenicin-2: β -hairpin stabilization by non-covalent interactions, *Biopolymers: peptide science* **92**, pp. 143-155, 2009.
 - 20) V.A. Tatsis, I.G. Tsoulos, C.S. Krinas, C. Alexopoulos, A. Stavrakoudis, Insights into the structure of the PmrD protein with molecular dynamics simulations, *International Journal of Biological Macromolecules* **44**, pp. 393-399, 2009.
 - 21) G. V. Papamokos , I. G. Tsoulos , I.N. Demetropoulos , E. Glavas, Location of Amide I mode of vibration in computed data utilizing constructed neural networks, *Expert Systems with Applications* **36**, pp. 12210-12213, 2009.
 - 22) I.G. Tsoulos, A. Stavrakoudis, On locating all roots of systems of nonlinear equations inside bounded domain using global optimization methods, *Nonlinear Analysis: Real World Applications* **11** pp. 2465-2471, 2010.
 - 23) I.G. Tsoulos, A. Stavrakoudis, Improving the speed and efficiency of PSO methods for global optimization, *Applied Mathematics and Computation* **216**, pp. 2988-3001, 2010.
 - 24) A. Stavrakoudis, I.G. Tsoulos, K. Uray, F. Hudecz, V. Apostolopoulos, Homology modeling and molecular dynamics simulations of MUC1-9/H-2Kb complex suggest novel binding interactions, *Journal of Molecular Modeling* **17** , pp. 1817-1829, 2011.
 - 25) I.G. Tsoulos, A. Stavrakoudis Eucb: A C++ program for molecular dynamics trajectory analysis, *Computer Physics Communications* **182**, pp. 834-841, 2011.
 - 26) A. Stavrakoudis, I.G. Tsoulos, Configurational entropy reallocation and complex loop dynamics of the mosquito-stage Pvs25 protein complexed with the Fab fragment of the malaria transmission blocking antibody 2A8. 5 protein complexed with Fab fragment of malaria J. Chem. Theory. Comput. **7**, pp 515-524, 2011.

- 27) O. Smart, I.G. Tsoulos, D. Gavrilis, G. Georgoulas, Grammatical Evolution for Features of Epileptic Slow Ripples, *Expert Systems with Applications* **38**, pp. 9991-9999, 2011.
- 28) I S Kardaras, V N Stavrou, I G Tsoulos and T S Kosmas, Exact wave functions of bound μ^- for calculating ordinary muon capture rates, *Journal of Physics: Conference Series Volume 410 conference 1*.
- 29) Fardin Ahmadizar, Khabat Soltanian, Fardin AkhlaghianTab, Ioannis Tsoulos, Artificial neural network development by means of a novel combination of grammatical evolution and genetic algorithm, *Engineering Applications of Artificial Intelligence* **39**, pp. 1-13, 2015.
- 30) I.G. Tsoulos, A. Tzallas, Dimitris Tsalikakis, PDoublePop: An implementation of parallel genetic algorithm for function optimization, *Computer Physics Communications* **209**, pp. 183-189, 2016.
- 31) Markos G. Tsipouras, Nikolaos Giannakeas, Alexandros T. Tzallas, Zoe E. Tsianou, Pinelopi Manousou, Ioannis Tsoulos, Epameinondas Tsianos, A Methodology for Automated CPA Extraction using Liver Biopsy Image Analysis and Machine Learning Techniques, *Computer Methods and Programs in Biomedicine* **140**, pp. 61-68, 2017.
- 32) Georgia Mitsi, Enrique Urrea, Benjamin Wissel, Elena Barbopoulou, Alok Kumar Dwivedi, Ioannis Tsoulos, Athanassios Stavrakoudis, Alberto J Espay, MD Papapetropoulos, Biometric Digital Health Technology for Measuring Motor Function in Parkinson's disease: Results from a feasibility and patient satisfaction study, *Frontiers in Neurology* **8**, pp. 27, 2017.
- 33) Ioannis G. Tsoulos, Alexandros Tzallas, Dimitris Tsalikakis, Evolutionary Based Weight Decaying Method for Neural Network Training, *Neural Processing Letters* **47**, pp. 463-473, 2018.
- 34) Ioannis G. Tsoulos, OnePC: A portable software for parallel genetic algorithms used in optimization problems, *International Journal of Advanced Research in Computer Science and Electronics Engineering* **6**, pp. 78-84, 2017.
- 35) P. Petrikis, P.V. Voulgari, A.T. Tzallas, V.A. Boumba, D.A. Archimandriti, D. Zambetas, I. Papadopoulos, I.G. Tsoulos, P. Skapinakis, V. Mavreas, Changes in the cytokine profile in first-episode, drug-naïve patients with psychosis after short-term antipsychotic treatment, *Psychiatry Research* **256**, pp. 378-383, 2017.
- 36) Ioannis G. Tsoulos, Creating classification rules using Grammatical Evolution, *International Journal of Computational Intelligence Studies* **9**, pp. 161-171, 2020.
- 37) Katerina D. Tzimourta, Ioannis Tsoulos, Thanasis Bilerio, Alexandros T. Tzallas, Markos G. Tsipouras and Nikolaos Giannakeas, Direct Assessment of Alcohol Consumption in Mental State Using Brain Computer Interfaces and Grammatical Evolution, *Inventions* **3**, p. 51, 2018.
- 38) Ioannis G. Tsoulos, O.T. Kosmas V.N. Stavrou, DiracSolver: a tool for solving the Dirac Equation, *Computer Physics Communications* **236**, pp. 237-243, 2019
- 39) Ioannis G. Tsoulos, Alexandros Tzallas, Markos Tsipouras, Vasileios Christou, Stopping rules for a parallel genetic algorithm, *International Journal of Computational Intelligence Studies* **9**, 146-160, 2020.
- 40) Ioannis Tsoulos, Georgia Mitsi, Athanassios Stavrakoudis and Spyros Papapetropoulos, Application of Machine Learning in a Parkinson's Disease Digital Biomarker Dataset Using Neural Network Construction (NNC) Methodology Discriminates Patient Motor Status, accepted for publication in *Frontiers in ICT | Digital Health*, 2019.

- 41) Ioannis G. Tsoulos, Alexandros Tzallas, Dimitrios Tsalikakis, Genetic Feature Construction Genetic Feature Construction: a parallel implementation of a genetic programming tool for feature construction, *European Journal of Engineering research and science* **4**, 2019.
- 42) Ioannis G. Tsoulos, Alexandros Tzallas, Dimitrios Tsalikakis, NNC: A tool based on Grammatical Evolution for data classification and differential equation solving, *SoftwareX* **10**, 2019.
- 43) Ioannis G. Tsoulos, Vasileios Stavrou, Nikolaos E. Mastorakis, Dimitrios Tsalikakis, GenConstraint: A programming tool for constraint optimization problems, *SoftwareX* **10**, 2019.
- 44) Ioannis G. Tsoulos, Alexandros Tzallas, Evaggelos Karvounis, Improving the PSO method for global optimization problems, *Evolving Systems* **12**, pp. 875-883, 2021.
- 45) V.N. Stavrou, I.G. Tsoulos, O.T. Kosmas, Spin-flip relaxation mechanism in Self-Assembled Quantum Dots via phonon emission, *Molecular Crystals and Liquid Crystals* **701**, pp. 40-47, 2020.
- 46) Ioannis G. Tsoulos, Evangelos Karvounis, Alexandros Tzallas, A novel sampling technique for multistart based methods, *SN Computer Science* **2**, 7, 2021.
- 47) Nikolaos Anastasopoulos, Ioannis G. Tsoulos, Evangelos Karvounis, Alexandros Tzallas, Locate the bounding box of neural networks with intervals, *Neural Processing Letters* **52**, pp. 2241-2251, 2021.
- 48) V.N. Stavrou, I.G. Tsoulos, Nikos E. Mastorakis, Transformations for FIR and IIR Filters' Design, *Symmetry* **13**, pp. 533, 2021.
- 49) Violaris, I.G.; Kalafatakis, K.; Zavala, E.; Tsoulos, I.G.; Lampros, T.; Lightman, S.L.; Tsipouras, M.G.; Giannakeas, N.; Tzallas, A.; Russell, G.M. Modelling Hydrocortisone Pharmacokinetics on a Subcutaneous Pulsatile Infusion Replacement Strategy in Patients with Adrenocortical Insufficiency. *Pharmaceutics* **2021**, *13*, 769.
- 50) Vasileios Charilogis, I.G. Tsoulos, MinCentre: using clustering in global optimisation, *International Journal of Computational Intelligence Studies* **11**, pp. 24-35, 2022.
- 51) VN Stavrou, IG Tsoulos, Coupled quantum dots: spin based qubits, *Molecular Crystals and Liquid Crystals* **721**, pp. 45-50, 2021.
- 52) Alexandros Arjmand, Vasileios Christou , Ioannis G. Tsoulos , Markos G. Tsipouras, Alexandros T. Tzallas, Christos Gogos, Euripidis Glavas, Nikolaos Giannakeas, An Evolutionary Algorithm-based Optimization Method for the Classification and Quantification of Steatosis Prevalence in Liver Biopsy Images, *Array* **11**, 2021.
- 53) Ioannis G. Tsoulos, Nikolaos Anastasopoulos, Georgios Ntritsos, Alexandros Tzallas, Train RBF networks with a hybrid genetic algorithm, *Evolutionary Intelligence*, 2021.
- 54) Ioannis G. Tsoulos, Alexandros Tzallas, An improved multistart based method for global optimization problems, *International Journal of Computational Intelligence Studies* **11**, pp. 73-93, 2022.
- 55) Nikolaos Anastasopoulos, Ioannis G. Tsoulos, Alexandros Tzallas, GenClass: A parallel tool for data classification based on Grammatical Evolution, *SoftwareX* **16**, 2021.
- 56) Vasileios Charilogis, I.G. Tsoulos, Alexandros Tzallas, Nikolaos Anastasopoulos, An improved Controlled Random Search method, *Symmetry* **11**, pp. 1981, 2021.
- 57) V. Christou, A. Arjmand, D. Dimopoulos, D. Varvarousis, I. Tsoulos, A.T. Tzallas, C. Gogos, M.G. Tsipouras, E. Glavas, A. Ploumis, Automatic Hemiplegia Type Detection (Right or Left) Using the Levenberg-Marquardt Backpropagation Method. *Information* **13**, 2022.
- 58) Vasileios Charilogis , Ioannis G. Tsoulos , Alexandros Tzallas, Evangelos Karvounis,

- Modifications for the Differential Evolution Algorithm, *Symmetry* **14**, 2022.
- 59) T. S. Kosmas, I. Tsoulos, O. Kosmas, P. G. Giannaka, Evolution of Hot and Dense Stellar Interiors: The Role of the Weak Interaction Processes, *Front. Astron. Space Sci.* **8**:763276, 2022.
 - 60) Ioannis G. Tsoulos, Alexandros Tzallas, Evangelos Karvounis, A Two-Phase Evolutionary Method to Train RBF Networks, *Applied Sciences* **12**, 2022
 - 61) Ioannis G. Tsoulos, Constructing Features Using a Hybrid Genetic Algorithm, *Signals* **2**, pp. 174-188, 2022.
 - 62) Evangelos D. Spyrou, Ioannis G. Tsoulos, Chrysostomos Stylios, Applying and Comparing LSTM and ARIMA to Predict CO Levels for a Time-Series Measurements in a Port Area, *Signals* **3**, pp. 235-248, 2022.
 - 63) Vasileios Charilogis, Ioannis G. Tsoulos, Towards an Ideal Particle Swarm Optimizer for Multidimensional Functions, *Information* **13**, 2022.
 - 64) Ioannis G. Tsoulos, Alexandros Tzallas, Evangelos Karvounis, RbfDeSolver: a software tool to approximate differential equations using Radial Basis Functions, *Axioms* **11**, pp. 294, 2022.
 - 65) Ioannis G. Tsoulos, Alexandros Tzallas, Evangelos Karvounis, A rule based method to locate the bounds of neural networks, *Knoweledge* **2**, pp. 412-428, 2022.
 - 66) Ioannis G. Tsoulos, Nikolaos Anastasopoulos, Evangelos Dermatas, Evaggelos Karvounis, Language inference using Elman networks with evolutionary training, *Signals* **3**, pp. 611-619, 2022.
 - 67) Ioannis G. Tsoulos, QFC: a parallel software tool for feature construction, based on Grammatical Evolution, *Algorithms* **15**, 2022.
 - 68) Ioannis G. Tsoulos, Learning functions and classes using rules, *AI* **3**, pp. 751-763, 2022.
 - 69) Vasileios Christou, Ioannis Tsoulos, Alexandros Arjmand, Dimitrios Dimopoulos, Dimitrios Varvarousis, Alexandros T. Tzallas, Christos Gogos, Markos Tsipouras, Evripidis Glavas, Avraam Ploumis, Nikolaos Giannakeas, Grammatical Evolution-based Feature Extraction for Hemiplegia Type Detection, *Signals* **3**, pp. 737-751, 2022.
 - 70) Ioannis Tsoulos , Alexandros T. Tzallas, Dimitrios Tsalikakis, Prediction of Covid-19 cases using constructed features by Grammatical Evolution, *Symmetry* **14**, 2149, 2022.
 - 71) V. Christou, A. Miltiadous, I.G. Tsoulos, E. Karvounis, K.D. Tzimourta, M.G. Tsipouras, N. Anastasopoulos, A.T. Tzallas, N. Giannakeas, Evaluating the Window Size Role in Automatic EEG Epilepsy Detection, *Sensors* **22**, 9233, 2022.
 - 72) I.G. Tsoulos, A. Tzallas, D. Tsalikakis, Use RBF as a Sampling Method in Multistart Global Optimization Method, *Signals* **3**, pp. 857-874, 2022.
 - 73) I.G. Tsoulos, C. Stylios, V. Charalampous, Covid-19 predictive models based on grammatical evolution, *SN Computer Science* **4**, 191, 2023.
 - 74) V. Charilogis, I.G. Tsoulos, A parallel implementation of the Differential Evolution method, *Analytics* **2**, pp. 17-30, 2023.
 - 75) I.G. Tsoulos, V. Charilogis, Locate the parameters of RBF networks using a hybrid Particle Swarm, *Algorithms* **16**, 71, 2023.
 - 76) I.G. Tsoulos, A.T. Tzallas, E. Karvounis, D.Tsalikakis, NeuralMinimizer, a novel method for global optimization, *Information* **14**, 66, 2023.
 - 77) E.I. Toki, G. Tatsis, V.A. Tatsis, K. Plachouras, J. Pange, I.G. Tsoulos, Applying Neural Networks on Biometric Datasets for Screening Speech and Language Deficiencies in Child

- Communication. *Mathematics* **11**, 1643, 2023.
- 78) V. Christou, I.G. Tsoulos, V. Loupas, A.T. Tzallas, C. Gogos, P.S. Karvelis, N. Antoniadis, E. Glavas, N. Giannakeas, Performance and early drop prediction for higher education students using machine learning, *Expert Systems with Applications* **225**, 120079, 2023.
 - 79) I.G. Tsoulos, A.T. Tzallas, E. Karvounis, D. Tsalikakis, Bound the parameters of neural networks using Particle Swarm Optimization, *Computers* **12**, 82, 2023.
 - 80) Eugenia I. Toki, Giorgos Tatsis, Vasileios A. Tatsis, Konstantinos Plachouras, Jenny Pange, I.G. Tsoulos, Employing Classification Techniques on SmartSpeech Biometric Data Towards Identification of Neurodevelopmental Disorders, *Signals* **4**, pp. 401-420, 2023.
 - 81) Evangelos D. Spyrou, Chrysostomos Stylios, I.G. Tsoulos, Classification of CO Environmental Parameter for Air Pollution Monitoring with Grammatical Evolution, *Algorithms* **16**, 300, 2023.
 - 82) D. Mpouziotas, P. Karvelis, I.G. Tsoulos, C. Stylios, Automated Wildlife Bird Detection from Drone Footage Using Computer Vision Techniques, *Applied Sciences* **13**, 7787, 2023.
 - 83) I.G. Tsoulos, A.T. Tzallas, A feature construction method that combines Particle Swarm Optimization and Grammatical Evolution, *Applied Sciences* **13**, 8124, 2023.
 - 84) I.G. Tsoulos, A.T. Tzallas, Training Artificial Neural Networks Using a Global Optimization Method That Utilizes Neural Networks, *AI* **4**, pp. 491-508, 2023.
 - 85) V. Charilogis, I.G. Tsoulos, A. Tzallas, An Improved Parallel Particle Swarm Optimization. *SN COMPUT. SCI.* **4**, 766, 2023.
 - 86) I.G. Tsoulos, Alexandros Tzallas, Dimitrios Tsalikakis, Solving differential equations with global optimization techniques, accepted for publication in *Int. J. of Computational Intelligence Studies*.
 - 87) V. Charilogis, I.G. Tsoulos, V. Stavrou, An intelligent technique for initial distribution of genetic algorithms, *Axioms* **12**, 980, 2023.
 - 88) I.G. Tsoulos, A. Tzallas, E. Karvounis, Constructing the bounds for neural network training using Grammatical Evolution, *Computers* **12**, 226, 2023.
 - 89) E. Spyrou, I.G. Tsoulos, C. Stylios, DDoS classification to SDN using Grammatical Evolution, *Future Internet* **15**, 401, 2023.
 - 90) I.G. Tsoulos, A. Tzallas, E. Karvounis, Adapt the parameters of RBF networks using Grammatical Evolution, *AI* **4**, pp. 1059-1078, 2023.
 - 91) I.G. Tsoulos, editorial for Special Issue “Algorithms in Data Classification”, *Algorithms* **17**, 5, 2024.
 - 92) Eugenia Toki, Giorgos Tatsis, Jenny Pange, I.G. Tsoulos, Constructing Features for Screening Neurodevelopmental Disorders using Grammatical Evolution, *Applied Sciences* **14**, 305, 2024.
 - 93) Eugenia Toki, Ioannis G. Tsoulos, V. Santamato, J. Pange, Machine Learning for Predicting Neurodevelopmental Disorders in Children, *Applied Sciences* **14**, 837, 2024.
 - 94) Ioannis G. Tsoulos, V.N. Stavrou, Numerical algorithms in semiconductor heterostructures, *Algorithms* **17**, 44, 2024.
 - 95) Dimitris Mpouziotas, Jeries Besharat, Ioannis G. Tsoulos, Chrysostomos Stylios, AliAmvra - Enhancing customer experience through the application of machine learning techniques for survey data assessment and analysis, *Information* **15**, 83, 2024.
 - 96) Eugenia I. Toki, Jenny Pange, Giorgos Tatsis, Konstantinos Plachouras, Ioannis G. Tsoulos, Utilizing Constructed Neural Networks for autism screening, *Applied Sciences* **14**, 3053, 2024.
 - 97) Ioannis G. Tsoulos, Alexandros Tzallas, Evangelos Karvounis, Applying bounding

- techniques on Grammatical Evolution, *Computers* **13**, 111, 2024.
- 98) Ioannis G. Tsoulos, Alexandros Tzallas, Evangelos Karvounis, Using optimization techniques in Grammatical Evolution, *Future Internet* **16**, 172, 2024.
- 99) Vasileios Charilogis, Ioannis G. Tsoulos, Introducing a parallel genetic algorithm for global optimization, *AppliedMath* **4**, pp. 709-730, 2024 .
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F. Papers on conferences

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2. I.G. Tsoulos, I.E. Lagaris, A. Likas. Piecewise Neural Networks for Function Approximation, Cast in a Form Suitable for Parallel Computation, *SETN 2002*, pp. 314-324, 2002.
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4. I. G. Tsoulos, I. E. Lagaris, A. Likas. Piecewise continuous approximation of two – dimensional functions using neural networks. *Hellenic Conference on Artificial Intelligence 2004* , Springer Verlag.
5. I.G. Tsoulos, D. Gavrilis, E. Glavas, Neural Network Construction using Grammatical Evolution. *5th IEEE International Symposium on Signal Processing and Information Technology*. 18-21 December 2005, ISBN: 0-7803-9313-9 , pp. 827-831 .
6. D. Gavrilis, I. Tsoulos, E. Dermatas, Stochastic Classification of Scientific Abstracts. Accepted in *Specom 2005*.
7. D. Gavrilis, I. Tsoulos, E. Dermatas, Evolutionary Grammar Induction for Protein Relation Extraction. Accepted in *Specom 2005*.
8. D. Gavrilis, G. Georgoulas, I. G. Tsoulos, Classification of Fetal Heart Rate using Grammatical Evolution. *IEEE 2005 Workshop on Signal Processing Systems*. 2-4 Nov. 2005, ISBN: 0-7803-9333-3 , pp. 425-429.
9. Dimitris Gavrilis, Ioannis G. Tsoulos, Evangelos Dermatas: Neural Recognition and Genetic Features Selection for Robust Detection of E-Mail Spam. *SETN 2006*: 498-501
10. I. Tsoulos, G. Georgoulas, D. Gavrilis, C. Stylios, J. Bernades, P. Groumpos, Introducing Grammatical Evolution for FHR Analysis and classification. Accepted for publication in *IEEE-IS'06*.
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15. I.S. Kardaras ,V.N. Stavrou,I.G. Tsoulos, T.S. Kosmas, Detailed calculations for muon capture rates within the quasi-particle RPA, 19th Symposiun of the Hellenic Nuclear Physics Society, Institute of Nuclear Physics - NSCR "Demokritos"
16. D. Gavrilis, I.G. Tsoulos, S. Angelis, Building Interactive Books using EPUB and HTML5. AMBI SYS, 2013.
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G. Reviewer

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1. IEEE Transactions on Evolutionary Computation
2. Journal of Computational and Applied Mathematics
3. Information Sciences
4. Applied mathematics and Computation
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10. The International Journal for Computers and Their Applications
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