

CURRICULUM VITAE

Vassilas Nikolaos

Department of Informatics and Computer Engineering
University of West Attica
Ag. Spiridonos St., 12210 Egaleo, Attiki
Tel. ++30-210-5385827
Fax ++30-210-5910975
E-mail: nvas@uniwa.gr

1. DEGREES

Ph.D.: Dpt. of Electrical Engineering, Univ. of Minnesota, USA, 1990

M.S.E.E.: Dpt. of Electrical Engineering, Univ. of Minnesota, USA, 1987

Diploma in Electrical Engineering: Aristotle University of Thessaloniki, 1983

2. PROFESSIONAL EXPERIENCE

- 8/18 –: Professor, Dpt. of Informatics & Computer Engineering, Univ. of West Attica
- 7/07 – 8/18: Professor, Dpt. of Informatics, T.E.I. of Athens.
- 4/03 – 7/07: Associate professor, Dpt. of Informatics, T.E.I. of Athens.
- 9/99 – 4/03: Assistant professor, Dpt. of Informatics, T.E.I. of Athens.
- 9/98 – 9/99: Adjunct instructor, Dpt. of Informatics, T.E.I. of Athens.
- 11/96 – 2/99: Adjunct researcher, Neural Networks Laboratory (NNL), Institute of Informatics and Telecommunications (IIT), N.C.S.R. “Demokritos”.
- 9/93 – 3/94: Post-doctoral researcher, Laboratoire MicroInformatique, Ecole Polytechnique Federale de Lausanne (EPFL).
- 5/92 – 11/96: Post-doctoral researcher, NNL, IIT, N.C.S.R. “Demokritos”.
- 9/84 – 9/90: Teaching Assistant, Dpt. of Electrical Engineering, Univ. of Minnesota.

3. ADMINISTRATIVE POSITIONS

- 2019-: Director of the Intelligent Knowledge, Image & Information Systems (ISLab) research laboratory of the Dpt. of Informatics & Computer Engineering, University of West Attica.
- 2016-20: Director of the Master program in Informatics, Image Synthesis and Computer Graphics (ISIC-G) in collaboration with the Dpt. of Informatics, University of Limoges, France.
- 2010-11: Head of Computer Programming Sector, Dpt. of Informatics, T.E.I. of Athens.
- 2008-10: Head of the Department of Informatics, T.E.I. of Athens.
- 2002-08: Head of Computer Programming Sector, Dpt. of Informatics, T.E.I. of Athens.

2001-02: Associate Head of Computer Programming Sector, Dpt. of Informatics, T.E.I. of Athens.

4. TEACHING EXPERIENCE

GRADUATE LEVEL

2020-21: Master program in "Artificial Intelligence and Visual Computing" offered at the Dpt. of Informatics & Computer Engineering, U. of West Attica in collaboration with the Dpt. of Informatics, U. of Limoges, France. Courses taught:

1. Artificial Intelligence and Machine Learning
2. Image Processing and Analysis
3. Deep Learning

2018-20: Master program in "Informatics" offered at the Dpt. of Informatics & Computer Engineering, University of West Attica. Courses taught:

4. Pattern Recognition and Special Topics of Computer Vision.

2007-20: Master program in "Informatics and Sciences of Information and Communication" offered at TEI of Athens in collaboration with University of Limoges, France. Courses taught:

5. Introduction to Image Processing
6. Artificial Intelligence

1992-98: Graduate educational program of the Institute of Informatics and Telecommunications, NCSR "Demokritos". Responsible for teaching the following courses:

7. Advanced Topics in Linear Algebra
8. Discrete Signals and Systems
9. Computer and Computational Vision

UNDERGRADUATE LEVEL

1998-20: Undergraduate programs of the Dpt of Informatics & Computer Engineering, U. of West Attica and the former Dpt of Informatics, TEI of Athens. Courses taught:

1. Pattern Recognition and Machine Learning
2. Neural Networks
3. Image Processing
4. Signals and Systems
5. Compilers
6. Artificial Intelligence
7. Introduction to Programming
8. Microprocessors (lab only)
9. Computer Architecture (lab only)

1984-90: Teaching assistant, Electrical Engineering Department, University of Minnesota, in the following courses and labs:

10. Linear Circuits I (EE 3009)
11. Linear Circuits II (EE 3010)
12. System Design (EE 3012)
13. Semiconductor Devices (EE 3060)
14. Analog Electronics (EE 3061)
15. Digital Electronics (EE 3062)
16. Instrumentation and Control Electronics (EE 5055)
17. Introduction to Logic Design (EE 3351, EE 3351 Lab)
18. Introduction to Microprocessors (EE 3352, EE 3352 Lab).

5. SELECTED RESEARCH PROJECTS

Research Coordinator

a) ARCHIMEDES I, funded by the European Union and the Greek Government. Title: "Methodology for Designing Systems of Personalized Access in Telematic Services of Educational Intranets Using Intelligent Agents". Budget: €50.000. Duration: 2004-2006 (36 months).

b) ARCHIMEDES III, funded by the European Union and the Greek Government. Title: "Intelligent Pattern Recognition Techniques for the Development of Multimodal Representations of Urban Areas (3D-CITY)". Budget: €100.000. Duration: 2012-2014 (36 months).

Participation in more than 20 funded research projects. Some of the European and nationally funded projects are:

a) *Human Capital & Mobility -- ERBCHBGCT920027*, 1992-95, "Neural Nets Multidisciplinary Network of Expertise",

b) *BRITE-EURAM -- BE-1117 "GeoNickel"*, 1996-98, "Integrated Technologies for Mineral Exploration: Pilot Project for Nickel Ore Deposits",

c) IST-ELEGANT, 2002-04, "Electronic Government Advisor Agent",

d) D-SCRIBE, 2003-06, "Ancient Greek Manuscript Digitization and Management System",

e) ARCHIMEDES, 2004-06, "Parallel Content-Based Multilingual Information Retrieval",

f) GSRT – Information Society, 2004-06, "POLYTIMO: A system for the processing, management and access to the content of valuable books and manuscripts".

RESEARCH INTERESTS

Intelligent pattern recognition, artificial neural networks, computer vision.

6. PUBLICATIONS

6.1. THESES AND DIPLOMA PROJECTS:

6.1.1. Nikolaos Vassilas, "Performance of Neural Associative Memories for Character Recognition and Associative Database Retrieval," Doctoral thesis, University of Minnesota, Minneapolis, November 1990.

6.1.2. Nikolaos Vassilas, "Learning for Recognition Tasks," Master's project, University of Minnesota, Minneapolis, December 1986.

6.1.3. Nikolaos Vassilas, "Bandpass Repeater of Binary Digital Signal – Realization and Simulation", Dipl. thesis, Aristotle University of Thessaloniki, November 1983.

6.2. JOURNALS, BOOK CHAPTERS AND PAPER COLLECTIONS:

6.2.1. V. Cherkassky and N. Vassilas, "Back Propagation Networks for Spelling Correction," *Neural Networks*, Vol. 1, No. 3, pp. 166-174, 1989.

6.2.2. V. Cherkassky, N. Vassilas and H. Wechsler, "Semantic Categorization Using a Hierarchical Associative Memory," *International Journal of Neural Networks-Research and Applications*, Vol. 2, No. 2/3/4, pp. 101-114, 1991.

6.2.3. V. Cherkassky, K. Fassett and N. Vassilas, "Linear Algebra Approach to Neural Associative Memories and Noise Performance of Neural Classifiers," *IEEE Transactions on Computers*, Vol. 40, No. 12, pp. 1429-1435, 1991.

6.2.4. V. Cherkassky, N. Vassilas, G. Brodt and H. Wechsler, "Conventional and Associative Memory Approaches to Automatic Spelling Correction," *International Journal of Engineering Applications of Artificial Intelligence*, Vol. 5, No. 3, pp. 223-237, 1992.

6.2.5. N. Vassilas, P. Thiran and P. Ienne, "How to Modify Kohonen's Self-Organising Feature Maps for an Efficient Digital Parallel Implementation," *Fuzzy Systems and Artificial Intelligence*, Romanian Academy Publishing House, Vol. 4, No. 1, pp. 73-80, 1995.

6.2.6. P. Ienne, P. Thiran and N. Vassilas, "Modified Self-Organizing Feature Map Algorithms for Efficient Digital Hardware Implementation," *IEEE Transactions on Neural Networks*, Vol. 8, No. 2, pp. 315-330, March 1997.

6.2.7. N. Vassilas, "Theoretical Analysis of the Batch Variant of the Self-Organizing Feature Map Algorithm for 1-D Networks Mapping a Continuous 1-D Input Space," *International Journal of Computer Mathematics*, Vol. 67, pp. 77-103, 1998.

6.2.8. S. Perantonis, N. Vassilas, Th. Tsenoglou and K. Seretis, "Robust Line Detection Using Weighted Region Based Hough Transform", *Electronics Letters*, Vol. 34, No. 7, pp. 648-650, 1998.

6.2.9. N. Vassilas and E. Charou, "A New Methodology for Efficient Neural Network Training and Classification in Demanding Remote Sensing Applications", *Neural Processing Letters*, Vol. 9, No. 1, pp. 35-43, 1998.

6.2.10. Perantonis, N. Vassilas, K. Seretis and Th. Tsenoglou, "A Novel Weighted Hough Transform for Robust Detection of Linear Formations", *Recent Advances in Information Science and Technology* (N. E. Mastorakis, ed.), World Scientific Publishing, pp. 233-237, 1998.

6.2.11. N. Βασιλάς, Δ. Βαϊόπουλος, Ε. Χάρου και Σ. Βαρουφάκης, "Αποτελεσματική Ομαδοποίηση και Ταξινόμηση Δορυφορικών Εικόνων σε Τύπους Εδαφοκάλυψης με Χρήση Αυτο-Οργανούμενων Χαρτών", *Τεχνικά Χρονικά, Επιστημονική Έκδοση ΤΕΕ, III*, No. 1-2, pp. 31-42, 1999.

6.2.12. J. Aarnisalo, K. Makela, B. Bourgeois, C. Spyropoulos, S. Varoufakis, E. Morten, K. Maglaras, H. Soininen, A. Angelopoulos, D. Eliopoulos, P. Lamberg, H. Papunen, A. Hattula, R. Pietila, S. Elo, C. Ripis, E. Dimou, A. Apostolikas, M. Melakis, M. Economou-Eliopoulos, N. Vassilas, S. Perantonis, N. Ampazis, E. Charou, N. Gustavsson, M. Tiainen, M. Stefouli, D. Delfini, P. Venturini, G. Vouros, Y. Stavarakas and D. Katsoulas, "Integrated Technologies for Minerals Exploration; Pilot Project for Nickel Ore Deposits", *Transactions of the Institution of Mining and Metallurgy, Section B: Applied Earth Science*, Vol. 108, pp. 151-163, 1999.

6.2.13. N. Vassilas, "Efficient Neural Network-Based Methodology for the Design of Multiple Classifiers", in *Recent Advances in Artificial Neural Networks – Design and Applications* (L.C. Jain and A-M. Fanelli, eds.), CRC Press, New York, pp. 95-125, 2000.

6.2.14. N. Vassilas, E. Kalapanidas, N. Avouris and S. Perantonis, "Intelligent Techniques for Spatio-Temporal Data Analysis in Environmental Applications", in *Lecture Notes in Artificial Intelligence: Machine Learning and Its Applications* (G. Paliouras, V. Karkaletsis and C. Spyropoulos, eds.), Springer-Verlag, Berlin-Heidelberg, pp. 318-324, 2001.

6.2.15. E.Charou, N. Vassilas, S.J. Perantonis and S. Varoufakis "Integration Techniques in Environmental Data Processing" in *Integrated Technologies for Environmental Monitoring and Information Production*, NATO Science Series (Harmancioglu et al., eds.), Kluwer Academic Publishers, The Netherlands, pp. 301-310, 2003.

6.2.16. N. Vassilas, "Self-Organization of the Batch Kohonen Network under Quantization Effects", *International Journal of Computer Mathematics*, Vol. 88, No. 17, pp. 3586-3612, 2011.

6.2.17. Th. Tsenoglou, N. Vassilas and D. Ghazanfarpour, "A New Weighted Region-based Hough Transform Algorithm for Robust Line Detection in Poor Quality Images of 2D Lattices of Rectangular Objects", *Electronic Letters on Computer Vision and Image Analysis*, Vol. 12, No. 2, pp. 66-77, 2013.

6.2.18. N.Vassilas, Th. Tsenoglou, and D. Ghazanfarpour, "Mean Shift-based Preprocessing Methodology for Improved 3D Buildings Reconstruction", *WASET Int'l Journal of Civil, Environmental, Structural, Construction and Architectural Engineering*, Vol. 9, No. 5, pp. 575-580, 2015.

6.2.19. E. Bratsolis, E. Charou, T. Tsenoglou, N. Vassilas, "Automated Building Block Extraction and Building Density Classification using Aerial Imagery and LiDAR data", *Journal of Earth Science and Engineering*, Vol. 6, No. 1, pp.1-9, 2016.

6.3. CONFERENCE PROCEEDINGS:

6.3.1. V. Cherkassky and N. Vassilas, "Performance of Back Propagation Networks for Associative Database Retrieval," in *Proc. IEEE International Joint Conference on Neural Networks*, Washington D.C., Vol. 1, pp. 77-84, June 1989.

6.3.2. V. Cherkassky and N. Vassilas, "Associative Database Retrieval Using Back Propagation Networks," in *Computational Intelligence II*, F. Gardin and G. Mauri (Eds.), Elsevier Science (North Holland), pp. 77-87, 1990.

6.3.3. V. Cherkassky, N. Vassilas and G. Brodt, "Conventional and Associative Memory Based Spelling Checkers," in *Proc. of the 2nd Int'l IEEE Conference on Tools for Artificial Intelligence*, Washington D.C., pp. 138-144, Nov. 1990.

6.3.4. V. Cherkassky, N. Vassilas and H. Wechsler, "Hierarchical Neural Model for Semantic Categorization," in *Proc. International Symposium MNEMO (Human Memory Modelling and Simulation)*, Varna, Bulgaria, 1990.

6.3.5. N. Vassilas, A. Rabavilas, Ch. Papageorgiou, E. Ventouras, N. Uzounoglou and C. Stefanis, "Artificial Neural Networks for Comparisons of ERP's in Normal Subjects and Patients with Obsessive Compulsive Disorder," in *Book of Abstracts, VII Congress of the Int'l Society of Greek Neuroscientists*, Chania, Sep. 1992.

6.3.6. Ch. Papageorgiou, N. Vassilas, A. Rabavilas, E. Ventouras, N. Uzounoglou and C. Stefanis, "Discrimination of ERP's of Obsessive Compulsive Disorder and Generalized Anxiety Disorder Using Artificial Neural Networks," in *Book of Abstracts, VII Congress of the Int'l Society of Greek Neuroscientists*, Chania, Sep. 1992.

6.3.7. S.J. Perantonis, N. Vassilas, G.T. Amanatidis, S. Varoufakis and J.G. Bartzis, "Neural Network Techniques for SO₂ Episode Prediction," in *Proc. of the 20th Int'l Technical Meeting on Air Pollution Modelling and its Applications*, Valencia, Spain, pp. 305-313, 29 Nov. - 3 Dec. 1993.

6.3.8. Ν. Βασιλάς, Χ. Παπαγεωργίου, Α.Δ. Ραμπαβίλας και Κ. Στεφανής, "Διάκριση των Προκλητών Δυναμικών με την Εφαρμογή της Τεχνολογίας των Τεχνητών Νευρωνικών Δικτύων σε Ψυχαναγκαστικούς και Αρρώστους με Πανικό", σε *Βιβλίο Περιλήψεων, 13ο Πανελλήνιο Συνέδριο Ψυχιατρικής, Χαλκιδική, Μάιος 1994*.

6.3.9. A. Benaki, B. Gatos, I. Karamani, D. Karras, S. Perantonis, N. Vassilas and N. Gaitanis, "A Robot Hand-Eye Coordination System for 3-D Object Recognition Using Novel Neural Networks Trained with Multiview Moments", in *Proc. of the European Robotics and Intelligence Systems Conference*, Malaga, Spain, pp. 1692-1701, Aug 1994.

6.3.10. N. Vassilas, Ch. Papageorgiou, A.D. Rabavilas, S. Perantonis, S. Varoufakis and C.N. Stefanis, "Artificial Neural Network Overlearning in the Classification of Panic and OCD Patients Using Evoked

Potentials", in *Book of Abstracts, 24th Congress of the European Association for Behavioural and Cognitive Therapies*, Corfu, Sep. 1994.

6.3.11. C. Papageorgiou, A. Rabavilas, N. Vassilas, S. Perantonis and C. Stefanis, "Classification of ERPs in Panic and OCD Patients Using Artificial Neural Networks", in *Book of Abstracts, 7th Int'l Congress of Psychophysiology*, Halkidiki, Sep. 1994.

6.3.12. E. Charou, N. Ampazis, N. Vassilas, S. Perantonis, C. Feizidis and S. Varoufakis, "Land-Use Classification of Satellite Images Using Artificial Neural Network Techniques," in *Proc. Integration, Automation and Intelligence in Photogrammetry, Remote Sensing and G.I.S.*, 3rd Int'l Colloquium of LIESMARS, Wuhan, P.R. China, pp. 368-377, Oct. 1994.

6.3.13. N. Vassilas, S. Perantonis, E. Charou, S. Varoufakis and M. Moutsoulas, "Neural Networks for Fast and Efficient Classification of Multispectral Remote Sensing Data," *Πρακτικά 5ου Πανελληνίου Συνεδρίου Πληροφορικής*, ΕΠΥ, Αθήνα, pp. 893-902, Dec. 1995.

6.3.14. A. Benaki, B. Gatos, I. Karamani, D. Karras, S. Perantonis, N. Vassilas, H. Charou and S. Varoufakis, "A Sensor Driven Robot Arm for Playing Chess," *Πρακτικά 5ου Πανελληνίου Συνεδρίου Πληροφορικής*, ΕΠΥ, Αθήνα, pp. 471-480, Dec. 1995.

6.3.15. Μ. Μουτσούλας, Ε. Χάρου, Ν. Βασιλάς, Σ. Περαντώνης και Σ. Βαρουφάκης, "Επεξεργασία Πολυφασματικών Δορυφορικών Δεδομένων με χρήση Νευρωνικών Δικτύων", σε *Βιβλίο Περιλήψεων, 4ο Πανελλήνιο Γεωγραφικό Συνέδριο*, Αθήνα, Οκτ. 1995.

6.3.16. Ν. Βασιλάς, "Η Χρήση των Τεχνητών Νευρωνικών Δικτύων στην Ψυχοφυσιολογική Διερεύνηση της Ψυχοπαθολογίας", σε *Βιβλίο Περιλήψεων, 14ο Πανελλήνιο Συνέδριο Ψυχιατρικής, Στρογγυλή τράπεζα: Ψυχοφυσιολογικές Μέθοδοι και Ψυχοπαθολογία*, Ηράκλειο Κρήτης, 30 Μαρ. - 3 Απρ. 1996.

6.3.17. N. Vassilas, P. Thiran and P. Ienne, "On Modifications of Kohonen's Feature Map Algorithm for an Efficient Parallel Implementation," in *Proc. IEEE International Conference on Neural Networks*, Washington, DC, pp. 932-937, June 1996.

6.3.18. N. Vassilas, C. Papageorgiou and A. Rabavilas, "ERP Classification Using Artificial Neural Networks and Multimodular Architectures", in *Book of Abstracts, X World Congress of Psychiatry, Symposium: Artificial Neural Networks in Psychophysiology Research*, Madrid, Spain, Aug. 1996.

6.3.19. V. Cherkassky, N. Vassilas and H. Wechsler, "Adaptive Prototype Formation," in *Proc. World Congress on Neural Networks (WCNN)*, San Diego, California, pp. 937-941, Sep. 1996.

6.3.20. M. Stefouli, N. Vassilas, S. Perantonis, N. Ampazis, E. Charou and S. Varoufakis, "Lithological Regions Interpretation and Classification of LANDSAT Data Using Neural Networks," First Congress of the Balkan Geophysical Society, Athens, Greece, pp. 474-475, Sep. 1996.

6.3.21. M. Stefouli, A. Angelopoulos, S. Perantonis, N. Vassilas, N. Ampazis, E. Charou and S. Varoufakis, "Integrated Analysis and Use of Remotely Sensed Data for Seismic Risk Assessment of the South-West Peloponessus, Greece", First Congress of the Balkan Geophysical Society, Athens, Greece, pp. 468-469, Sep. 1996.

6.3.22. Δ. Βαϊόπουλος, Ν. Βασιλάς, Ε. Χάρου, Σ. Βαρουφάκης και Θ. Γκουρνέλλος, "Ταξινόμηση Δορυφορικών Εικόνων σε Τύπους Κάλυψης Γης με Χρήση Ευφυών Συστημάτων", σε *Βιβλίο Περιλήψεων, Συμπόσιο: Τηλεανίχνευση και Εφαρμογές*, Αθήνα, Νοέμβριος 1996.

6.3.23. N. Vassilas, C. Papageorgiou and A. Rabavilas, "A Multiple Classifier System Using Neural, Fuzzy and Statistical Modules for the Discrimination of Psychiatric Disorders", 1ο Συμπόσιο Ελληνικής Εταιρείας Τεχνητής Νοημοσύνης: *Επεξεργασία Λόγου, Αναπαράσταση και Επεξεργασία Γνώσης, Έμπειρα Συστήματα - Εφαρμογές*, Παν/μιο Πειραιώς, Δεκ. 1996.

6.3.24. N. Vassilas, E. Charou and S. Varoufakis, "Fast and Efficient Land-Cover Classification of Multispectral Remote Sensing Data Using Artificial Neural Network Techniques", in *Proc. 13th Int'l Conference on Digital Signal Processing (DSP97)*, Santorini, pp. 995-998, June 1997.

6.3.25. N. Vassilas, S. Perantonis, E. Charou and S. Varoufakis, "Intelligent Techniques for Efficient Generation of Ground-Cover Maps", in *Proc. 20th Canadian Symposium on Remote Sensing*, Calgary, Canada, pp. 255-258, May 1998.

6.3.26. B. Gatos, N. Gouraros, S. Mantzaris, S. Perantonis, A. Tsigris, P. Tzavelis and N. Vassilas, "A new method for segmenting newspaper articles", in *Lecture Notes in Computer Science 1513, Second European Conference on Research and Advanced Technology for Digital Libraries*, Heraclion, Crete, (Ch. Nikolaou and C. Stephanidis Eds.), Springer, pp. 695-696, 1998.

- 6.3.27. N. Vassilas, S. J. Perantonis, E. Charou, K. Seretis and Th. Tsenoglou, "Automatic Lineament Detection from Geophysical Grid Data Using Efficient Clustering and Weighted Hough Transform Algorithms", in *Proc. Advanced Course in Artificial Intelligence (ACAI'99), Workshop 07: Intelligent Techniques for Spatiotemporal Data Analysis in Environmental Applications*, Chania, Greece, pp. 16-25, July 1999.
- 6.3.28. D. Vaiopoulos, A. Vassilopoulos, N. Evelpidou, N. Vassilas, S. Perantonis, E. Charou, S. Varoufakis "Land Cover Thematic Map production by photointerpretation and quantitative analysis of Satellite imagery", 5ο Πανελλήνιο Γεωγραφικό Συνέδριο, Αθήνα, pp. 326-330, Νοε. 1999.
- 6.3.29. Ν. Βασιλάς, Μ. Στεφούλη, Δ. Βαϊόπουλος, Ε. Χάρου και Σ. Βαρουφάκης, "Επεξεργασία και ταξινόμηση Λιθολογικών Ενοτήτων από Δορυφορικές Εικόνες με Χρήση Νευρωνικών Δικτύων", *Πρακτικά Του Διεθνούς Συνεδρίου: Διαστημικές Εφαρμογές και Περιβάλλον*, Αθήνα, 31 Οκτ. - 2 Νοε. 1997, pp. 95-99, 1999.
- 6.3.30. Ν. Βασιλάς, Χ. Παπαγεωργίου, Κ. Αλεξίου, Ν. Παπαζαφειρόπουλος και Α. Ραμπαβίλας, "Κατηγοριοποίηση των Προκλητών Εγκεφαλικών Δυναμικών με την Εφαρμογή της Τεχνολογίας των Τεχνητών Νευρωνικών Δικτύων στις Αγχώδεις Διαταραχές", σε *Βιβλίο Περιλήψεων, 1ο Πανελλήνιο Συνέδριο της Ελληνικής Εταιρείας Ψυχοφυσιολογίας, Στρογγυλή τράπεζα: Κλινική Ψυχοφυσιολογία: Θεωρητικές Προσεγγίσεις και Εφαρμογές στην Ψυχιατρική*, Θεσσαλονίκη, 7-10 Ιουνίου, p. 53, 2001.
- 6.3.31. N. Vassilas, S. Perantonis, V. Virvilis, Ch. Papageorgiou, A. Rabavilas and G.N. Christodoulou, "Multimodular ERP Classification Using Neural Network Based Feature Selection", in *Proc. of the IASTED Int. Conference: Artificial Intelligence and Applications (AIA'01)*, Marbella, Spain, pp. 26-29, September 2001.
- 6.3.32. N. Vassilas, S. Perantonis, E. Charou, Th. Tsenoglou, M. Stefouli and S. Varoufakis, "Delineation of Lineaments from Satellite Data Based on Efficient Neural Network and Pattern Recognition Techniques", in *Proc. Second Hellenic Conference on AI*, Thessaloniki, Greece, pp. 355-365, April 2002.
- 6.3.33. N. Vassilas, G. Miaoulis, D. Chronopoulos, E. Constandinidis, I. Ravani, D. Makris and D. Plemenos, "MultiCAD-GA: A System for the Design of 3D Forms Based on Genetic Algorithms and Human Evaluation", in *Lecture Notes in Artificial Intelligence (LNAI 2308): Methods and Applications of Artificial Intelligence, Second Hellenic Conference on AI*, Thessaloniki, Greece (I. Vlahavas and C. Spyropoulos Eds.), Springer, pp.203-214, 2002.
- 6.3.34. D. Plemenos, G. Miaoulis and N. Vassilas, "Machine Learning for a General Purpose Declarative Scene Modeler". *GraphiCon'2002*, Nizhny Novgorod, Russia, Sep. 16-21, 2002.
- 6.3.35. Ν. Βασιλάς, Π. Μπέλης, Σ. Περαντώνης, Χ. Σκουρλάς και Κ. Σφήκας, "Εξαγωγή Χαρακτηριστικών, Δεικτοδότηση και Ανάκτηση Εικόνας Βασισμένη στο Περιεχόμενο", *Συνέδριο ΑΡΧΙΜΗΔΗΣ Ι*, Τ.Ε.Ι. Αθήνας, 24-26 Νοεμβρίου 2005.
- 6.3.36. Ξ. Παπαδόπουλος, Θ. Σπύρου, Ι. Δαρζέντας, Π. Καραβίτη, Π. Κουτσαμπάσης, Ι. Φουντά και Ν. Βασιλάς, "Ολιστική Προσέγγιση της Προσωποποιημένης Πρόσβασης", *Συνέδριο ΑΡΧΙΜΗΔΗΣ Ι*, Τ.Ε.Ι. Αθήνας, pp. 153-160, 2005.
- 6.3.37. N. Vassilas and A. Sharma, "Segmentation of Continuous Text Using An Associative Dictionary, Language Statistics and Backtracking Techniques", in *Proc. of the 14th National Conference of Academic Libraries*, Athens, pp. 293-303, 1-3 December 2005.
- 6.3.38. N. Vassilas and C. Skourlas, "Content-Based Coin Retrieval Using Invariant Features and Self-Organizing Maps", in *Lecture Notes in Computer Science (LNCS 4132): 16th International Conference on Artificial Neural Networks (ICANN06)* (Kollias et al., Eds.), Springer, Vol. 2, pp.113-122, 2006.
- 6.3.39. C. Skourlas and N. Vassilas, "Content-Based Retrieval Using Invariant Features, Self-Organizing Maps, Concepts and Fuzzy Interval Numbers", *The Contribution of Information Technology to Science, Economy, Society and Education (eRA-2)*, Athens, Greece, Sep. 2007.
- 6.3.40. N. Vassilas, "Batch Self-Organizing Map Algorithm: A Theoretical Study of Self-Organization of a 1-D Network Under Quantization Effects", in *Proceedings IEEE International Joint Conference on Neural Networks (IJCNN'08), WCCI 2008, Hong-Kong*, pp. 1925-1930, June 1-6, 2008.
- 6.3.41. N. Vassilas, Th. Tsenoglou and D. Ghazanfarpour, "Robust Region-based Line Detection from Poor Quality Images of Aligned Rectangular Objects", in *Proceedings 9th IASTED International Conference on Signal Processing, Pattern Recognition and Applications (SPPRA 2012)*, Crete, Greece, pp. 35-42, June 18-20, 2012.

6.3.42. Th. Tsenoglou, N. Vassilas and D. Ghazanfarpour, “Robust Line Detection in Images of Building Facades using Region-based Weighted Hough Transform”, in Proceedings *16th Panhellenic Conference on Informatics (PCI’2012)*, University of Piraeus, Greece, pp. 333-338, October 5-7, 2012.

6.3.43. E. Bratsolis, S. Gyftakis, E. Charou and N.Vassilas, “Comparative Analysis of Classification Techniques for Building Block Extraction using Aerial Imagery and LiDAR Data”, in Proc. 13th IEEE International Symposium on Signal Processing and Information Technology (ISSPIT 2013), Athens, Greece, Dec. 12-15, 2013.

6.3.44. S. Gyftakis, T. Tsenoglou, E. Bratsolis, E. Charou and N. Vassilas, “Fusion of Aerial Images with Mean Shift-based Upsampled Elevation Data for Improved Building Block Classification”, in Proc. *SPIE 9244, Image and Signal Processing for Remote Sensing XX*, Amsterdam, The Netherlands, October 2014.

6.3.45. E. Charou, S. Gyftakis, E. Bratsolis, Th. Tsenoglou, Th.D. Papadopoulou and N.Vassilas, “Urban Density Indices Using Mean Shift-based Upsampled Elevation Data”, in Proc. 36th International Symposium on Remote Sensing of Environment, ISRSE36-428-1, Berlin, Germany, 11-15 May 2015.

6.3.46. E. Spyrou, A. Kesidis, P. Kolliopoulos, T. Tsenoglou, E. Bratsolis, S. Gyftakis, E. Charou, N.Vassilas, “Comparative Study of Visual Feature Extraction Methods for Building Retrieval on Urban Databases”, in Proc. 6th International Conference on Information, Intelligence, Systems and Applications, (IISA 2015), Corfu, Greece, July 6-8, 2015.

6.3.47. A. Kesidis, N.Vassilas, Th. Tsenoglou, D. Ghazanfarpour, “Experimental Sensitivity Investigation of Mean-Shift Variants to Bandwidth Parameters for 3D Buildings Reconstruction”, in Proc. 9th International Symposium on Image and Signal Processing and Analysis, (ISPA 2015), Zagreb, Croatia, September 7-9, pp. 116-121, 2015.

6.3.48. G. Bardis, N. Sideris, N. Vassilas, G. Miaoulis, “An Intelligent GIS Database Framework Featuring Building Query Functionality Using N-grams Encoding and k-means Classification”, in Proc. 2nd Workshop (IPMSC) of the 16th International Conference on Engineering Applications of Neural Networks (EANN 2015), Rodos, Greece, September 2015.

6.3.49. N. Sideris, G. Bardis, N. Vassilas, G. Miaoulis, “An Integrated Framework for Semantic Modelling and Decision Support in 3D Urban Virtual Environments”, in Proc. 2nd Workshop (IPMSC) of the 16th International Conference on Engineering Applications of Neural Networks (EANN 2015), Rodos, Greece, September 2015.

6.3.50. E. Spyrou, A. Kesidis, N.Vassilas, “Robust Retrieval from Compressed Urban Databases Using SIFT Local Features”, in Proc. International Conference ‘Science in Technology’ (SCinTE’2015), Athens, Greece, November 2015.

6.3.51. G. Papadopoulos, N.Vassilas, A. Kesidis, “Convolutional Neural Network for Detection of Building Contours Using Multisource Spatial Data”, in J. Macintyre, L. Iliadis, I. Maglogiannis and C. Jayne (eds), *Engineering Applications of Neural Networks (EANN 2019)*, Communications in Computer and Information Science, Vol. 1000, Springer, 2019.

6.4. INTERNAL REPORTS:

6.4.1. N. Vassilas, "A Study of the Continuous One-Dimensional Batch Kohonen Algorithm," Internal Report No. 94.5, Laboratoire Microinformatique, Ecole Polytechnique Federale de Lausanne, Lausanne, Switzerland, 1994.

6.4.2. N. Vassilas, S. Perantonis, V. Virvilis, Ch. Papageorgiou, A. Rabavilas and C. Stefanis, “ERP Classification Using Neural Network Based Feature Selection and Multiple Classifier Modules”, Internal Report, Athens, 1999.

6.5. TECHNICAL REPORTS:

6.5.1. S. Varoufakis, S. Perantonis, N. Vassilas, D. Karras, E. Charou, A. Benaki, B. Gatos, Ch. Kosmas, D. Kalogeras and O. Michanetzis. Final technical report of the research project SPA 14DHMO1 “Neural Networks”, 1994. In Greek.

6.5.2. S. Varoufakis, S. J. Perantonis, N. Vassilas and N. Ampazis. First Year Report of Project “GEONICKEL” - Technical Annex (Special Report of WP3 - Image Processing, Pattern Recognition), January 1997.

- 6.5.3. S. Perantonis, V. Virvilis and N. Vassilas. Annual progress report of the research project PENED “Development of Neural Network Algorithms for the Study and Prediction of Plasma Parameters in Reactors of Thermal Nuclear Fusion”, June 1997. In Greek.
- 6.5.4. S. Perantonis, N. Vassilas and Th. Tsenoglou. Intermediate progress report for the research project PAVE KT222 “Integrated Knife Encoding and Classification System”, December 1997. In Greek.
- 6.5.5. S. Varoufakis, N. Vassilas, S. J. Perantonis, N. Ampazis, V. Virvilis, E. Charou, K. Seretis and Th. Tsenoglou. Documentation for ANN Classification and Lineament Detection Software (WP3). User’s manual. Project “GEONICKEL” Deliverable, January 1998.
- 6.5.6. S. Varoufakis, S. J. Perantonis, N. Vassilas and N. Ampazis (1998). Second Year Report of Project “GEONICKEL” - Technical Annex 3 (Special Report of WP3 - Image Processing, Pattern Recognition), January 1998.
- 6.5.7. S. Perantonis, V. Virvilis and N. Vassilas. Final progress report of the research project PENED “Development of Neural Network Algorithms for the Study and Prediction of Plasma Parameters in Reactors of Thermal Nuclear Fusion”, June 1998. In Greek.
- 6.5.8. S. Perantonis, N. Vassilas and Th. Tsenoglou. Final progress report for the research project PAVE KT222 “Integrated Knife Encoding and Classification System”, December 1998. In Greek.
- 6.5.9. N. Vassilas, Ch. Kitsos and A. Tomaras. Report on reforming the courses supported from the Department of Mathematics of TEI of Athens for the project EPEAEK II “Undergraduate Computer Science Curriculum”, April 2004. In Greek.
- 6.5.10. N. Vassilas, C. Efstathiou and E. Galiotou. Report on suggestions from international organizations for undergraduate Computer Science curricula for the project EPEAEK II “Undergraduate Computer Science Curriculum”, February 2005. In Greek.
- 6.5.11. D. Kehagias, N. Vassilas and F. Maggafas. Report on Assessment of Semantic Net Technology for the research project IST-ELEGANT “Electronic Government Advisor Agent”, June 2005. In Greek.
- 6.5.12. N. Vassilas, E. Charou, G. Miaoulis, E. Petsa and L. Grammatikopoulos. Report on geospatial data acquisition for the project “Intelligent Pattern Recognition Techniques for the Development of Multimodal Representations of Urban Areas (3D-CITY)”, ARCHIMEDES III, December 2012. In Greek.
- 6.5.13. N. Vassilas, A. Kesidis, E. Charou, D. Ghazanfarpour, S. Gyftakis and Th. Tsenoglou. Report on segmentation methods for urban area data for the project 3D-CITY, ARCHIMEDES III, June 2014. In Greek.
- 6.5.14. N. Vassilas, Th. Tsenoglou, A. Kesidis, D. Kosmopoulos, E. Charou, E. Bratsolis and S. Gyftakis. Report on 3-D modeling method for the project 3D-CITY, ARCHIMEDES III, March 2015. In Greek.
- 6.5.15. G. Bardis, G. Miaoulis, N. Sideris and N. Vassilas. Report on the proposed integrated system of the project 3D-CITY, ARCHIMEDES III, September 2015. In Greek.
- 6.5.16. L. Grammatikopoulos, H. Kalisperakis, E. Petsa, A. Kesidis and N. Vassilas. Report on model completion and image registration for the project 3D-CITY, ARCHIMEDES III, October 2015. In Greek.
- 6.5.17. L. Grammatikopoulos, H. Kalisperakis, E. Petsa, A. Kesidis and N. Vassilas. Report on automated texture rendering for the project 3D-CITY, ARCHIMEDES III, October 2015. In Greek.
- 6.5.18. N. Vassilas, G. Miaoulis, A. Kesidis, E. Bratsolis, P. Kolliopoulos and Th. Tsenoglou. Report on model completion with texture for the project 3D-CITY, ARCHIMEDES III, October 2015. In Greek.
- 6.5.19. N. Vassilas, G. Miaoulis and E. Petsa. Final evaluation report of the project 3D-CITY, ARCHIMEDES III, October 2015. In Greek.

7. CITATIONS

The citations on the above published research work that I know up to now are more than 300.

8. COMMITTEES

- Chair, Student Sessions, Advanced Course on Artificial Intelligence (ACAI'99), Chania, Greece, July 5-16, 1999.
- Co-chair, Workshop "Intelligent Techniques for Spatio-Temporal Data Analysis in Environmental Applications", ACAI'99, Chania, Greece, July 5-16, 1999.
- Member, Organizing and Program Committees, ACAI'99, Chania, Greece, July 5-16, 1999.
- Member, Program Committee, 2nd Panhellenic Conference on AI, Thessaloniki, Greece, April 11-12, 2002.
- Member, International Program Committee, International Workshop on Applied Information Technology (IAIT'05), Bangkok, Thailand, November 25-26, 2005.
- Member, Scientific Committee, 14th National Conference of Academic Libraries, Athens, December 1-3, 2005.
- Member, Program Committee, 4th Panhellenic Conference on AI, Herakleion, Greece, May 18-20, 2006.
- Member, Scientific Committee, 2nd ARCHIMEDES Conference, TEI of Athens, Greece, November 22-24, 2006.
- Member, Organizing and Program Committee, International Conference on Computer Graphics and Artificial Intelligence (3IA), from 2007 to 2013.

9. ACTIVE OR EX MEMBER OF SCIENTIFIC ORGANIZATIONS

- Technical Chamber of Greece
- Institute of Electrical and Electronics Engineers (IEEE)
- IEEE Computational Intelligence Society
- IEEE Systems, Man and Cybernetics Society
- Hellenic Society of Artificial Intelligence
- Greek Computer Society

10. REFEREE

I. INTERNATIONAL JOURNALS

- Fuzzy Sets & Systems
- IEEE Transactions on Neural Networks
- Neural Networks
- Neural Processing Letters
- Applied Artificial Intelligence
- Artificial Intelligence Tools
- Signal Processing
- Environmental Informatics
- Environmental Monitoring
- IEEE Transactions on Industrial Informatics
- Visual Communication and Image Representation

- IET Image Processing
- SpringerPlus
- Remote Sensing
- Applied Sciences

II. INTERNATIONAL CONFERENCES

- Advanced Course on Artificial Intelligence (ACAI), Chania, Greece, 1999.
- International Joint Conference on Neural Networks (IJCNN), 2000, 2019, 2020 και 2021.
- 14th European Conference on Artificial Intelligence (ECAI), 2000.
- International Conf. on Artificial Neural Networks (ICANN), 2001, 2002 και 2018.
- The International Workshop on Applied Information Technology (IAIT'05), 2005.
- International Conference on Computer Graphics and Artificial Intelligence (3IA), 2007-13.
- Engineering Applications of Neural Networks (EANN), 2011, 2013, 2015 και 2019.
- International Conference 'Science in Technology' SCinTE 2015.
- 14th Int'l Conf. on Artificial Intelligence Applications and Innovations (AIAI), 2018.
- IEEE Conference on Evolving and Adaptive Intelligent Systems (EAIS), 2018 και 2019.

III. NATIONAL CONFERENCES

- Panhellenic Conference on AI (SETN), 2002-20.
- 14th National Conference of Academic Libraries, Athens, 2005.
- 11th Panhellenic Conference on Informatics (PCI'07), Patra, Greece, 2007.