

CURRICULUM VITAE

Nikos D. FAKOTAKIS

fakotaki@upatras.gr

<http://www.wcl.ece.upatras.gr/>

Telephone: +30 2610 996 216

A. EDUCATION

- 1982-1986:** **Ph.D. in Speech Processing**, (1986), University of Patras (UoP).
1978-1979: **M.Sc. in Electronics**, (1979), University of Wales (U.K.).
1975-1978: **B.Sc. in Electronics** (Honors Degree), (1978), University of London (U.K.).

B. PROFESSIONAL EXPERIENCE

- Since 2004:** Professor, Electrical and Computer Engineering (ECE) Dept., University of Patras (UoP).
Since 2004: **Director of Wire Communications Laboratory** (WCL).
2005-2017: **Director of Information and Communication Technology (ICT) Division**
Since 2004: **Head of Artificial Intelligence Group** of the ICT Division.
2013-2016: **Deputy President of ECE Dept.**, University of Patras.
2000-2003: Associate Professor, ECE Dept., University of Patras,
Head of Speech and Language Processing Group of the WCL.
1992-1999: Assistant Professor, ECE Dept., University of Patras.
Head of Speech and Language Processing Group of the WCL.
1986 - 1992: Lecturer, ECE Dept., University of Patras.
1981 - 1982: Electronic Engineer, Medical instrument Dept. SIEMENS AE.

C. AREAS OF SCIENTIFIC INTEREST

The main themes of scientific interest, in the areas of Digital Signal Processing and Artificial Intelligence are the following:

- Artificial Intelligence, (TNN, Machine Learning, data and text mining, intelligent information retrieval, natural language processing etc.)
- Digital Signal Processing, (Pattern Recognition, Neural Networks, HMM, etc.)
- Speech Processing (Speaker Recognition, Speech Recognition/Understanding, Coding etc.)
- Natural Language Processing (MorphoSyntactic Analysis, Semantics, Pragmatics, Dialogue Systems etc).
- Computer Vision, Image and Video Processing, Optical Character recognition (OCR), Facial Features Detection, Object Recognition, Object Tracking,
- Human Computer Interaction,

D. EDUCATION ACTIVITIES

D.1. Teaching (under- and post graduate level) in the ECE Dept, University of Patras

- Since 1988:** "Artificial intelligence I", (semester 7/10)
Since 2002: "Artificial intelligence II", (semester 9/10)
Since 1993: "Digital Logic Design", (semester 3/10)
Since 2016: "Speech and Natural Language Processing" (semester 9/10)
Since 2016: "Digital Logic" (1semester 1/10)
1995 - 2016: "Introduction to Digital Logic", (semester 2/10)
1994 - 2016: "Speech Technology" (Postgraduate),
1994 - 2016: "Natural Language Processing" (Postgraduate),
1992 - 1993: "Expert Systems", (semester 10/10)
1987 - 1988: "Computer Systems I", (semester 7/10)
1987 - 1988: "Computer Systems II", (semester 8/10)

1986 - 1993: "*Digital Logic Design I*", (semester 3/10)

1986 - 1993: "*Digital Logic Design II*", (semester 4/10)

1986 - 1987: "*Computer Systems III*", (semester 9/10)

1986 - 1987: "*Computer Systems IV*", (semester 10/10)

D.2. Supervisions of PhD Dissertations

1. K. Sgarbas, "Techniques of Automatic Morpho - Syntactic Analysis of Modern Greek language", June 1997. (UP)
2. S. Michos, "Computational Syntactic Processing of texts of Modern Greek Language based on empirical methods". June 1997.
3. E. Stamatatos, "Author recognition based on style". April 2000. (UP)
4. E. Kavallieratou, "Optical Character Recognition based on artificial Neural Networks". November 2000. (UP)
5. N. Liolios, "Optical Character Recognition based on hidden models of Markov". March 2001. (UP)
6. I. Potamitis, "Speech enhancement in the context of automatic speech recognition". March 2001. (UP)
7. J. Sirigos, "Speech Recognition based on syllable spotting", October 2002
8. K. Georgila, "Language and dialog modeling for human – machine interaction systems through speech", October 2002. (UP)
9. A. Thanopoulos, "Automatic extraction of semantic knowledge from text corpora". March 2004.
10. K.L. Kermanidis, "Automatic Learning of Syntactic Dependencies and Grammar Development for Modern Greek", March 2004. (UP)
11. M. Maragoudakis, "A Bayesian Network Model for Information Retrieval from Greek Text", Dec. 2004. (UP)
12. Ganchev, Todor, "Speaker Recognition", November 2005. (UP)
13. P. Zervas, "Prosodic Modelling and Boundary Prediction for Greek Speech Synthesis" February 2007. (UP)
14. Mporas, Iosif, "Automatic Segmentation of Digital Speech Signals and Application of Speech Synthesis, Speech Recognition and Language Recognition", July 2009. (UP)
15. Ntalambiras, Stavros, "Digital Signal Processing and Automatic Categorization of environmental Sounds" April 2010. (UP)
16. Siafarikas, Michael, "Speech and Speaker Recognition Using Wavelets", May 2010.
17. Lazaridis, Alexandros, "Prosody Modeling Using Machine Learning Techniques for Neutral and Emotional Speech Synthesis ", February 2011.
18. Kostoulas, Theodoros, "Emotion Recognition from Speech Using Digital Signal Processing and Machine Learning Techniques", February 2012. (UP)
19. E. Skodras, "Precise Localization and Tracking of Eye Centres, in Human Computer Interaction", June 2016.
20. Arvanitis, Gerasimos "Computational geometry and signal processing of 3D objects" Jun 2018, (in progress).
21. Kotinas, Ilias, "Learning and Decision Support Systems under unfavorable environments", (in progress).
22. Theodorou, Theodoros, "Detecting and Recognizing Events and Features from Audio Signals", (in progress).

D.3. Other Education Activities

- Supervised more than 250 (under and post graduate) Diploma Thesis.

- Seminars, invited speaker of many international conferences and summer schools.

E. EDUCATIONAL BOOKS

- “Speech Technology”, University of Patras.
- “Natural Language Processing” (Co-Author), University of Patras.
- “Digital Logic Design”, University of Patras.
- “Introduction to Artificial Intelligence and PROLOG” (Co-Author), University of Patras.
- “Artificial Intelligence”, E. Rich and K. Knight, McGraw Hill. Greek Edition 2000: Translation and Scientific Editing.
- “Artificial Intelligence”, Michael Negnevitsky, Greek Edition 2017: Scientific Editing.

F. OTHER PROFESSIONAL ACTIVITIES

F.1. Member of Scientific Companies

- Member of the Executive Board and the Foundation Board of ELSNET (European Language and Speech Network of Excellence) (1997-2007)
- Member of the Executive Board of RCAIUP (Research Center of Artificial Intelligence, University of Patras) (1997 - 2002)
- Vice President of the Hellenic Artificial Intelligence Society (No 39) (1998 - 2006).
- Member of Technical Chamber of Greece (No 82956).
- Member of Institute of Electrical and Electronics Engineers (IEEE) (No. 4727756).
- Member of European Association for Signal Processing (EURASIP) (No. 773)
- Member of European Speech Communication Association (ESCA) (No. 1036).

F.2. Participation in the Organization of Academic Conferences

- Co-Chair of the EUROSPEECH'97 (5th European Conference on Speech Communication and Technology), Sept. 22-25, 1997.
- Member of the Organizing Committee of “Speech Technology in the Public Telephone Network”: Where are we today?”, organized by COST Telecom Actions 249, 250 and 258, Sept.26-27, 1997.
- Member of the Organizing and Scientific Committee of the conference "ELSNET in Wonderland" Soesterberg, The Netherlands, March 25-27, 1998
- Co-Chair of the Workshop and Summer School “Advanced Course on AI ‘99” (ACAI ’99) ECCAI, July 1999.
- Member of the Organizing Committee of EUROSPEECH'99, (6th European Conference on Speech Communication and Technology), Budapest, Hungary, Sept. 5-10, 1999.
- Co-Chair of the Workshop “Machine Learning in Human Language Technology”, July 1999.
- Co-Chair of COMLEX 2000 (International Conference on Computational Lexicography and Multimedia Dictionaries), Sept. 22-23, 2000.
- Co-Chair of PC-HCI 2001 (International Conference on Human Computer Interaction), Dec. 7-9, 2001.
- General Chair of SPECOM 2005 (International Conference Speech and Computer), Oct. 17-19, 2005.
- Co-Chair of the ECAI 2008 (European Conference on Artificial Intelligence), July 21-25, 2008.
- General Chair of SPECOM 2015 (International Conference Speech and Computer), Sept. 20-24, 2015.
- Co-Chair of the SETN 2018 (10th Hellenic Conference on Artificial Intelligence), Patras Greece.

F.3. Other Distinctions and Activities

- Editor-in-Chief of the electronic journal "The European Student Journal on Language and Speech", published in Scotland under the auspices of ISCA (International Speech Communication Association), EACL (European Association for Computational Linguistics) and ELSNET (European Language and Speech Network) (1998 - 2007).
- Member of the Telematics Management Panel within the framework of the planning of the fourth programme (1994-1998). (Brussels 1993/94).
- Reviewer of large number of scientific journals, conferences, and grant proposals.

G. PARTICIPATION IN R&D PROJECTS

- [1] (ESPRIT-860): "Linguistic Analysis of the European Languages" (1986-1989). Study and modeling of the Greek language and the transformation of written text to spoken language and the reverse.
- [2] BECOS (EURECA EU-385): "A Natural Language Front-End to Databases with Speech Facilities", (1991-1995). Development of a natural language front-end for databases, in several European languages using both text and voice as input stream.
- [3] POLYGLOT (ESPRIT II-2104): "A Multilanguage Speech-to-Text and Text-to-Speech System", (1989-1993). Design and Development of a large Vocabulary Isolated-Word Recognition system (IWSR), Text-to-Speech Synthesis, Continuous Speech Recognition.
- [4] LOGOS (STRIDE 15): "Development of the Language and Speech industry", (1991-1994). Development of the infrastructure for the language industry in Greece through the creation of data bases, execution of a number of statistical and phonetic studies and development of a number of hardware and software methodologies.
- [5] TRANSLEARN (LRE, 61-016): "Interactive Corpus-based Translation Drafting Tool", (1993-1995). Development of an interactive corpus-based translation drafting tool, that will relieve the translator from repetitive part of the work, enhance the quality of the output and the productivity of the human translator.
- [6] RIWORD (ESPRIT 5677): "Robust Isolated Word Recognition of Distinct Utterances", (1991-1993): Development of a robust, speaker independent, small vocabulary, isolated word recognizer over telephone lines.
- [7] GRAMCHECK (MLAP 11): "A Grammatical and Style Checker", (1994-1995). Development of an integrated tool for grammatical and stylistic analysis of multilingual documents.
- [8] LEXICON (COLLINS) (1993-1995): Design and Development of an English-Greek, Greek-English Electronic dictionary using 20,000,000-word Corpus
- [9] NOW: "Lexicography using Computer" (1993-1995). A Training Program in Lexicography using Computers.
- [10] TRANSLIB (LIB-3038): "Advanced Tools for Accessing Multilingual Library Catalogues", (1995-1997). Development of a front-end tool for library automation systems, that enables the language transparent search, access and presentation of multilingual bibliographic catalogues.
- [11] ACCeSS (LE-1 1802): "Automated Call Center through Speech Understanding System", (1996-1999). ACCeSS concerns the development of an automated telephone center for the insurance industry utilizing speech recognition, speech understanding and script understanding techniques.
- [12] VASME (TRANSPORT PL-00010): "Value Added Services for Maritime Environment", (1996-1998) Development of an automatic information system to be used by vessels approaching to harbors or Vessel Traffic Systems (VTS), supporting among others speech recognition and synthesis functionalities.

- [13] DIALOGOS (EPET II): “Improvement of Man-Machine Communication Using Linguistic Technologies”, (1995-1998)
- Part I: Development of a Telebanking system, over the public telephone network, utilizing speech recognition and understanding as well as speaker verification techniques.
- Part II: Development of an automated letter creation system for business correspondence utilizing speech recognition and natural language processing techniques.
- [14] SPEECHDAT (LE-2 4001): “Speech Databases for the Creation of Voice Driven Teleservices”, (1996-1999). A coordinated effort for the development of large Speech databases (5000 speakers) in all European Languages. (11 languages, 17 dialects).
- [15] COST (EUROPEAN COOPERATION IN SCIENTIFIC AND TECHNICAL RESEARCH) 249: “Continuous Speech Recognition over the Telephone”, (1995-2000).
- [16] COST (EUROPEAN COOPERATION IN SCIENTIFIC AND TECHNICAL RESEARCH) 250: “Speaker Recognition in Telephony” (1995-2000)
- [17] IDAS (LE-8315): “Interactive, Telephone-based, Directory Assistance Services”, (1998-2000). Development of Directory Assistance Services over Public Telephonic Networks”.
- [18] SPEECHDAT-CAR (LE-8334): “Speech Data Basis for Voice Driven Teleservices and Control in Automotive Environments”, (1998-2000).
- SpeechDat-CAR aims to create language resources for the development of voice operated services for in-vehicle applications in 9 languages.
- [19] MITOS (EPET II): "A System to Retrieve and Mine Information - Application in Financial News" (1999-2001)
- [20] ΔΗΛΟΣ (98ΓΤ12): "Bilingual Electronic Dictionary of Economic Terms with Reference to Corpora"(1999-2001).
- [21] ΔΕΙΚΤΗΣ (98ΤΤ24): “Dialogical Extraction of Information from medical text-corpora of Remote - Control Electrical Systems”, (1999-2001).
- [22] ΙΑΝΟΣ (98ΓΤ46): "A Two-Level System for Automatic Morphological Analysis of the Greek Language». (1999-2001).
- [23] ΥΠΕΡ (99ΥΠ66): Development of a Reliable Continuous Speech Recognition System with the use of hidden models of Markov and Neural Networks"(1999-2002)
- [24] Software Usability (EPET II-00): «Human Network of dispersion of Scientific and Technological Knowledge», (2000-2002).
- [25] Artificial Intelligence (EPET II-00): «Human Network of dispersion of Scientific and Technological Knowledge», (2000-2002).
- [26] COST (EUROPEAN COOPERATION IN SCIENTIFIC AND TECHNICAL RESEARCH) 278: “Spoken Language Interaction in Telecommunication”, (2001-2003).
- [27] Orientel (IST-2000-28373): “Multilingual Access to Interactive Communication Services for the Mediterranean and Middle East”, (2000-2004).
- [28] ORASIS (OOBE 435): “Automatic Recognition of hand-written Documents - Questionnaires”, (2001-2003).
- [29] E2M (IST-2000-30167): “From e-services to mobile services”, (2001-2003).
- [30] GEMINI (IST-2001-32343): “Generic Environment for Multilingual Interactive Natural Interfaces”, (2002-2004).
- [31] INSPIRE (IST-2001-32746): “Infotainment Management with speech Interaction via Remote-Microphones and Telephone Interfaces”, (2002-2004).
- [32] MoveON (IST-2005-034753): “Multi-modal and multi-sensor zero-distraction interaction interface for two-wheel vehicles ON the move”, (2006-2009).

- [33] PlayMancer (Grand Agreement Number 215839): “A European Serious Gaming 3D Environment, (2007-2010).
- [34] Prometheus ‘Prediction and interpretation of human behaviour based on probabilistic sStructures and HEterogeneoUs Sencors”, (2007-2010).
- [35] Amibio (Life+08NAT/GR/539: “Automatic acoustic Monitoring and Inventorying of BIOdiversity”, (2010-2013). **Was awarded as best-of-the-best, EC LIFE+ project.**
- [36] Software Usability (EPET II-00): “Human Network for Knowledge Dissemination “, (2000-2002).
- [37] Artificial Intelligence (EIIET II-00): “Human Network for Knowledge Dissemination” (2000-2002).
- [38] TECHNOISIS: Artificial Intelligence and Applications (InterUniversity R&D Networks, 2009-)
- [39] MOMIRAS – (GRST), “Mobile Mixed Reality System, (2014-2017)
- [40] FrailSafe: Sensing and predictive treatment of frailty and associated co-morbidities using advanced personalized models and advanced interventions, H2020- RIA
- [41] myAirCoach: Analysis, modelling and sensing of both physiological and environmental factors for the customized and predictive self-management of Asthma, H2020-RIA
- [42] OACTIVE: Advanced personalized, multi-scale computer models preventing OsteoArthritis, H2020-RIA

H. PUBLICATIONS

Over **400 scientific publications** in internationally recognized journals and conferences, which have been cited more than 4,600 times and has an **h-index of 32**.

H.1. Dissertations

- [1] N. Fakotakis, "Voltage to Frequency Converter" B.Sc. Dissertation, University of London, King's College London, Department of Electronics, June 1978.
- [2] N. Fakotakis, "Dielectric Measurements at Microwave Frequencies", M.Sc. Dissertation, University of Wales, Department of Electronics, UWIST, Oct. 1979.
- [3] N. Fakotakis, “A Novel Approach for Automatic Speaker Recognition”, Ph.D. Dissertation, University of Patras, Electrical Engineering Department, Greece, March 1986.

H.2. Journals

- [j1] N. Fakotakis, E. Tsopanoglou and G. Kokkinakis, “A Text-Independent Speaker Recognition System Based on Vowel Spotting”, Speech Communication Journal, Vol. 12, No. 1, pp. 57-68, March 1993.
- [j2] K. Sgarbas, N. Fakotakis and G. Kokkinakis, “A Flexible Modular Semantic Parser for the Greek Language”, Technika Chronika, Scientific Journal of the Technical Chamber of Greece 1993, Vol. 13, No. 4, pp. 65-75, Dec. 1993.
- [j3] K. Sgarbas, N. Fakotakis and G. Kokkinakis, “Genetically Evolved Strategies Winning by Selective Processing of the Chromosome Pool”, IEEE Potentials Magazine, Vol. 14, No. 1, pp. 36-40, Feb./March 1995.
- [j4] K. Sgarbas, N. Fakotakis and G. Kokkinakis, “A PC-KIMMO, Based Morphological Description of Modern Greek”, Literary and Linguistic Computing Journal, Vol. 10, No 3, pp. 189-201, 1995.
- [j5] S. Michos, N. Fakotakis and G. Kokkinakis, “A Novel and Efficient Method for Parsing Unrestricted Texts of Quasi Free Word Order Languages”, International Journal on Artificial Intelligence Tools, Vol. 4, No 3, pp. 301-321, 1995.
- [j6] K. Sgarbas, N. Fakotakis and G. Kokkinakis, “Two Algorithms for Incremental Construction of Directed Acyclic Word Graphs”, International Journal on Artificial Intelligence Tools, Vol. 4, No 3, pp. 369-381, 1995.

- [j7] S. Michos, N. Fakotakis and G. Kokkinakis, "Towards an Adaptive Natural Language Interface to Command Languages", *Journal on Natural Language Engineering*, 2 (3), pp. 191-209, Cambridge University Press, 1997.
- [j8] K. Sgarbas, N. Fakotakis and G. Kokkinakis, "A PC-KIMMO Based Bi-directional Graphemic/Phonetic Converter for Modern Greek", *Literary and Linguistic Computing Journal*, Vol. 13, No. 2, pp. 65-75, 1998.
- [j9] K. Sgarbas, N. Fakotakis and G. Kokkinakis, "TEMPO: A Temporal Sub-Parser for Modern Greek", *International Journal on Artificial Intelligence Tools*, Vol. 7, No. 1, pp. 103-120, 1998.
- [j10] S. Michos, N. Fakotakis and G. Kokkinakis, "Enhancing Text Retrieval by Using Advanced Stylistic Techniques", *International Journal of Intelligent and Robotics Systems*, Vol.26, No. 2, pp.136-148, Oct.1999.
- [j11] E. Kavallieratou, N. Fakotakis and G. Kokkinakis, "Skew Angle Estimation in Document Processing using Cohen's Class Distributions", *Pattern Recognition Letters*, Vol. 20, Issue 11, pp. 1305-1311, Nov. 1999.
- [j12] S. Michos, S. Stamatatos and N. Fakotakis, "Supporting Multilinguality to Library Automation Systems through AI Tools", *AAI'99, International Journal on Applied Artificial Intelligence*, Vol. 13, pp. 679-703, 1999.
- [j13] E. Kavallieratou, N. Fakotakis and G. Kokkinakis, "A Slant Removal Algorithm", *Pattern Recognition Journal*, Vol. 33, Issue 7, pp. 1261-1262, 2000.
- [j14] K. Keramidis, K. Sgarbas, N. Fakotakis and G. Kokkinakis, "A PC-PATR-Based Syntactic Description of Modern Greek", *Literary and Linguistic Computing*, Vol. 5, No. 3, pp. 291-312, 2000.
- [j15] I. Potamitis, N. Fakotakis and G. Kokkinakis, "Independent Component Analysis Applied to Feature Extraction for Robust Automatic Speech Recognition", *Electronics Letters, an International Publication, IEE*, Vol. 36, No. 23, pp. 1977-1978, Nov. 2000.
- [j16] E. Stamatatos, N. Fakotakis, G. Kokkinakis, "Automatic Text Categorization in Terms of Genre and Author", *Computational Linguistics*, Vol. 26, No. 4, pp. 471-495, Dec. 2000.
- [j17] E. Stamatatos, N. Fakotakis, G. Kokkinakis, "Computer-Based Authorship Attribution without Lexical Measures", *Computers and the Humanities*, Vol. 35, Issue 2, pp.193-214, May 2001.
- [j18] I. Potamitis, N. Fakotakis, G. Kokkinakis, "Robust Automatic Speech Recognition in the Presence of Impulsive Noise", *Electronics Letters, an International Publication, IEE*, Vol. 37, No. 12, pp. 799-800, June 2001.
- [j19] E. Kavallieratou, Fakotakis N. and G. Kokkinakis, "Slant Estimation Algorithm for OCR Systems", *Pattern Recognition Journal*, Vol. 34, Issue 12, pp. 2515-2522, 2001.
- [j20] N. Liolios, N. Fakotakis and G. Kokkinakis, "An Improvement to Document Skew Detection Based on Nearest Neighbor Cluster Extension", *Signal Processing and Pattern Recognition, AMSE Periodicals*, Vol. 44, No 2, pp. 9-20, 2001.
- [j21] A. Thanopoulos, N. Fakotakis, G. Kokkinakis, "Exploiting Rich Contextual Data for Automatic Extraction of Semantic Knowledge", *T.A.L. (Traitement Automatique des Langues) Journal*, Vol. 42, No 3, pp. 785-812, 2001.
- [j22] N. Liolios, N. Fakotakis and G. Kokkinakis, "On the Generalization of the Form Identification and Skew Detection Problem", *Pattern Recognition Journal*, Vol. 35, Issue 1, pp. 253-264, 2002.
- [j23] E. Kavallieratou, N. Fakotakis and G. Kokkinakis, "An Unconstrained Handwriting Recognition System", *IJDR, International Journal on Document Analysis and Recognition*, Vol. 4, No. 4, pp. 226-242, 2002.
- [j24] J. Sirigos, N. Fakotakis and G. Kokkinakis, "A Hybrid Syllable Recognition System Based on Vowel Spotting", *Speech Communication Journal*, Vol. 35, No 3-4, pp. 427-440, 2002.
- [j25] K. Georgila, N. Fakotakis, G. Kokkinakis, "Large Vocabulary Search Space Reduction Employing

- Directed Acyclic Word Graphs and Phonological Rules”, *International Journal of Speech Technology*, Vol. 5, No 4, pp. 355-370, 2002.
- [j26] E Kavallieratou, N. Fakotakis and G. Kokkinakis, “Skew Angle Estimation for Printed and Handwritten Documents using the Winger-Ville Distribution”, *Image and Vision Computing Journal*, Vol. 20, Issue 11, pp. 813-824, Sept. 2002.
- [j27] K. Georgila, N. Fakotakis, G. Kokkinakis, “Stochastic Language Modelling for Recognition and Generation in Dialogue Systems”, *T.A.L. (Traitement Automatique des Langues) Journal*, Vol. 43, No 3, pp. 129-154, 2002.
- [j28] N Liolios, N. Fakotakis and G. Kokkinakis, “Karhunen-Loeve Vs. Discrete Cosine Transform Feature Extraction for Handwritten Character Recognition”, *Signal Processing and Pattern Recognition, AMSE Periodicals*, Vol. 45, Issue 1, pp. 57-71, 2002.
- [j29] K. Georgila, K. Sgarbas, A. Tsopanoglou, N. Fakotakis, G. Kokkinakis, "A Speech-based Human-Computer Interaction System for Automating Directory Assistance Services", *International Journal of Speech Technology, Special Issue on Speech and Human Computer Interaction*, Kluwer Academic Publishers, Vol. 6, No. 2, pp. 145-159, 2003.
- [j30] K. Sgarbas, N. Fakotakis, G. Kokkinakis, "Optimal Insertion in Deterministic DAWGs", *Theoretical Computer Science, Elsevier*, Vol. 301, Issue 1-3, pp. 103-117, 2003.
- [j31] E. Kavallieratou, N. Dromazou, N. Fakotakis and G. Kokkinakis, "An Integrated System for Handwritten Document Image Processing", *IJPRAI, International Journal of Pattern Recognition and Artificial Intelligence*, Vol. 17, No. 4, pp. 101-120, 2003.
- [j32] I. Potamitis, N. Fakotakis and G. Kokkinakis, "Speech Enhancement using Band-dependent Spectral Estimators", *IEICE Trans. on Information and Systems*, Vol. E86-D, No 5, pp. 937-946, 2003.
- [j33] I. Potamitis, N. Fakotakis, N. Liolios, “Speech Enhancement based on Combining Perceptual Enhancement and Short-Time Spectral Attenuation”, *Signal Processing and Pattern Recognition, AMSE Periodicals*, Vol. 46, No. 7, pp. 53-65, 2003.
- [j34] K. Sgarbas, G. Londos, N. Fakotakis, G. Kokkinakis, "The WATCHER Project: Building an Agent for Automatic Extraction of Language Resources from the Internet", *Literary and Linguistic Computing Journal*, Vol. 18, No. 4, pp. 449-464, 2003.
- [j35] M. Maragoudakis, N. Fakotakis, “A Bayesian Network Model for Stochastic Tagging of Natural Language Texts”, *Journal of Applied Linguistics*, No. 19, pp. 63-81, 2003.
- [j36] K.L. Kermanidis, N. Fakotakis, G. Kokkinakis, “Automatic acquisition of verb subcategorization information by exploiting minimal linguistic resources”, *International Journal of Corpus Linguistics*, Vol. 9, No. 1, pp. 1-28, 2004
- [j37] T. Ganchev, I. Potamitis, N. Fakotakis, G. Kokkinakis, “Text-Independent Speaker Verification for Real Fast-Varying Noisy Environments”, *International Journal of Speech Technology, Kluwer Academic Publishers*, Vol. 7, No. 3, pp. 281-292, 2004.
- [j38] T. Ganchev, D.K. Tasoulis, M.N. Vrahatis, N. Fakotakis, “Locally Recurrent Probabilistic Neural Networks with Application to Speaker Verification”, *GESTS International Transaction on Speech Science and Engineering, SunJin P.C. Volume 1, Issue 2*, pp. 1– 13, 2004.
- [j39] K. Sgarbas, N. Fakotakis, G. Kokkinakis, “Transformation of DAWG’s into Word Lattices”, *Asian Journal of Information Technology*, Vol.3, No. 4, pp. 247-251, 2004.
- [j40] M. Maragoudakis, A. Thanopoulos, K. Sgarbas, N. Fakotakis, “Domain Knowledge Acquisition and Plan Recognition by Probabilistic Reasoning”, *IJAIT International Journal of Artificial Intelligence Tools*, Vol. 13, No. 2, pp. 333-365, 2004.
- [j41] M. Siafarikas, T. Ganchev, N. Fakotakis. “Speaker Verification Reinforced by Objective Wavelet Packets-based Speech Parameterization”, *GESTS International Transaction on Speech Science and Engineering, SunJin P.C. Volume 1, Issue 2*, pp. 60– 71, 2004.

- [j42] Liolios N., E. Kavallieratou, N. Fakotakis, “Past Performance Knowledge Utilization for Improved Handwritten Character Recognition,” *Signal Processing and Pattern Recognition, A.M.S.E. Periodical*, Vol. 0, pp. 000-000, 2004.
- [j43] I. Potamitis, P. Zervas, N. Fakotakis, “Wideband DOA estimation using complex independent component”, *GESTS International Transaction on Speech Science and Engineering*, ISSN 1738-4737, Volume 1, Issue 2, , pp. 30-39, 2004.
- [j44] P. Zervas, G. Xydias, N. Fakotakis, “Accent Placement in Heterogeneous Training and Operational Conditions with the Induction of Supervised Learning”, *GESTS International Transaction on Acoustic Science and Engineering*, ISSN 1738-4729, Volume 4, Issue 2, pp. 57-68, 2005.
- [j45] P. Zervas, N. Fakotakis, G. Kokkinakis “Improving Unit Selection Speech Synthesis Using a TTS Guided Approach”, *International Journal of Computer Science and Network Security*, ISSN 1738-7906, Volume 5, Issue 10, pp. 122-126, 2005.
- [j46] M. Maragoudakis, P. Zervas, N. Fakotakis and G. Kokkinakis: Conditional Independence–Based Classification of Intonational Phrase Boundaries, *Advances in Modelling, Series B: Signal Processing and Pattern Recognition, AMSE Periodicals*, vol. 10, No. 1, pp. 27-41, 2005.
- [j47] Maragoudakis M., Kermanidis K., Tasikas A., Fakotakis N. and Kokkinakis, “G. Bayesian Induction of Verb Subcategorization Frames in Imbalanced Heterogeneous Data”, *International Journal of Quantitative Linguistics*, Routledge, Taylor and Francis Group, Vol. 12, Number 2-3, pp. 185-211, 2006.
- [j48] Maragoudakis M, Thanopoulos A, Fakotakis N, “Meteobayes: Effective Plan Recognition in A Weather Dialogue System”, *IEEE Intelligent Systems* 22 (1): 67-77 Jan-Feb 2007.
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