

Fotini A. Papadopoulou

Assistant Professor in Signal Processing

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Education

- *2/2000, Aristotle University of Thessaloniki, Dept. of Electrical and Computer Engineering, Thessaloniki, Greece. Ph.D. with honours.
- *6/1991, Aristotle University of Thessaloniki, Dept. of Electrical and Computer Engineering, Thessaloniki, Greece. Diploma in Electrical Engineering. Diploma Degree 7.12/10.
- *6/1989, State Conservatory of Thessaloniki. Piano diploma (1st degree) with honours.
- *6/1984, Graduation from the 13th High School of Thessaloniki. Graduation degree: 19.5/20. Admission (by competition) in the Dept. of Electrical Engineering, A.U.Th. Ranking: 9th. Greek State Scholarship.

Vocational training

- *2003, Union of Dipl. Engineers Public Officers (EMDYDAS) in co-operation with the Technical Chamber of Greece (TEE). Seminar. Title: *"Short-time seminars for new engineers in public service"*, 9-13 June, Thessaloniki, Greece.
- *2002, *Introductory Education*, National Center of Public Administration, Thessaloniki, Greece.
- *2000, PATES/SELETE (Technical educator's training. Duration: two semesters), Diploma Degree: 8.9/10.
- *1998, 16th International Symposium on Electromagnetic Theory URSI'98, May 25-28, Thessaloniki, Greece
- *1992, Aristotle University of Thessaloniki, Section of Telecommunications, Dept. of Electrical and Computer Engineering. Seminar. Title: *"Stochastic Processes and Spectrum Estimation"*. Seminar tutor: Professor Athanasios Papoulis (Polytechnic Institute of New York).
- *1992, Aristotle University of Thessaloniki, Section of Telecommunications, Dept. of Electrical and Computer Engineering. Title of the program: *"Advanced Techniques and Means of Propagation of Information Signals, New Telecommunication Systems. Biomedical Signals and Propagation-Processing of Acoustic Signals"*. (Duration: one semester).
- *1991, Aristotle University of Thessaloniki, Faculty of Medicine. EU Program: *"Democritus III"*. Title: *"High Technology Devices in Health"*. (Duration: one semester).
- *1991, Aristotle University of Thessaloniki, Dept. of Electrical and Computer Engineering, Section of Telecommunications. Title of the program: *"Advanced Techniques, Telecommunication Systems and Signal Processing "*. (Duration: one semester).

Work Experience-Projects

- *August 2018-today: Assistant Professor, Dept. of Automation Engineering, Alexander Technological Educational Institution (A.T.E.I.) of Thessaloniki.
- *January 2012-July 2018: Lecturer, Dept. of Automation Engineering, Alexander Technological Educational Institution (A.T.E.I.) of Thessaloniki.

*September 2000-December 2011: Scientific Associate, Dept. of Automation, Alexander Technological Educational Institution (A.T.E.I.) of Thessaloniki.

*January 2002-December 2011: Electrical Engineer Public Officer, Municipality of Stavroupoli, Thessaloniki, Greece.

*June 1991-January 2002: Research assistant (Telecommunications Laboratory, Section of Signal Processing & Biomedical Technology, Dept. of Electrical and Computer Engineering, Aristotle University of Thessaloniki). Teaching (Technical/Vocational Education).

*IKYDA 2000-2003: Personnel Exchange Program between Greece and Germany. Funded by IKY & DAAD. Project Title: *"Enhanced Diagnostic Assessment of Lung Sounds for Detection of Lung Diseases using Innovative Signal Processing Methods,"* (IKYDA 2000). Partners: Signal Processing & Biomedical Technology Unit (Telecommunications Laboratory), Dept. of Electrical & Computer Engineering, Aristotle University of Thessaloniki, Greece,-Medizinische Poliklinik der Philipps, Universität Marburg, Germany.

*February 2000-September 2001: Program for the Support of Research in Greece Funded by the General Secretariat for Research and Technology, Ministry of Development, GR. Project Title: *"Reception, Recording and Processing of Cerebral Hemodynamics Parameters and Cerebral Activity in the Intensive Care and Anaesthesiology Unit"*, (PENED 99). Prime Contractor: Aristotle University of Thessaloniki, Dept. of Electrical and Computer Engineering, Telecommunications Laboratory, Signal Processing & Biomedical Technology Unit. Partners: AHEPA General Hospital of Thessaloniki, Intensive Care and Anaesthesiology Unit.

*June 1998-December 1999: Aristotle University of Thessaloniki, Dept. of Electrical and Computer Engineering Telecommunications Laboratory, Section of Signal Processing & Biomedical Technology in co-operation with the Geophysics Laboratory of Aristotle University of Thessaloniki. Title: *"Automated, real-time location of seismic epicenter and processing of seismic data"*.

*May 1998-June 1999: Aristotle University of Thessaloniki, Dept. of Electrical and Computer Engineering Telecommunications Laboratory, Section of Signal Processing & Biomedical Technology in co-operation with the Geophysics Laboratory and Civil Engineering Department of the Aristotle University of Thessaloniki Title: *"Control and recording of a full optical microseismical network of sensors in an active seismic area"*.

*October 1991-1998: Participation as a research assistant in many projects on Telecommunications and especially on Signal Processing (Aristotle University of Thessaloniki, Dept. of Electrical and Computer Engineering, Telecommunications Laboratory, Signal Processing & Biomedical Technology Unit).

Publications-Conferences

*2016, Healthcare Technology Letters, vol. 3, issue 4, pp. 263-268. Title: *"Fuzzy logic-based risk of fall estimation using smartwatch data as a means to form an assistive feedback mechanism in everyday living activities,"* D. E. Iakovakis, F. A. Papadopoulou and L. J. Hadjileontiadis.

*2001, International Lung Sounds Association (ILSA), 26th Annual Conference, Berlin, Germany, September 20-21. Communication. Title: *"Selective bispectrum slicing: A novel method for robust system reconstruction of wheezes and stridors,"* L. J. Hadjileontiadis, F. A. Papadopoulou, C. D. Saragiotis, G. I. Tremoulis, V. Gross, Th. Penzel.

*2000, Aristotle University of Thessaloniki, Dept. of Electrical and Computer Engineering Thesis. Title: *"Analysis and Processing of Neurophysiological Signals: Solution of the Inverse Problem in Electroneurography using the Model of Third-Order Moments and Spectrum"*.

*1999, Proceedings of the IEEE Signal Processing Workshop on Higher-Order Statistics, pp. 161-165, (SPW-HOS'99), Caesarea, Israel. Communication. Title: *"Estimation of the nerve conduction velocity distribution using partial bicepstral information,"* F. A. Papadopoulou and S. M. Panas.

*1999, IEEE Trans. Magnetics, vol. 35, no. 3, pp. 1801-1804. Title: *"Estimation of the nerve conduction velocity distribution by peeling sampled compound action potentials",* F. A. Papadopoulou and S. M. Panas.

- *1999, Med. Eng. & Physics (Special Issue), vol. 21, issue 6-7, pp. 499-505. Title: *"Bispectral de-noising of the compound action potential for estimation of the nerve conduction velocity distribution"*, F. A. Papadopoulou and S. M. Panas.
- *1998, 8th Biennial IEEE Conference on Electromagnetic Field Computation (CEFC' 98), Tucson, Arizona, USA. Communication. Title: *"A Wavelet Analysis of Sampled Compound Action Potentials for the Estimation of the Nerve Conduction Velocity Distribution"*, Fotini A. Papadopoulou and Stavros M. Panas.
- *1998, Journal of Intelligent Systems, Vol. 8, Nos. 1-2, pp.147-161. Title: *"Classification of the EMG's Recruitment Pattern Using Neural Networks"* F. Papadopoulou, A. Michou, S. Panas, I. Mavromatis.
- *1995, 8th International Symposium on Theoretical Engineering (ISTET95), Thessaloniki. Communication. Title: *"Calculation of the Extracellular Field of an Active Nerve Bundle"*, F. A. Papadopoulou, S. M. Panas.
- *1995, 11th Meeting for the Neurosciences in Greece, Metsovo. Communication. Title: *"Calculation of the Extracellular Field of an Active Nerve Bundle"*, F. A. Papadopoulou, S. M. Panas.
- *1993, Aristotle University of Thessaloniki, Dept. of Electrical and Computer Engineering. Seminars 1993-1994, edition of Section of Telecommunications. Title: *"Study of the Distribution of Conduction Velocities in a Nerve Bundle"*.
- *1992, 2nd Panhellenic Conference of Medical Informatics, Thessaloniki. Communication. Title: *"Classification of the Electromyogram by Using Artificial Neural Networks "*, A. Michou, F. Papadopoulou, S. Panas, I. Mavromatis.
- *1991, Aristotle University of Thessaloniki, Faculty of Medicine, EU Program: *"Democritus III"*. Bibliographical research. Title: *"Biological Effects of the Non Ionizing Radiation"*.
- *1991, Aristotle University of Thessaloniki, Dept. of Electrical and Computer Engineering Diploma Thesis. Title: *"Classification of the Electromyogram by Using Artificial Neural Networks"*.

Lecture Notes

- *2013, *"Laboratory Exercises on Telecommunications"*, Dept. of Automation Engineering, Alexander Technological Educational Institution (A.T.E.I.) of Thessaloniki (last revised on Jan. 2016).
- *2012, *"Laboratory Exercises on Digital Signal Processing"*, Dept. of Automation Engineering, Alexander Technological Educational Institution (A.T.E.I.) of Thessaloniki (last revised on Sept. 2013).
- *2002, *"Notes on Telecommunications"*, Dept. of Automation, Alexander Technological Educational Institution (A.T.E.I.) of Thessaloniki (last revised on Jan. 2016).
- *2001, *"Notes on Electronics I (PN, BJT, FET & SCR) "*, Dept. of Automation, Alexander Technological Educational Institution (A.T.E.I.) of Thessaloniki.

Teaching Activities

- *September 2000-today: *"Digital Signal Processing"*, Dept. of Automation Engineering, Alexander Technological Educational Institution (ATEI) of Thessaloniki.
- *September 2001-June 2002 & January 2012-today: *"Telecommunications"*, Dept. of Automation Engineering, Alexander Technological Educational Institution (ATEI) of Thessaloniki.
- *September 2017-today: *"Probabilities & Stochastic Processes"*, Dept. of Automation Engineering, Alexander Technological Educational Institution (ATEI) of Thessaloniki.
- *September 2013-January 2017: *"Mathematics III"*, Dept. of Automation Engineering, Alexander Technological Educational Institution (ATEI) of Thessaloniki.
- *September 2000-June 2002: *"Electronics I", "Electronics II"*, Dept. of Automation, Alexander Technological Educational Institution (ATEI) of Thessaloniki.
- *September 2000-June 2001: *"Electrical Technology II", "Electrical Technology Applications", "Control and Automation Systems in Automobiles"*, 13th Technical Professional/Vocational High School of Thessaloniki.

*September 1992-June 2000: "*Stochastic Signal*", Dept. of Electrical & Computer Engineering, Aristotle University of Thessaloniki.

*1996: "*Use of the PC-informatics, in persons with special needs-ex-users*" (Open University in cooperation with the Psychiatric Hospital of Thessaloniki).

Professional Organizations

*Member-Technical Chamber of Greece (TEE), 1991.

Languages

*Greek (native)

*English (First Certificate in English, University of Cambridge, 1986)

*French (Certificat Pratique de Langue Française, 1er degré, Sorbonne, Paris, 1980)

Computers/Programming

*Expert user of PC's various office productivity applications.

*Expertise in Basic, Pascal, ASYST and Matlab Programming.

*Expertise in MS-DOS, MS-Windows and Unix operating systems.

Research Interests

*Signal Processing-Digital Signal Processing

*Neural Networks

*Biomedical Engineering (EMG/ENG).

*Higher Order Statistics and Applications.

*Applications of Signal Processing and Analysis in Medical Signals.

Other Activities

*April 1990-2000: Founding member of the Music Ensemble of the School of Engineering, Aristotle University of Thessaloniki.

*1998-today: Member of "TECHNI" Macedonian Cultural Society.