

George Nokas

Address: Antikalamos Messinias. P.C. 24100
Messinia, Greece

Phone:
+30 27210 45153

Email:
g.nokas@uop.gr

General Information

Surname:	Nokas
First Name:	George
Father's name:	Nikolaos
Date of birth:	12th June 1971
Nationality:	Greek
Marital status:	Married
Military Service:	Fulfilled
Address:	Antikalamos Messinias. P.C. 24100 Messinia, Greece
Email:	g.nokas@uop.gr Telephone: 27210 - 45153, 6932-810566

Studies

1997-2004:	Received his PhD degree on Computer Engineering: "Speech recognition in noise using multiple microphones", at Patras University, Department of Electrical and Computer Engineering.
1990-1996	Patras University, Department of Electrical and Computer Engineering, Division of Telecommunications & Information Technology Diploma Thesis: "Speech recognition system based on psychoacoustic hearing models", University of Patras, 1996 – Grade: Excellent (10).

Teaching Experience

2001-2018	Adjunct Scientific Staff of the Technological Institute of Patras and of Peloponnese.
2004-2021	Teacher of Informatics in secondary schools.
2021- today	Laboratory Teaching Staff of the University of Peloponnese

Work Experience

During his collaboration with Electrical Engineering Department of the University of Patras he participated in the following projects:

- 1995-1996: "Developing of an Isolated Speech Recognition System, Speaker Independent for the Digits and a Restricted Number of Commands in PCs and through Telephone Lines" General Secretariat Of Research And Technology of Greece, Siemens S.A., University Of Patras. R&D Project.
- 1997: «ACCeSS, Automated Call Center Through Speech Understanding System (LEI-1802 10347/0)», EU.
- 1999: «KORAIS-Novel Greek-English electronic dictionary 100000 lemas». Secretariat Of Research And Technology of Greece, R&D Project.
- 2000: "Automatic Speech Recognition in Very Noisy Environments", R&D project in corporation with S^{nt} Petersburg University, Russia.
- 2001: " Development of advanced hybrid methods in critical decisions: applications in medicine", PENED.
- 2002-2004: "Telecare" EU/IN-13.

From 2004 since 2010 he was with the Laboratory of fluid mechanics and energy, Chemical Engineering Department of the University of Patras, as a post-doc researcher. During this time, he participated in the following projects:

- 2004-2005: HEACE (Health Effects in Aircraft Cabin Environment). His contribution was in the modeling of a virtual airplane passenger. More specific, an comfort index estimation system has been designed. The estimated index calculates how comfortable the passenger is feeling. The estimation system has been developed in Matlab.
- 2005–2007 PYTHAGORAS II (EPEAEK http://epeaek.upatras.gr/index/sub_project/103) in the subtask "Noise control in home/office/industry environment for the protection of the employes using automated active methods with Neural Networks and genetic algorithms as post-doc researcher.

- 2004-2006: MESEMA. His contribution consist of a) Find the optimal position of actuators for noise reduction in an airplane fuselage. b) Parameter optimization of an electric generator based on smart materials (Terfenol-B) which uses the airplane's vibrations for the production of elctrical power.
- 2006 – 2010: SENSE. His contribution consists of the development of a sound source identification/classification system for use in airport environment. The system was based on Analog Devices Blackfin Processors.

Scientific Publications

Journals (4)

Nokas, G., & Kotsilieris, T. (2023). Preventing keratoconus through eye rubbing activity detection: A machine learning approach. *Electronics (Switzerland)*, 12(4) doi:10.3390/electronics12041028

Nokas, G., & Dermatas, E. (2007). Continuous speech recognition in noise using a spectrum-entropy beam-former. *International Journal of Robotics and Automation*, 22(2), 103-110. doi:10.2316/journal.206.2007.2.206-2735

Nokas, G., & Dermatas, E. (2004). Maximum likelihood adaptation for distant speech recognition of stationary and moving speakers in a noisy reverberant environment. *Advances in Modelling and Analysis B*, 47(1-2), 33-45.

Nokas, G., & Dermatas, E. (2003). Speaker tracking for hands-free continuous speech recognition in noise based on a spectrum-entropy beamforming method. *IEICE Transactions on Information and Systems*, E86-D(4), 755-758.

Conference full paper review (4)

Nokas, G., & Dermatas, E., & George, K. (2001). Maximum likelihood adaptation for distant speech recognition of stationary and moving speakers in reverberant environments. Paper presented at the EUROSPEECH 2001 - SCANDINAVIA - 7th European Conference on Speech Communication and Technology, 2631-2634.

Nokas, G., & Dermatas, E. (2002). Hands-free continuous speech recognition in noise using a speaker beam-former based on spectrum-entropy. Paper presented at the ICASSP, IEEE International Conference on Acoustics, Speech and Signal Processing - Proceedings, , 1 I/889-I/892. doi:10.1109/icassp.2002.5743882

Nokas, G., & Dermatas, E. (2002). Spectrum-entropy based beam-former with speaker tracking for hands-free continuous speech recognition in noise. Paper presented at the International Conference on Digital Signal Processing, DSP, , 1 251-254. doi:10.1109/ICDSP.2002.1027881

Georgoulas, G. G., Stylios, C. D., Nokas, G., & Groumpos, P. P. (2004). Classification of fetal heart rate during labour using hidden markov models. Paper presented at the IEEE International Conference on Neural Networks - Conference Proceedings, , 3 2471-2475. doi:10.1109/IJCNN.2004.1381017

Conference paper abstract review (29)

Nokas, G., Dermatas, E., & Kokkinakis, G. (1997). ON THE ROBUSTNESS OF THE CRITICAL-BAND ADAPTIVE FILTERING METHOD FOR MULTI-SOURCE NOISY SPEECH RECOGNITION. Paper presented at the 5th European Conference on Speech Communication and Technology, EUROSPEECH 1997, 1587-1590.

G.Nokas, E. Dermatas And G. Kokkinakis, "Robust Speech Recognition In An Environment Of Moving Noise Sources", in proc. SPECOM, pp 105-108, Oct. 1997.

G.Nokas E.Dermatas G.Kokkinakis , "Speech Recognition In Noisy Reverberant Rooms Using Frequency Domain Adaptive Filtering " in proc. Text Speech Dialogue pp. 281-284, Brno 1998.

- G.Nokas E.Dermatas G.Kokkinakis , "Robust Speech Recognition In Noisy Reverberant Rooms " , in proc. SPECOM, pp. 257-260, Moscow 1998.
- G.Nokas E.Dermatas "Speech Recognition In Noisy Reverberant Rooms Using A Frequency Domain Blind Deconvolution Method" , in proc. Eurospeech, vol. 6, pp. 2853-2856, Budapest 1999.
- G. Nokas E.Dermatas, G. Kokkinakis, "Feature Compensation For Reverberant Speech Recognition Using Moments, - 100 years phonetics in Russia", St. Petersburg University, 2001.
- G. Nokas E.Dermatas, G. Kokkinakis: "Feature Adaptation using A Probabilistic Neural Network for Speech recognition of Moving Speakers in Reverberant Environments", in proc. Specom 2001 Moscow Russia.
- G. Nokas E.Dermatas:" Spectrum-Entropy Beam-Former For Hands-Free Continuous Speech Recognition In Real Environments", DOGS 2002, pp. 45-48, Becej Serbia.
- Koutras, I. Chtistoyanni, G. Nokas, G. Georgoulas, Ch. Stylios, P. Groumos: "Linear and nonlinear approaches for cardiogram data prediction", 5th International Workshop on Mathematical methods in scattering theory and Biomedical Technology, Corfu, Greece, 2001.
- G. Nokas, A. Koutras, I. Chtistoyanni, G. Georgoulas, Ch. Stylios, P. Groumos: "Prediction of missing data in cardiocograms using the expectation maximization algorithm", 5th International Workshop on Mathematical methods in scattering theory and Biomedical Technology, Corfu, Greece, 2001.
- G.Nokas, P. Vlachopoulos: "Reliable Tele-Education: Requirements, Scenarios and Concepts", in proc. "New Horizons in Industry and Education", Milos, Greece, 2001.
- G. Nokas, E. Dermatas and G. Kokkinakis: "Distant Speech Recognition using Stochastic Estimation of a Speaker's DOA in Microphone Arrays" , in proc. SPECOM, Moscow Russia Oct. 2003.
- I.E. Lamprinos, A. Prentza, G. Nokas, E. Dermatas, A Tsoukalis, D.Koutsouris: "Design of wireless network of sensors for continuous monitoring of vital biosignals", in proc. IEE Eurowearable 2003, Univ. of Birmingham, UK.
- Nokas G., Diamantis Z. and Tsahalis D. "Alternative neural network topologies for comfort index estimation in aircraft environments". In proc. 1st IC-SCCE, pp. 160-163, Vol. 1, Athens, Greece, September 2004.
- Nokas G., Photeinos D., and Tsahalis D. "Optimized feature extraction for comfort index estimation in aircraft environments". In proc. 1st IC-SCCE, pp. 1002-1005, Vol. 3, Athens, Greece, September 2004.
- Diamantis Z., Photeinos D., Nokas G. and Tsahalis D. "Selection of the optimal patterns for the training of an artificial neural network based virtual passenger using a genetic algorithm". In proc. 1st IC-SCCE, pp. 1097-1102, Vol. 3, Athens, Greece, September 2004.
- George Nokas, Dionysios Photeinos, Konstantinos Tsokas and Demos T. Tsahalis, "A human response model for aircraft environment based on neural networks",In proceedings of 1st EpsMso International Conference, Athens 2005.
- Tsahalis D.T., Tsokas K. Nokas G. ""A Neural Network based Human Response Model for Real Aircraft environment". In proceedings of 2nd IC-SCCE, Athens 2006.
- Nokas G., Tsahalis D.T ""Optimal Positioning of an Active Vibration Control System inside an Aircraft, with the use of a Genetic Algorithm". In proceedings of 2nd IC-SCCE, Athens 2006.
- Tsahalis D., Nokas G., Photeinos D. "Optimization of a terfenol based magnetostrictive electrical generator's parameters with the use of a genetic algorithm",In proceedings of 2nd EpsMso International Conference, Athens 2007.

Tsahalis D., Photeinos D., Nokas G. "Optimal positioning of sensor/actuator pairs for health monitoring in a fuselage", In proceedings of 2nd EpsMso International Conference, Athens 2007.

Tsahalis D., Nokas G., Photeinos D. "Optimal positioning of sensor/actuators for active vibration control inside an aircraft, with the use of a genetic algorithm", In proceedings of 2nd EpsMso International Conference, Athens 2007.

Tsahalis D., Photeinos D., Nokas G. "An Innovative Active Noise Control System Based on Artificial Intelligence Techniques - Part II Validation Results", In proceedings of 3rd IC-SCCE, Athens 2008.

Tsahalis D., Nokas G., Photeinos D. "Optimal Positioning of Actuators for Active Noise Control in an Aircraft's Fuselage", In proceedings of 3rd IC-SCCE, Athens 2008.

Tsahalis D., Nokas G., Photeinos D.. "Optimal Positioning of Collocated Sensor/Actuators Pairs for Structural Health Monitoring in an Aircraft Fuselage", In proceedings of 3rd IC-SCCE, Athens 2008.

Tsahalis D., Nokas G., Photeinos D.. "Optimal Positioning of Sensor/Actuator for Combined Active Noise Control and Structural Health Monitoring", In proceedings of 3rd IC-SCCE, Athens 2008.

Tsahalis D., Nokas G., Tsokas K., Photeinos D. "The Use of Decision Tree Classifiers for the Detection of Sound Objects Using Microphone Array Filtered Data - Part I: Theoretical background", In proceedings of 3rd IC-SCCE, Athens 2008.

Tsahalis D., Nokas G., Tsokas K., Photeinos D. "The Use of Decision Tree Classifiers for the Detection of Sound Objects Using Microphone Array Filtered Data - Part II: Applications", In proceedings of 3rd IC-SCCE, Athens 2008.

G. Nokas, J. Tsahalis and D.T. Tsahalis "CLASSIFIERS FOR SOUND OBJECTS DETECTION USING MICROPHONE ARRAY FILTERED DATA", In proceedings of 4th IC-SCCE, Athens 2010.

Other Scientific/Research activities - Memberships

Member of the conference committee in:

1st IC-SCCE, Athens, Greece, September 2004.

1st Eps-Mso , Athens, Greece, July 2005.

2nd Eps-Mso , Athens, Greece, July 2007.

3rd Eps-Mso, Athens, Greece, July 2009

Reviewer in IEEE Signal Processing Letters

Member of the Technical Chamber of Greece

Languages

English – C2

French – B2.