

1. PERSONAL INFORMATION

Date of birth: September 9th, 1978
Place of birth: Athens, GREECE
Nationality: Greek
Profession: Electrical and Computer Engineer, PhD.
Current Employment: Assistant Professor, Department of Electronics Engineering, TEI Piraeus
Marital status: Married, 2 children
Contact: +30210531813 (Office), +306973224020 (Mobile)
E-mail: ntatlas@teipir.gr

2. STUDIES AND RESEARCH INTERESTS

2.1 STUDIES

2001-2006: PhD in Electrical and Computer Engineering, Division of Telecommunications, Department of Electrical and Computer Engineering, University of Patras, Greece.
1996-2001: Diploma of Electrical and Computer Engineering (5-year curriculum), Department of Electrical and Computer Engineering, University of Patras, Greece.

2.2 RESEARCH INTEREST AREAS

- Analysis, Processing and Conversion of digital audiovisual signals
- Digital amplification of audio signals
- Coding and distribution of audiovisual signals
- Digital audio and image applications for communication networks
- Embedded audiovisual systems for consumer and professional applications
- Wireless audiovisual transmission technologies
- Open and closed space acoustics study, measurements and simulation.
- Measurement of acoustic quality, intelligibility and fidelity of audio signals
- Measurement and analysis of outdoor noise.

3. TEACHING EXPERIENCE

10/2001 – 6/2005 **Teaching assistant**, Dept. of Electrical and Computer Eng., University of Patras. Subjects taught include: Electroacoustics I & II, Information systems and Digital Audio Technology.

10/2009 – 3/2011 **Research Associate**, Department of Electronics Eng, Piraeus University of Applied Sciences
Subjects taught include: Radio and Television Systems, Audio Systems and Analog RF Electronics.

3/2011 – 6/2015 **Lecturer**, Department of Electronics Eng, Piraeus University of Applied Sciences
Subjects taught include: Radio and Television Systems, Audio Systems, Logic Circuits and Introduction in Telecommunications.

6/2015 – to date **Assistant Professor**, Department of Electronics Eng, Piraeus University of Applied Sciences

4. PROFESSIONAL EXPERIENCE

4.1 Research experience

3/2002 – 9/2004	«Infotainment management with speech interaction via remote microphone interfaces», IST. Closed space acoustics study, development of dereverberation/beamforming DSP algorithms, audio pre-processing and optimization system integration.
10/2004 – 7/2006 and	«Wireless Networked Loudspeakers», GSRT. Wireless audio transmission over WLAN protocol development, amplification and reproduction subsystem design, final system integration. Technical leader for Audio and Acoustics Group.
12/2006 – 4/2007	«General architecture for a speech recognition system targeted at commercial applications», GSRT. Study of the system architecture.
1/2009 – 7/2009	«Z-PHONE: Novel low-powered headsets based on Zigbee technology», Eurostars/GSRT. Study and specification of the audio processing, recording and reproduction subsystem.
4/2009 – 3/2011	« Design of a prototype frame for multimedia reproduction», Corallia Phase II. Study and specification of the embedded DPF system.
5/2009 – 3/2011	«MEMSense: Development of Innovative sensor systems offering distributed intelligence», Corallia Phase II. Technical leader for the “smart microphone” system.
7/2012 – 10/2015	“A distributed microelectronic system for environmental monitoring with emphasis on sound mapping (ESOUNDMAPS)”.
10/2013 – 10/2015	«Energy autonomous smart greenhouse», Team Leader.
1/2015 – to date	«ENTOMATIC, Novel automatic and stand-alone integrated pest management tool for remote count and bioacoustics identification of the Olive Fly (<i>Bactrocera oleae</i>) in the field», Grant agreement No: 605073»

4.2 Other professional experience

10/2001 – 5/2002	System Engineer, ATMEL Hellas S.A. DSP engineer, Bluetooth group and VoIP group.
7/2008 – 7/2009	Research projects manager, inAccess Networks SA.
8/2009 – 3/2011	Research projects manager, BLUEdev LTD.

5. SCIENTIFIC/TECHNICAL MEMBERSHIPS

1. Member of the Institute of Electrical and Electronic Engineering (IEEE)
2. Member of the Audio Engineering Society (AES). Board member of the AES Greek Section.
3. Member of the Technical Chamber of Greece.

6. FOREIGN LANGUAGES

- English, proficient (Cambridge Proficiency)
- French, average (Delf 2nd Degree)

7. KEY PUBLICATIONS

- [Π1] T. Giannakopoulos, **N. A. Tatlas**, T. Ganchev, I. Potamitis, “A practical, real-time speech-driven home automation front-end”, *IEEE Transactions on Consumer Electronics*, Volume 51, No.2, May 2005, pp. 514-523.
- [Π2] A. Floros, **N. A. Tatlas** and J. N. Mourjopoulos, “BlueBox: A cable-free Digital Jukebox for compressed-quality Audio Delivery”, *IEEE Transactions on Consumer Electronics*, Vol. 51, No. 2, May 2005, pp. 534 – 539.
- [Π3] A. Floros, **N. A. Tatlas** and J. Mourjopoulos, “A High-quality Digital Audio Delivery Bluetooth Platform”, *IEEE Transactions on Consumer Electronics*, Vol. 52, No.3, Aug. 2006, pp. 909-916.
- [Π4] **N. A. Tatlas**, A. Floros, T. Zarouchas and J. Mourjopoulos, “Perceptually-optimized Error Concealment for Audio over WLANs”, *Mediterranean Journal of Electronics and Communications*, Vol. 3, No. 3, July 2007, pp. 77 - 86.
- [Π5] **N. A. Tatlas**, A. Floros, T. Zarouchas and J. Mourjopoulos, “WLAN Technologies for Audio Delivery”, *Advances on Multimedia Journal*, Special Issue “Multimedia Transmission over Emerging Wireless Technologies”, Volume 2007, Article ID 12308, December 2007.
- [Π6] **N. A. Tatlas**, F. Kontomichos and J. Mourjopoulos, “Design and Performance of a Sigma-Delta Digital Loudspeaker Array Prototype”, *Journal of the Audio Engineering Society.*, Vol. 57, No. 1/2, 2009 January/February.
- [Π7] S.M. Potirakis, **N. A. Tatlas**, N. Zafeiropoulos, T. Ganchev, M. Rangoussi, «Assessment of military intercom headsets for maximum voice reproduction level in high noise conditions», *Applied Acoustics* 74 (2013) 870–881, doi: 10.1016/j.apacoust.2012.12.009.
- [Π8] S. Psarras, P. Hatziantoniou, M. Kountouras, **N. A. Tatlas**, J. Mourjopoulos and D. Skarlatos, “Measurements and analysis of the Epidaurus ancient theater acoustics”, submitted for review to *Acta Acustica united with Acustica*, May 2012 (invited).
- [Π9] T. Ganchev, S. M. Potirakis, G. Tuna, **N. A. Tatlas**, R. Zogo, «Design considerations of an interactive robotic agent for public libraries», *Journal of Balkan Libraries Union* 1(1), 1-6, 2013 (<http://bkdb.trakya.edu.tr/index.php/bluj/article/view/3>).
- [Π10] S. M. Potirakis, B. Nefzi, **N. A. Tatlas**, G. Tuna, and M. Rangoussi, “A Wireless Network of Acoustic Sensors for Environmental Monitoring”, accepted for publication in *Key Engineering Materials*, 11/2013.
- [Π11] S. M. Potirakis, B. Nefzi, **N. A. Tatlas**, G. Tuna, and M. Rangoussi, “Design Considerations for an Environmental Monitoring Wireless Acoustic Sensor Network”, accepted for publication in *Sensor Letters*, 12/2013.
- [Π12] **N. A. Tatlas**, S. M. Potirakis, S. A. Mitilineos, M. Rangoussi, «On the effect of compression on the complexity characteristics of wireless acoustic sensor network signals», *Signal Processing*, 2014, doi: 10.1016/j.sigpro.2014.08.012.
- [Π13] **N. A. Tatlas**, D. Ballios, S. Potirakis, C. Charitou, S. Koutroubinas, M. Rangoussi, “A smart sensor platform for Greenhouse applications”, *Key Engineering Materials* Vol 644 (2015) pp 92-95, doi: 10.4028/www.scientific.net/KEM.644.92
- [Π14] S. A. Mitilineos, S. M. Potirakis, N.A. Tatlas, and M. Rangoussi, “High-Level Sound Classification in the ESOUNDMAPS Project”, *Key Engineering Materials* Vol 644 (2015) pp 83-86, doi:10.4028/www.scientific.net/KEM.644.83
- [Σ1] P. Hatziantoniou, I. Potamitis, **N. A. Tatlas**, J. Mourjopoulos and N. Fakotakis, “Robust speech recognition in reverberant environments based on complex-smoothed responses”, presented at the 10th International Conference on Speech and Computer, Patras, October 2005

- [Σ2] **N. A. Tatlas**, A. Floros and J. Mourjopoulos, “Wireless Digital Audio Delivery Analysis and Evaluation”, Proceedings of the IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP) 2006, Toulouse, France, 16 – 19 May 2006, pp. V-201 – V-204.
- [Σ3] **N. A. Tatlas**, A. Floros, T. Zarouchas and J. Mourjopoulos, “An Error – Concealment Technique for Wireless Digital Audio Delivery”, In Proc. of the 5th International Conference on Communication Systems, Networks and Digital Signal Processing (CSNDSP’06), July 19 – 21 2006, Patras, Greece, pp. 181 - 184.
- [Σ4] *K. Agavanakis*, G. Panagakis, **N.A. Tatlas** and S. Koutroubinas, “Hardware Virtualization for Rapid and Secure CE Product Development and Life Cycle Management”, IEEE International Conference on Consumer Electronics (ICCE 2011), January 9-11 2011, Las Vegas.
- [Σ5] A. Floros and **N.A. Tatlas**, “Spatial enhancement for immersive stereo audio applications”, 17th International Conference on Digital Signal Processing (DSP 2011), July 6-8 2011, Corfu, Greece.
- [Σ6] A. Floros, **N.A. Tatlas** and S. Potirakis, “Sonic perceptual crossings: a tic-tac-toe audio game”, Proceedings of the 6th Audio Mostly Conference: A Conference on Interaction with Sound, p. 88-94, 2011.
- [Σ7] S. Vassilantonopoulos, *P. Hatziantoniou*, **N.A. Tatlas**, T. Zakynthinos, D. Skarlatos and J. Mourjopoulos, “Measurements and analysis of the acoustics of the ancient theatre of epidaurus”, presented at The Acoustics of Ancient Theatres Conference, Patras, September 18-21, 2011
- [Σ8] S. M. Potirakis, B. Nefzi, **N.A. Tatlas**, G. Tuna and M. Rangoussi, “A wireless network of acoustic sensors for environmental monitoring”, 3rd International Conference on Materials and Applications for Sensors and Transducers, IC-MAST 2013, September 13-17, 2013, Prague, Czech Republic.
- [Σ9] G. Tuna, S. M. Potirakis, **N. A. Tatlas**, A. Tuna, R. Zogo, G. Gezer and K. Gulez, “Design Considerations of a Robotic Agent for Libraries”, 7th International Advanced Technologies Symposium (IATS’13), Yildiz Technical University, Istanbul, Turkey, 30 October - 1 November, 2013.
- [Σ10] G. Gezer, K. Gulez, B. Nefzi, S. M. Potirakis, **N. A. Tatlas** “Autonomous control of multi-boat group with neural networks”, 7th International Advanced Technologies Symposium (IATS’13), Yildiz Technical University, Istanbul, Turkey, 30 October - 1 November, 2013.
- [Σ11] S. Mitilineos , S. Potirakis , **N. A. Tatlas** , M. Rangoussi, “High-level sound classification in the ESOUNDMAPS project”, in Proceedings of the 4th International Conference on Materials and Applications for Sensors and Transducers, IC-MAST 2014, June 8-11, 2014, Bilbao, Spain.
- [Σ12] **N. A. Tatlas**, D. Ballios, S. Potirakis, C. Charitou, S. Koutroubinas, M. Rangoussi, “A smart sensor platform for Greenhouse applications”, in Proceedings of the 4th International Conference on Materials and Applications for Sensors and Transducers, IC-MAST 2014, June 8-11, 2014, Bilbao, Spain.
- [Σ13] K. Drossos, A. Floros, S. Potirakis, **N. A. Tatlas**, and G. Tuna, “A Socially-Intelligent Multi-Robot Service Team for In-Home Monitoring”, Proceedings of the IISA 2014, The 5th International Conference on Information, Intelligence, Systems and Applications, Chania, Crete, Greece, 7-9 July 2014, 159 – 164, doi: 10.1109/IISA.2014.6878763.