

Personal Data

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Short Profile

Dr. A. Tzavaras has a multidisciplinary academic and working experience in Health sector. He holds a PhD in Health Informatics from the City University, London UK. His multidisciplinary interest is supported by international publications in the fields of Health Economics and Management, Medical Research Prototype development and Artificial Intelligence in Medical Decision Support Systems. He has worked with Notified Bodies for the Certification of Medical Devices as a Technical Specialist. He has participated in the design, development and management of several research projects, including European and Government - University funded research. Through the years of lecturing he has developed good communication and presentation skills, and fast adaptation to new knowledge base, to meet the demands of different audience (academic students and healthcare professionals) and scientific topics. His hobbies include sport activities, travelling and continuous education.

Selected Scientific Publications**International peer-reviewed journals:**

B. Spyropoulos, M. Botsivaly, K. Koutsourakis, M. Marinis, P. Sochos and **A. Tzavaras**, Application Tools supporting Decision Making in the Modern Hospital, *International Journal of Scientific Research (IJSR)*, 2006;16: 129-133.

M. Botsivaly, B. Spyropoulos, M. Marinis, P. Sarantakis, G. Nikoloudakis, I. Balabanis, N. Karagiannis, I. Limnou, M. Moschidis, **A. Tzavaras**, K. Koutsourakis, Software Development for the Estimation of the Mean DRGs related Treatment Cost, *J. Stud in Health Technol Inform*, 2006; 12: 307-312.

B. Spyropoulos, M. Botsivaly, **A. Tzavaras**, K. Koutsourakis, E. Koulouris, D. Liargovas, K. Mertika, "Development of a system supporting Patient Supervision and Treatment in contemporary Home-Care", *J. Stud. in Health Tech and Inform*, 2006;124:91-98.

B. Spyropoulos, **A. Tzavaras**, M. Botsivaly, "Development of a low-cost on-line Blood-product Refrigerators' Inventory Management System based on RFID-tagging", *Transfusion Supplement*, 2008;48:256A.

B. Spyropoulos, **A. Tzavaras**, M. Botsivaly, K. Koutsourakis, "Ensuring the Continuity of Care of Cardio-respiratory Diseases at Home: Monitoring Equipment and Medical Data Exchange over Semantically annotated Web Services", *Methods of Inf Med*. 2010; 49(2):156-160.

A. Tzavaras, P.R. Weller, Classical approaches and intelligent systems in Ventilation Management: A Survey. *Critical reviews in biomedical engineering* 2010;38(2):157-188.

Peer reviewed conference proceedings:

A. Tzavaras, M. Athanasiou, A. Hatjiokakimidis, P. Diamandi, E. Ventouras, "Implementation of a simulated Radiology DICOM-PACS network", *Proc. WSEAS conference on Engineering Education*, Venice, Italy, 2004, *WSEAS Transactions on Advances in Engineering Education*, 2004;1:45-47.

A. Tzavaras, B. Spyropoulos, A. Koufakis, K. Gatsios, Multivariable Fuzzy Logic Ventilator Advisory System, Paper Nr. 1716, *Proceedings of the EMBECC' 05 Conference 20-25 November 2005*, Prague, Czech Republic.

M. Botsivaly, B. Spyropoulos, **A. Tzavaras**, P. Sarantakis, M. Moschidis, M. Marinis, K. Koutsourakis, A Software-Tool allowing for Departmental Hospital Operational Cost Estimation, Paper Nr. 1697, *Proceedings of the EMBECC' 05 Conference 20-25 November 2005*, Prague, Czech Republic.

B. Spyropoulos, M. Botsivaly, **A. Tzavaras**, G. Nikoloudakis, I. Balabanis, N. Karagiannis, I. Limnou, *Acquisition of Cost Data for Surgery and Intensive Medicine to be employed for drafting a DRGs Hospital Reimbursement System in Greece*, Paper Nr. 2067, *Proceedings of the EMBECC' 05 Conference 20-25 November 2005*, Prague, Czech Republic.

B. Spyropoulos, M. Botsivaly, **A. Tzavaras**, K. Koutsourakis, A comprehensive Training Approach for Biomedical Engineers in Intensive Medicine and Operation Room Technology, *Proceedings of the 2005 WSEAS International Conference on Engineering Education*, Vouliagmeni, Athens, Greece, July 8-10, 2005.

A. Tzavaras, N. Kontodimopoulos, E. Monoyiou, I. Kalatzis, N. Piliouras, I. Trapezanidis, D. Cavouras, E. Ventouras, Upgrading Undergraduate Biomedical Engineering Laboratory Training, *Engineering in Medicine and Biology Society*, 2005. *IEEE-EMBS 2005. 27th Annual International Conference of the IEEE*, 17-18 Jan. 2006 Page(s):353 – 356.

B. Spyropoulos, **A. Tzavaras**, M. Botsivaly, M. Moschidis, K. Koutsourakis, An integrated System supporting Training in medical and administrative Decision Making in the Emergency Department, *Engineering in Medicine and Biology Society*, 2006. *EMBS '06. 28th Annual International Conference of the IEEE*, Aug. 30 2006-Sept. 3 2006 Page(s):2593 - 2596 .

A. Tzavaras, E. Koulouris, D. Liargovas, T. Athanassiadis, A. Lychounas, M. Botsivaly, B. Spyropoulos, Development of custom made Patient-monitoring Hardware supporting Home-Care, *Proceedings of the 5th European Symposium on Biomedical Engineering (ESBME 2006)*, 7-9 July, 2006, Patra, Greece.

B. Spyropoulos, M. Botsivaly, **A. Tzavaras**, K. Koutsourakis, *Extending the use of DRGs to estimate mean Home-Care cost by employing an adapted ASTM E2369-05 Continuity of Care Record*, *Engineering in Medicine and Biology Society*, 2006. *EMBS '06. 28th Annual International Conference of the IEEE*, Aug. 30 2006-Sept. 3 2006 Page(s):5210 – 5213.

B. Spyropoulos, M. Botsivaly, **A. Tzavaras**, K. Koutsourakis, E. Koulouris, D. Liargovas, K. Mertika, Development of a system

supporting Patient Supervision and Treatment in contemporary Home-Care: Status Report, Proceedings of MIE 2006, 27-30 August 2006, Maastricht, The Netherlands (also appears in Stud Health Technol Inform 124 (2006) 91-96).

B. Spyropoulos, **A. Tzavaras**, M. Botsivaly, K. Koutsourakis, E. Koulouris, and D. Liargovas, Development of Low-Cost Hardware Supporting Mobile Home-Care, World Congress on Medical Physics and Biomedical Engineering 2006 (WC2006), August 27 - September 1, 2006, Seoul, South Korea.

A. Tzavaras, B. Spyropoulos, R. Gruen, *Diagnosis Related Groups: Approval and suitability for the Greek National Health System*, Proceedings of ITAB 2006, 26-28 October 2006, Ioannina, Greece.

A. Tzavaras, P.R. Weller, B. Spyropoulos A, A Neuro-Fuzzy Controller for the estimation of Tidal Volume and Respiration Frequency ventilator settings for COPD patients ventilated in control mode. Engineering in Medicine and Biology Society, 2007. EMBS 2007. 29th Annual International Conference of the IEEE, 22-26 Aug. 2007 Page(s):3765 – 3768.

B. Spyropoulos, **A. Tzavaras**, M. Botsivaly, D. Kligopoulos, A. I. Filippas, K. Mertika, T. Athanassiadis, E. Koulouris, D. Liargovas, A. Lychounas, K. Koutsourakis, Developing an integrated system supporting contemporary Home-Care, Proceedings of the 12th World Congress on Health Informatics MEDINFO 2007, 20-24 August 2007, Brisbane, Australia.

B. Spyropoulos, **A. Tzavaras**, M. Botsivaly, K. Koutsourakis, Supporting Cardio-respiratory Diseases related House-call Medical Practice. In: B.Blobel, P.Pharow, J.Zvarova and D.M.Lopez (Edrs.): Combining Health Telematics, Telemedicine, Biomedical Engineering and Bioinformatics to the Edge – CeHR 2007 Conference Proceedings. IOS Press and Akademische Verlagsgesellschaft Aka, Berlin 2008.

B. Spyropoulos, M. Botsivaly, **A. Tzavaras**, Software supporting the Continuity and the Assessment of the Resources necessary for contemporary Home-care. In: B.Blobel, P.Pharow, J.Zvarova and D.M.Lopez (Edrs.): Combining Health Telematics, Telemedicine, Biomedical Engineering and Bioinformatics to the Edge – CeHR 2007 Conference Proceedings. IOS Press and Akademische Verlagsgesellschaft Aka, Berlin 2008.

A. Tzavaras, B. Spyropoulos, E. Kokalis, A. Palaiologos, D. Georgopoulos, G. Prinianakis, M. Botsivaly P.R.Weller, A Classification Attempt of COPD, ALI-ARDS and Normal Lungs of ventilated Patients through Compliance and Resistance over Time Waveform Discrimination, , IFMB Proceedings (EMBE November 23-28, 2008, Antwerp, Belgium), Springer, 2008, Vol. 22, pp.192-195.

A. Tzavaras, B. Spyropoulos, P. Weller, Decision support tools in the ICU; ventilation management for patients with COPD, MEDICEXPO 2008, Athens, Greece.

B. Spyropoulos, M. Botsivaly, **A. Tzavaras**, P. Spyropoulou, "Towards Digital Blood-Banking", ITU-T Kaleidoscope event, Mar del Plata, Argentina, 31 Aug - 1 Sep 2009.

A. Tzavaras, P.R.Weller, G. Prinianakis, A. Lahana, P. Afedoulis, B. Spyropoulos, Locating of the Required Key-Variables to Be Employed in a Ventilation Management Decision Support System, 33rd Annual International IEEE EMBS Conference, August 30 - September 3, 2011, Boston Marriott Copley Place, Boston, MA, USA.

B. Spyropoulos, M. Botsivaly, **A. Tzavaras**, Supporting technically the Continuity of Medical Care: Status report and perspectives, ITU Kaleidoscope event, 12 - 14 December 2011, Cape Town, South Africa.

P. Afentoulidis, **A. Tzavaras**, B. Spyropoulos ,Development status of a low cost system quasi-visualizing pathological alteration of the lungs based on their acoustic response modification, ESCR 2011 Annual Scientific Meeting, Amsterdam, the Netherlands, October 27 - 29, 2011.

A. Tzavaras, B. Spyropoulos, Development of a Low-Cost Wireless Monitoring System Supporting the Continuity of Medical Care of the Patient at Home, 35th Annual International IEEE EMBS Conference, Osaka, Japan, 3-7 Jul, 2013.

B. Spyropoulos, **A. Tzavaras**, D. Zogogianni, M. Botsivaly, Adapting the Design of Anesthesia Information Management Systems to Innovations Depicted in Industrial Property Documents, 35th Annual International IEEE EMBS Conference, Osaka, Japan, 3-7 Jul, 2013.

B. Spyropoulos, **A. Tzavaras**, P. Afentoulifis, M. Botsivaly, Supporting medical house-call by expanding bedside in-vitro point of care test-range and attaining respiratory sounds' visualization, Point-of-Care Healthcare Technologies (PHT), 2013 IEEE, DOI: 10.1109/PHT.2013.6461309.

A. Tzavaras, B. Spyropoulos, P.R. Weller, Fuzzy Reasoning Clinical Decision Support for Manual Titration of Positive Airway Pressure Support and Oxygen supply in Patients with Obstructive Sleep Apnea, IEEE BHI 2014, Valencia, Spain, 1-4 June, 2014.

A. Tzavaras, B. Spyropoulos, Development of a system for telemonitoring of respiration parameters for patients with Obstructive Sleep Apnea, EMBC 2014, Conf Proc IEEE Eng Med Biol Soc. 2014;2014:3472-5. doi: 10.1109/EMBC.2014.6944370.

Book contributions:

B. Spyropoulos, M. Botsivaly, **A. Tzavaras**, K. Koutsourakis, Optimization of Medical Supervision, Management, and Reimbursement of contemporary Home Care. In: Encyclopedia of Healthcare Information Systems, (edited by Dr. Wickramasinghe and Eliezer Geisler) ISBN: 978-1-59904-889-5, IGI Global, Hershey, PA, USA, 2008.

A. Tzavaras, E. Ventouras, Evaluation of a Radiology Picture Archiving and Communication System Laboratory Exercise, Current Developments in Technology-Assisted Education (2006). VOL. II: Technological Science Education, Collaborative Learning, Knowledge Management, pp. 735-1404, ISBN of Collection (13): 978-84-690-2469-8 / ISBN Vol. II (13): 978-84-690-2472-8.

Books:

A. Tzavaras, Capital Budgeting Analysis for Medical Equipment, Radiology Department, ISBN-13: 978-1456525026.

Selected short papers-abstracts conference peer-reviewed proceedings:

G. Angelopoulos, C. Tsigkas, **A. Tzavaras**, B. Spyropoulos; Digital Multiplexer supported scanning Data Collection Method to be employed in Electrical Impedance Tomography simulation measurements, ESCR 2010, Prague, Czech Republic, October 28-30, 2010.

B. Spyropoulos, M. Marinis, V. Mamakou, M. Botsivaly, **A. Tzavaras**, Software supporting Physicians Training in Patients DRG-Assignment Rules and ISO 13606-1 compliant Discharge Reporting , AMIA 2010, Washington, DC, Nov. 13-17, 2010.

A. Tzavaras, P.R.Weller, B. Spyropoulos, Developing and Evaluating Intelligent Decision Support Models in Ventilation Management, EFMI STC Conference, Prague Czech Republic, 17-19 April, 2013.