CURRICULUM VITAE

MARIA N. RANGOUSSI

I.   PERSONAL DATA

Full Name:	Maria Rangoussi
Born :	April 18, 1964 / Athens, Greece
Profession:	Electrical Engineer, MSc, PhD.
Current Employment:	Professor, Dept. of Electronics Eng., TEI Piraeus/Greece
Marital status:	Married - 2 children.
Home address:	64, Parnassoy str, Halandri-Athens, GR-15234, Greece
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II.   STUDIES

1991-1995   PhD in Electrical and Computer Engineering, Division of Computer Science, Department of Electrical and Computer Engineering, National Technical University of Athens (NTUA), Greece.

1988-1990   MSc in Electrical Engineering, Department of Electrical Engineering, University of Virginia, Virginia, USA, under a scholarship from The Fulbright Foundation. (Thesis option, Major: Digital Signal Processing, Minor: Automatic Control). GPA: 4.0 / 4.0.

1982-1987   Diploma of Electrical Engineer (5-year curriculum), Department of Electrical Engineering, NTUA, Athens, Greece. Option: Computer Engineering. Grade: 8.2 / 10.00.

Languages:
- Greek (mother tongue),
- English C2 (Cambridge Certificate of Proficiency, 1980),
- French B2 (Certificat de Langue Francaise, 1984).

Scholarships:
- Grant for graduate studies in the USA from the Fulbright Foundation, 1988, (2 years).
- Fellowship of the Dean, School of Engineering and Applied Science, University of Virginia, Virginia, USA, 1988-89.
- Research grant from the Research Institute EUROTRA, Greece, for research in speech technology, 1993 (7 months).
- Research grant from the Institute of Language and Speech Processing (ILSP), Athens, Greece, for research in digital speech processing, 1990 (5 years).

Research Interests and Specialization Areas:
Digital signal processing (linear and non-linear methods), spectral and time-frequency/time-scale analysis, signal detection, pattern recognition / classification, linear and non-linear system modeling, noise mapping & control, biomedical signal and image processing, speech and audio analysis/processing/recognition, automatic fault detection and classification in production processes, non-linear classifiers (ANNs, fuzzy-logic, SVMs), intelligent systems and materials characterization and modeling, environmental signals monitoring and analysis, Electric

Power Quality monitoring methods, E-learning and Engineering Education (E-learning, virtual and remote laboratories, adaptive / personalized / affective computing in Education).

- Research h-index: 9 (Scopus).
- Citations: 346 (Scopus), 578 (all sources).

III. PROFESSIONAL and RESEARCH ACTIVITIES

Brief description of jobs / positions held:
- Freelance Electrical Engineer and Research Engineer, Athens, Greece, 1990 – 1998.
- Academic Staff, Department of Electronics Eng., TEI Piraeus, Greece, 1998 – today. Assistant Professor (1998-2003), Associate Professor (2003-2007), Professor (2007-today).

Teaching Experience:
- Teaching Assistant, MSc course "Digital Communications", Communications Lab, Department of Electrical Engineering, University of Virginia, USA (1989-90, part-time position).
- Teaching Assistant, 7th semester undergraduate course "Digital Signal Processing", Department of Electrical and Computer Engineering, NTUA, Greece (1991-92 up to 1994-95).
- Adjunct assistant professor, undergraduate courses "Programming in Assembly" and "Microprocessors", Dept. of Computer Engineering, TEI Piraeus (1995-96 up to 1997-98).
- Adjunct Lecturer, MSc course "Advanced stochastic models for signal processing", Institute for Electronic Systems, Aalborg University, Aalborg, Denmark, (1995, 1996).
- Adjunct assistant professor, (employed under law 407/1980), 8th semester undergraduate course "Computer Networks" (laboratory), Communications Lab, Dept. of Electronics and Computer Engineering, Technical University of Crete, Chania, Greece, (1996).
- TEI Piraeus academic staff, undergraduate courses taught (lectures and laboratory instruction):
  1. Analog Electronics I, II and III,
  2. RF Electronic Circuits Design,
  3. Electric Circuits I and II,
  4. Automatic Control Systems I and II,
  5. Intelligent Control Systems,
  6. Digital Signal Processing.
- TEI Piraeus academic staff, graduate (MSc) courses taught:
  1. "Biomedical Signal and Image Analysis" in the MSc Programme "Health Informatics" run by the University of Athens (1998-2009),
  2. "E-learning Systems and Tele-education Technologies" in the MSc programme "Information and Communication Technologies in Education" run by the University of Athens (2005-today).
  3. "Green and Energy-aware Electronic Systems", in the MSc programme "Internetworked Electronic Systems", offered by the Department of Electronics Engineering since 2015-16 (2015- today).

Research Experience:
- Research Engineer, "Development of an integrated platform for text to speech conversion", *tender*: DSP Lab, Dept. of Electrical Engineering, NTUA, *funding*: E.U. ESPRIT-I Project 64 "SPIN: Speech Automation in Office Workstation", (1988).
- Research Engineer, "Fast algorithms and Multi-Processing in Pattern recognition and signal processing", *tender*: Dept. of Electrical Engineering, NTUA, *funding*: General Secretariat for Research and Technology (GSRT), Min. of Development, PENED 89/201, (7/1991-7/1993).
- Visiting researcher, "ASIC design for hearing aids", funding: Institute for Electronic Systems, Aalborg University, Aalborg, Denmark (1995).
- Research engineer, "NIKA: An integrated system for processing and management of medical images", *tender*: Dept. of Electrical Engineering, NTUA, *funding*: GSRT, Min. of Development, EPET-II, (1996).
- Research Engineer, "Design, Implementation and Deployment of the University of Piraeus Computer Network", *tender*: University of Piraeus research Center, *funding*: Min. of Education and E.E./ESF, O.P. EPEAEK-I, (1996-1998).

- Research Engineer, "EUDOXUS: Tele-training of secondary education teachers on East Aegean Islands", *tender*: Univ. of Piraeus and Aegean Univ., *funding*: Min. of Education and E.E./ESF, O.P. EPEAEK-I, (1999).
- Research project leader for TEI Piraeus, "Digital System for Automatic Surveillance of TV and radio content", *tender*: Image, Video and Multimedia Lab, NTUA and Dept. of Electronics, TEI Piraeus, *funding*: GSRT, Min. of Development & MDM S.A., Greece, PABE'99, (1999-2000).
- Research project leader, "Digital Processing and Recognition of speech Signals", *tender*: Dept. of Electronics Eng., TEI Piraeus, *funding*: TEI Piraeus Research Center, (internal research program, 2000).
- Research engineer, "Non-linear processing and classification of Electroencephalograms", and "DSP methods applied as a non-destructive alternative in the analysis of fabrics", *tender*: Dept. of Electronics Eng., TEI Piraeus, *funding*: TEI Piraeus Research Center, (internal research program, 2001).
- Research project leader "Electrically conductive fabrics", *tender*: Dept. of Electronics Eng., TEI Piraeus, *funding*: Min. of Education and E.E./ESF, O.P. EPEAEK-II "Archimedes-I" (1/2004 – 12/2006).
- Research engineer, "Data analysis for the NA49/SPS experiment and development of electronic sub-systems for the TPC/TRD detectors of the ALICE/LHC Experiment," *tender*: Dept. of Physics, Univ. of Athens, *funding*: Min. of Education and E.E./ESF, O.P. EPEAEK-II "Pythagoras-II" (1/2005 – 12/2006).
- Research engineer, "Telecontrolled intelligent robot in a mixed reality environment," *tender*: Dept. of Electrical and Computer Eng., Aristotle Univ. of Thessaloniki, *funding*: Min. of Education and E.E./ESF, O.P. EPEAEK-II "Pythagoras-II" (1/2005 – 12/2006).
- Research engineer, "VEMUS (Virtual European Music School)," *tender*: Institute for Language and Speech Processing (ILSP), Research & Innovation Centre "Athena", *funding*: GSRT, Min. of Development and E.E., IST-VEMUS-027952 (1/2006 – 12/2007).
- Research engineer, "Noise pollution suppression in work/public environments using a digital active noise control system," *tender*: Dept. of Electronics Eng., TEI Piraeus, *funding*: Min. of Education and E.E./ESF, O.P. EPEAEK-II "Archimedes-II-Environment" (1/2005 – 8/2008).
- Research engineer, "Development of novel technologies for the spectrum control of Organic Light Emitting Diodes and applications in advanced optoelectronic devices," *tender*: Dept. of Electronics Eng., TEI Piraeus, *funding*: Min. of Education and E.E./ESF, O.P. EPEAEK-II "Archimedes-II" (1/2005 – 8/2008).
- Research project leader, "Active crossover circuits for loudspeakers: alternative technologies and time-frequency analysis", *tender*: Dept. of Electronics Eng., TEI Piraeus, *funding*: TEI Piraeus Research Center, (internal research program, 2009-2010).
- Research engineer, "PIMACTex: Applications of textile products based on smart materials on the monitoring, display and control of physiological parameters", *coordinator:* Dept. of Electronics Eng., TEI Piraeus, *funding* (total budget 600,000 euro): GSRT, Min. of Development and E.U./ERDF, O.P. «Competitiveness and Entrepreneurship» (OPCE II) – submitted 11/2009, selected for funding, (2011-2015, completed).
- Research project leader and engineer in three (3) research proposals on Hi-Fi digital audio, on indoors wireless user localization by Direction of Arrival estimation and on advanced electronics design, "Thales" call, *funding*: Min. of Education and E.E./ESF, O.P. "Education and LifeLong Learning" –submitted 1/2010, not funded.
- Research project leader for (partner) TEI Piraeus, "SoundSignage: Intelligent system for stereoscopic audiovisual public information", *coordinator:* Bluedev S.A., Greece, *funding* (total budget 500,000 euro): GSRT, Min. of Development and E.U./ERDF, O.P. «Competitiveness and Entrepreneurship» (OPCE II) – submitted 6/2010, selected for funding – Not funded.
- Research project leader for (partner) TEI Piraeus, "SENS-ERA: Strengthening sensor research links between the Georgian Technical University and the European Research Area," *coordinator*: Georgian Technical University (GTU), *funding* (total budget 693,000 euro): E.U., FP7-INCO-2011-6.1, ERA WIDE (2011-2013, completed).
- Research engineer, "SAVELEC: Safe control of non cooperative vehicles through electromagnetic means", coordinator: Institute of the Technological Applications through Advanced Communications (ITACA), Polytechnic University of Valencia partners: Deutsches Zentrum Fuer Luft - und raumfahrtev, MBDA France S.A, IMST Gmbh, Technological Education Institute of Piraeus, BCB Informática y Control S.L, Statens Vag-Och Transportforskningsinstitut, Otoo-Vov-Guericke-Universitat Magdeburg, Akadémia ozbrojenýchsíl gen. M.R. Štefánika, Hellenic Aerospace Industry SA, funding: EU FP7-SEC-2011.1.4-2: Innovative techniques for safe external control of non cooperative vehicles – Capability Project.– submitted 12/2010, selected for funding 8/2011 (2011- 2016). Budget: 3.395.416euro (total budget).

- Research team member, "FLARETEX: Sustainable flame retardancy for textiles and related materials based on nanoparticles substituting conventional chemicals" Cost Action MP-1105. Coordinator: University of Ghent, partners: Universities from 22 countries, selected for funding (2011-2014)
- Research Project Leader, "ESOUNDMAPS: A distributed microelectronic system for environmental monitoring with emphasis on sound mapping," coordinator: Dept. of Electronics Eng., TEI Piraeus, partners: National and Kapodistrian University of Athens, Department of Informatics and Telecommunications, University of Patras, Department of Electrical and Computer Engineering, funding: greek Ministry of Education and E.U./European Social Fund, Operational Program "Education and Life-Long Learning (EDULLL)", call "Archimedes-III" (submitted: Phase 1 (in greek) 9/2009, Phase 1 (in english) 9/2010, Phase 2 (in english) 4/2011, selected for funding: 10/2011). Budget: 100,000 euro. (2012-2015, completed).
- Research engineer, "NPQFM: Model Development for Power Quality assessment in Electric Networks using Fuzzy Logic and Analytic Measurements," coordinator: Dept. of Electronics Eng., TEI Piraeus, partners: National Technical University of Athens, Center for Renewable Energy Sources (CRES), funding: greek Ministry of Education and E.U./European Social Fund, Operational Program "Education and Life-Long Learning (EDULLL)", call "Archimedes-III" (submitted: Phase 1 (in greek) 9/2009, Phase 1 (in english) 9/2010, Phase 2 (in english) 4/2011, selected for funding: 10/2011). Budget: 100,000 euro. (2012-2015, completed).
- Research engineer, "BRITE-GREEN: Energy autonomous smart greenhouse", coordinator: KlimaLeviTechniki S.A., partners: Brite Hellas S.A., BlueDev S.A., FORTH-ICEHT, NAGREF, Dept. of Electronics Eng., TEI of Piraeus, TEI of Patras, funding: greek Ministry of Education and E.U./European Social Fund, Operational Program "Education and Life-Long Learning (EDULLL)", call "COOPERATION 2011 – Partnerships of Production and Research Institutions in Focused Research and Technology Sectors" – submitted 8/2010, selected for funding. Budget: 2,454,401euro (total budget). (2012-2015, completed).
- Research engineer, "CT-AudioLink: Improving aural cultural links between different lingual communities in Thrace", European Economic Area Financial Mechanism (EEA FM) 2009-2014, Priority sector "Diversity, inequalities and social inclusion", Programme Area: GR07 – Academic Research, Coordinator: University of Patras, partner: Department of Electronics Eng., TEI Piraeus. Funded by EU through the GSRT, Total budget 200,000 euro, TEI budget 66,000, TEI team leader: Assoc. Prof. St. Potirakis, (2015-2016).
- Research engineer, "TRILLION: TRusted, CItizen -LEA coILaboratIon over sOcial Networks", H2020 – Security, Research and Innovation Actions, partner: Department of Electronics Eng., TEI Piraeus. Funded by EU through the GSRT, Total budget 4,263,408 euro, TEI team leader: Assoc. Prof. Ch. Patrikakis, (funded, running 2015-2018).
- Research engineer, "STORM: Safeguarding Cultural Heritage through Technical and Organisational Resources Management", HORIZON 2020, DRS-11-2015, no 700191. Partner: Department of Electronics Eng., TEI Piraeus. Funded by EU through the GSRT, Total Budget: 7,297,875 € / PUAS: 480,000 €, TEI team leader: Assoc. Prof. Ch. Patrikakis, (funded, running 2015-2018).
- Research engineer, "ETexWeld: Welding of E-Textiles for Interactive Clothing", H2020 MARIE CURIE - Research and Innovation Staff Exchange (RISE), Coordinator: Istanbul Technical University, Total budget: 913,500 euro, partner: Department of Electronics Eng., project leader: Prof. S. Vassiliadis, (funded, running 2015-2018).

Member of technical and scientific organizations committees:
- Technical Chamber of Greece, (Member, 1988 - ...).
- Greek Chapter of Mechanical and Electrical engineers, (Member, 1988 - ...).
- IEEE Signal Processing Society (Student Member 1988, Member 1995 - ...).
- International (former: European) Speech Communication Association (ISCA) (Member, 1993 - …).

Reviewer for the journals:
- IEEE Transactions on Signal Processing,
- Signal Processing (EURASIP),
- IEEE Transactions on Circuits and Systems,
- International Journal of Adaptive Control and Signal Processing,
- IEEE Signal Processing Letters,
- IEEE Trans. on Biomedical Engineering.

Member of International Conference organizing committees:

- 8th IEEE Global Engineering Education Conference (**IEEE-EDUCON 2017**), Athens, Greece, April 25-28, 2017 (http://www.educon-conference.org/educon2017/) / Local Organizing Committee.
- International Conference "Science in Technology" (**SCINTE-2015**), National Research Center, Athens, Greece, Nov. 5-7, 2015, International Scientific Committee, Electrical Engineering, Computer Science and Telecommunications.
- 9th Mediterranean Conf. on Power Generation, Transmission, Distribution and Energy Conversion (**MedPower 2014**), co-organized by the IET (Cyprus, Hellas, Israel), NTUA/Greece and TEI Piraeus, November 5-7, 2014, TEI Piraeus, Athens-Egaleo, Greece / International Advisory Committee, (http://medpower2014.ntua.gr/#)
- 25th Intl. Conf. **EUROSENSORS XXV** - 2011, organized by NCSR "Demokritos" in Athens, Greece, 4-7 Sept. 2011, (http://www.eurosensors2011.org/content.php) / Local Program Committee.
- 7th Mediterranean Conf. on Power Generation, Transmission, Distribution and Energy Conversion (**MedPower 2010**), co-organized by the IET (Cyprus, Hellas, Israel), NTUA/Greece and the University of Nicosia / Cyprus, November 7-10, 2010, Agia Napa, Cyprus / International Advisory Committee, (http://cyprusconferences.org/medpower2010)
- 6th Mediterranean Conf. on Power Generation, Transmission and Distribution (**MedPower 2008**), co-organized by the IET (Cyprus, Hellas, Israel), NTUA/Greece and the Aristotle University of Thessaloniki / Greece, November 5-8, 2008, Thessaloniki, Greece / International Advisory Committee, (http://www.medpower08.com)
- 12th Intl. Workshop on Systems, Signals and Image Processing 2005 (**IWSSIP'05**) organised by the Technological Education Institute of Chalkida, Greece, in cooperation with IEEE, IEEE Region 8, IEE, IEEE Greece Section Chapters of Signal Processing and Computer and EURASIP, in Chalkida, Greece, 22-24 Sept. 2005 (http://www.teihal.gr/iwssip05/index.htm)/ Organizing Committee (Proceedings chair).
- 8th IEEE Signal Processing Workshop on Statistical Signal and Array Processing, (**IEEE-SSAP'96**), Corfu, Greece, June 24-26, 1996 (http://www.computer.org/portal/web/csdl/proceedings/s#4)/Organizing Committee (Local Arrangements).

Positions held in academic administration:

- Dean, Faculty of Engineering, T.E.I. Piraeus, (elected, 4-year term, 1/9/2010-31/8/2014).
- Head, Department of Electronics Engineering, T.E.I. Piraeus, (elected (a) 2006-07 to 2007-08 and (b) 2008-09 to 2009-10).
- Head, Division A "Electronics and Computers", Department of Electronics Engineering, T.E.I. Piraeus, (elected, 1999-2000 to 2005-06).

PhD Theses Supervision:

1. PhD thesis: "Automated analysis of digitized mammograms for the recognition of pathologies," Digital Image Processing Lab., Interdepartmental "Health Informatics" Programme, Department of Nursing, **University of Athens**, Greece (2003-2006), candidate: Halkiotis, Stylianos, PhD conferred: 2006.
2. PhD thesis: "Fuzzy cognitive maps in distance and collaborative learning and evaluation: the case of technological education", Department of Production and Management Engineering, **Democritus University of Thrace**, Xanthi, Greece, (2011 -), candidate: Mr. Angelos Charitopoulos.
3. PhD thesis: "Investigation of the usage of I.C.T. by greek museums in relation to school population", Faculty of Early Childhood Education, **National and Kapodistrian University of Athens**, Athens, Greece, (2011 - 2015), candidate: Mrs. Vaya Manoli. PhD conferred: 2015.
4. PhD thesis: "Web 2.0 tools usage in educational action research: Design of a school website, management and content development in Joomla for the classroom," Faculty of Early Childhood Education, **National and Kapodistrian University of Athens**, Athens, Greece, (2016 -), candidate: Mrs. Evangelia Vardalahou.
5. PhD thesis: "Class management at the greek public primary school level: design, development implementation and evaluation of an integrated electronic environment for teachers, pupils and parents," Faculty of Early Childhood Education, **National and Kapodistrian University of Athens**, Athens, Greece, (2016 -), candidate: Mr. Diamantis Kintsakis.

PUBLICATIONS

V.1. THESES

[T1] Maria Rangoussi, "Over-determined systems and Singular Value Decomposition in modern spectral analysis", *Diploma Thesis*, Division of Computer Science, Dept. of Electrical Engineering, NTUA, Greece, 1987.
[T2] Maria Rangoussi, "Signal reconstruction algorithms and the use of higher order statistics," *MSc Thesis*, Dept. of Electrical Engineering, University of Virginia, Virginia, USA, May 1990.
[T3] Maria Rangoussi, "Novel techniques for the detection of speech under adverse noise conditions and for the recognition of plosive sounds", ***PhD Thesis***, Division of Computer Science, Dept. of Electrical & Computer Engineering, NTUA, Greece, 1995.

V.2. JOURNAL PUBLICATIONS (refereed)

[P1] **M.Rangoussi**, G.B.Giannakis, "FIR Modeling using Log-Bispectra: Weighted Least-Squares Algorithms and Performance Analysis," IEEE Trans. on Circuits and Systems, vol. 38, pp. 281-296, March 1991. **[15 citations]**.
[P2] **M.Rangoussi**, S.Bakamidis, G.Carayannis, "On the use of SVD and high-order statistics for robust endpoint detection of speech," in Levels in Speech Communication: relations and interactions, Ed. C.Sorin et al., pp. 267-279, Elsevier, Brussels, 1995.
[P3] **M.Rangoussi**, G.Carayannis, "Adaptive detection of speech using third-order statistics," Intl. Journal of Adaptive Control and Signal Processing, Special Issue on Adaptive Signal Processing and Higher Order Statistics, Wiley, vol. 10, no. 2/3, pp. 113-136, March-June 1996. **[1 citation]**.
[P4] M.Poulos, **M.Rangoussi**, N.Alexandris, A.Evangelou, "On the use of EEG features towards person identification via Neural Networks," Medical Informatics & the Internet in Medicine, (now: "Informatics for Health and Social Care"), vol. 26, No 1, pp. 35-48, January 2001. **[22+6=28 citations]**.
[P5] M.Poulos, **M.Rangoussi**, N.Alexandris, A.Evangelou, "Person Identification from the Electroencephalogram using non-linear signal classification," Methods of Information in Medicine, vol. 41, No. 1, pp. 64-75, January 2002. **[45 citations]**.
[P6] M.Poulos, **M.Rangoussi**, V.Chrissikopoulos, A.Evangelou, F.Georgiacodis, "Comparative analysis of the Computational Geometry and Neural Network Classification Methods for person identification purposes via the EEG, Part I," Journal of Discrete Mathematical Sciences and Cryptography, vol. 7, No. 3, Dec. 2004, pp. 319-347.
[P7] A.Çay, S.Vassiliadis, **M.Rangoussi**, I.Tarakçıoğlu, "On the Use of Image Processing Techniques for the Estimation of the Porosity of Textile Fabrics," International Journal of Signal Processing, vol. 1, No. 1, pp. 51-54, 2005.
[P8] G.Karkavitsas, M.Rangoussi, "Object localization in medical images using genetic algorithms," International Journal of Signal Processing, vol. 1, No. 4, pp. 204-207, 2005.
[P9] K.Prekas, **M.Rangoussi**, S.Vassiliadis, G.Prekas, "Performance of laboratory experiments over the Internet: towards an Intelligent Tutoring System on Automatic Control," International Journal of Signal Processing, vol. 1, No. 4, pp. 208-211, 2005.
[P10] M.Poulos, E.Kafetzopoulos, **M.Rangoussi**, F.Georgiacodis, "Statistical evaluation of Computational Geometry and Neural Network Classification Methods for person identification purposes via the EEG," Journal of Discrete Mathematical Sciences and Cryptography, vol. 8, No. 1, Apr. 2005, pp. 27-47.
[P11] N.Stathopoulos, S.Savvaidis, M.Rangoussi, "Propagation characteristics of nonlinear waveguides with complex refractive index using a transmission line model", Optical and Quantum Electronics, vol. 38, no. 8, pp. 683-699, June 2006. **[5 citations]**.
[P12] A.Çay, S.Vassiliadis, **M.Rangoussi**, I.Tarakçıoğlu, "Prediction of the air permeability of woven fabrics using neural networks", International Journal of

Clothing Science and Technology, vol. 19, no. 1, pp. 18-35, 2007. **[5 citations]**.

[P13] S.Halkiotis, T.Botsis, **M.Rangoussi**, "Automatic detection of clustered microcalcifications in digital mammograms using mathematical morphology and neural networks", Signal Processing, Volume 87, Issue 7, pp. 1559-1568, July 2007. **[40 citations]**.

[P14] I.Paraskevas, E.Chilton, **M.Rangoussi**, "The Hartley phase spectrum as a tool for phase analysis and extraction", Journal of the Acoustical Society of America, (submitted, 2007, under revision).

[P15] I.Paraskevas, **M.Rangoussi**, "The Hartley phase cepstrum as a tool for signal analysis," Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), vol. 4885 LNAI, pp. 204-212, 2007. **[3 citations]**.

[P16] I.Paraskevas, **M.Rangoussi**, S.M.Potirakis, S.Savvaidis, "Phase spectral processing for improved time-domain soft microphone based noise estimation," Acoustical Society of America, Proceedings of Meetings on Acoustics (POMA), electronic publication, vol. 4, 2008.

[P17] S.Vassiliadis, **M.Rangoussi**, A.Cay and C.Provatidis, "Artificial Neural Networks and Their Applications in the Engineering of Fabrics," in Woven Fabric Engineering, Book edited by: Polona Dobnik Dubrovski, ISBN: 978-953-307-194-7, Publisher: SCYIO, pp. 111-134, November 2010.

[P18] I.Paraskevas, S.M.Potirakis, I.Liaperdos, **M.Rangoussi**, "Automatically Updated Sound-maps as a tool for environmental monitoring: Research in progress," Soundscape (The Journal of Acoustic Ecology), vol. 11, no. 1, Fall-Winter 2011, pp.57-58, (ISSN 1607-3304, on-line at http://wfae.proscenia.net/journal/scape_16.pdf).

[P19] I.Paraskevas, S.M.Potirakis, I.Liaperdos, **M.Rangoussi**, "Development of Automatically Updated Soundmaps for the Preservation of Natural Environment," Journal of Environmental Protection, vol. 2, pp. 1388-1391, Dec. 2011 (on-line journal).

[P20] I.Paraskevas, **M.Rangoussi**, "Frequency domain feature extraction for audio classification using the Hartley Transform," Open Journal of Acoustics, vol. 2, pp. 131-142, 2012 (on-line journal).

[P21] 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, Elsevier, vol. 74, issue 6, pp.870-881, June 2013.

[P22] K.Prekas, T.Shah, N.Soin, **M.Rangoussi**, S.Vassiliadis, E.Siores, "Sedimentation behaviour in electrorheological fluids based on suspensions of zeolite particles in silicone oil," Journal of Colloid and Interface Science, vol. 401, July 2013, pp. 58-64.

[P23] N.A.Stathopoulos, S.P.Savaidis, H.Simos, **M.Rangoussi**, P.Kervalishvili, "Simulation and Properties of Erbium-Doped Distributed Bragg Reflectors (ED-DBR) and Fiber Bragg Gratings (ED-FBG)", Optical Fiber Technology, vol. 19, issue 5, pp.369-377, October 2013.

[P24] S.M.Potirakis, B.Nefzi, N.-A.Tatlas, G.Tuna, **M.Rangoussi**, "A wireless network of acoustic sensors for environmental monitoring", Key Engineering Materials, 605, pp. 43-46, 2014, doi: 10.4028/www.scientific.net/KEM.605.43.

[P25] S.M.Potirakis, B.Nefzi, N.-A.Tatlas, G.Tuna, **M.Rangoussi**, "Design Considerations for an Environmental Monitoring Wireless Acoustic Sensor Network", Sensor Letters, vol. 12, pp.1-7, 2014.

[P26] Melike Yigit, V. Cagri Gungor, Gurkan Tuna, **Maria Rangoussi**, Etimad Fadel, "Power line communication technologies for smart grid applications: A review of advances and challenges", Computer Networks, Elsevier, vol. 70, pp. 366-383, 9 Sept. 2014 (available on-line 6/2014).

[P27] 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, Elsevier, vol. 107, no. 2 pp.153-163, 2/2015 (available on-line 8/2014).

[P28] S.A.Mitilineos, S.M.Potirakis, N.-A.Tatlas, **M.Rangoussi**, "High-Level Sound Classification in the ESOUNDMAPS Project", Key Engineering Materials, 644, pp. 83-86, 2015, doi:10.4028/ www.scientific.net/ KEM.644.83.

[P29] N.-A.Tatlas, D.Ballios, S.M.Potirakis, C.Charitou, S.Koutroubinas, **M.Rangoussi**, "A smart sensor platform for Greenhouse applications", Key Engineering Materials, 644, pp. 92-95, 2015, doi:10.4028/ www.scientific.net/ KEM.644.92.

[P30] S.Vassiliadis, P.Papadopoulos, **M.Rangoussi**, T.Konieczny, J.Gralewski, "Bitcoin Value Analysis Based on Cross-Correlations," Journal of Internet Banking and Commerce, Special issue "Special Issue: Global Strategies in Banking and Finance", vol. 22, no. S7, Jan. 2017 (available on-line at http://www.icommercecentral.com/open-access/bitcoin-value-analysis-based-on-crosscorrelations.php?aid=85536).

V.3. BOOKS / BOOK CHAPTERS

[B1] **M. Rangoussi**, A. Cay, "Non-linear approaches in Textiles: The Artificial Neural Networks example", in S.Vassiliadis (Ed.) "Electronics and Computing in Textiles", Ventus Publishing ApS, ISBN 978-87-403-082-0 (open access in http://bookboon.com/en/textbooks).

V.4. CONFERENCE PROCEEDINGS (refereed)

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[19] S.Despotopoulos, E.Kyriakis-Bitzaros, I.Liaperdos, S.Mitilineos, D.Nicolaidis, S.M.Potirakis, **M.Rangoussi**, N.-A.Tatlas, "Wireless acoustic sensor network design stages for an environmental monitoring application", eRA-8 International Scientific Conference, TEI Piraeus, Greece, Sept. 23-25, 2013 (paper no. AB.2.8)

[20] V.Tsopanoglou, **M.Rangoussi**, "Automatic Control Systems undergraduate course: support teaching material development in the Moodle platform", eRA-8 International Scientific Conference, TEI Piraeus, Greece, Sept. 23-25, 2013 (paper no. BB.3.8)

[21] L.Toumanidis, A.Charitopoulos, D.Metafas, **M.Rangoussi**, "E-advisor and E-evaluator Module developments for the Moodle E-learning platform based on ID3 classification algorithms", eRA-8 International Scientific Conference, TEI Piraeus, Greece, Sept. 23-25, 2013 (paper no. BB.3.9)

[22] E.Lignou, D.Metafas, **M.Rangoussi**, "Teaching Mathematics in high school: Content development in the Open Source E-Learning Platform Moodle", eRA-8 International Scientific Conference, TEI Piraeus, Greece, Sept. 23-25, 2013 (paper no. BB.3.1)

[23] A.Liapi, D.Metafas, **M.Rangoussi**, "A walk in Space: A case study for Early Age Education content developed in Moodle", eRA-8 International Scientific Conference, TEI Piraeus, Greece, Sept. 23-25, 2013 (paper no. BB.3.2)

[24] N.Gemistou, D.Metafas, **M.Rangoussi**, "An elementary school history course developed in Moodle: Alexander the Great and the development of Macedonian State", eRA-8 International Scientific Conference, TEI Piraeus, Greece, Sept. 23-25, 2013 (paper no. BB.3.3)

[25] N.Mpalatsouka, D.Metafas, **M.Rangoussi**, "Cultural and linguistic activities in High School education: development of an educational electronic course", eRA-8 International Scientific Conference, TEI Piraeus, Greece, Sept. 23-25, 2013 (paper no. BB.3.4)

[26] I.Komi, D.Metafas, **M.Rangoussi**, "Teaching a course on Computers in high school: Content development in the Open Source E-Learning Platform Moodle", eRA-8 International Scientific Conference, TEI Piraeus, Greece, Sept. 23-25, 2013 (paper no. BB.3.5)

[27] F.Peraki, D.Metafas, **M.Rangoussi**, "E-learning Platform support for a high school project on Shakespeare's Language", eRA-8 International Scientific Conference, TEI Piraeus, Greece, Sept. 23-25, 2013 (paper no. BB.3.6)

[28] M.Grigoraki, D.Metafas, **M.Rangoussi**, "Developing Content for elementary school students in the Open E-Learning Platform Moodle: A project on mythology", eRA-8 International Scientific Conference, TEI Piraeus, Greece, Sept. 23-25, 2013 (paper no. BB.3.7)

[29] A.Politi, D.Metafas, **M.Rangoussi**, "Halloween: enhancing intercultural understanding using the Open E-Learning Platform Moodle", eRA-8 International Scientific Conference, TEI Piraeus, Greece, Sept. 23-25, 2013 (paper no. BB.3.13)

[30] S.Mitilineos, N.-A.Tatlas, S.M.Potirakis, **M.Rangoussi**, E.Kyriakis-Bitzaros, I.Liaperdos, "Research Progress in the ESOUNDMAPS Project: Classification of sounds using ANNs", eRA-9 International Scientific Conference, TEI Piraeus, Greece, Sept. 22-24, 2014 (paper no. I.1.3)

[31] **M. Rangoussi**, Ch. Patrikakis, A. Charitopoulos, "Open Academic Courses in the Department of Electronics Engineering", Open Academic Courses in TEI Piraeus Workshop, TEI Piraeus, 25-26 Sept. 2014.

V.7. INTERNATIONAL SCIENTIFIC EVENTS

[1] S.M. Potirakis, M.Rangoussi, 6th International R&D Project Brokerage Event, organized by Uludag Textile Exporters Association (UTIB) and Bursa Textile and Clothing R&D Center (BUTEKOM), supported by TUBITAK-TEYDEB/Turkey, held in Bursa, Turkey, 3-4 April 2014. Presentation of four proposals for R&D projects:

PROJECT 1	**SESSION:** Protech and Military Textiles **Project Title:** "*Smart vest for the monitoring of first responders / border policemen situation: a wireless sensor network approach*" **Coordinator:** Stelios M. Potirakis **Participants:** C.Vossou, S.Vassiliadis, S.Mitilineos, M.Rangoussi, G.Tuna, G.Gezer, K.Gulez
PROJECT 2	**SESSION:** Buildtech **Project Title:** "*Textile acoustic ceiling tiles*" **Coordinator:** Stelios M. Potirakis **Participants:** N.-A. Tatlas, C.Vossou, S.Vassiliadis, A.Cay, A.Marmarali, M. Rangoussi
PROJECT 3	**SESSION:** Functional Clothing Textiles **Project Title:** "*Early Medical Warning by Thermo-chromic Garments*" **Coordinator:** Maria Rangoussi **Participants:** A.Cay, A.Trikalinou, C.Vossou, E.Siores, S.M.Potirakis, S.Vassiliadis
PROJECT 4	**SESSION:** Hometech and Home Textiles. **Project Title:** "*Active Noise Control by textile structures comprising embedded sound sensors and actuators based on piezoelectric fibers*" **Coordinator:** Maria Rangoussi **Participants:** S.M.Potirakis, N.-A. Tatlas, C.Vossou, S.Vassiliadis, A.Cay, A.Marmarali, E.Siores,

V.8. TEXTBOOKS FOR STUDENTS (In greek)
[TB1] Γ.Καραγιάννης, **Μ.Ραγκούση**, *"Ψηφιακή Επεξεργασία Σημάτων: Θεωρία – Αλγόριθμοι – Πρακτική,"* Εκδόσεις Συμεών, Αθήνα 1993.
Διδάσκεται από το 1993-94 έως το 2006-07 στο αντίστοιχο μάθημα του 7[ου] / 6[ου] εξαμήνου σπουδών στο Τμήμα Ηλεκτρολόγων ΕΜΠ.
[TB2] Α.Κοσσίδας, **Μ.Ραγκούση**, Σ.Ματιάτος, *"Συμβολικές Γλώσσες και Αρχιτεκτονική Μικροεπεξεργαστών,"* Εκδόσεις Μπένου, Αθήνα 1996.
Διδάσκεται από το 1996-97 στο αντίστοιχο μάθημα του 4ου εξαμήνου σπουδών στο Τμήμα Ηλεκτρονικών Υπολογιστικών Συστημάτων του ΤΕΙ Πειραιά.