

Dr. Grigorios E. Koulouras, Associate Professor

Research Laboratory of Telecommunications, Signal Processing and Intelligent Systems (TelSiP)

Department of Electrical and Electronic Engineering, University of West Attica

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Curriculum Vitae

General Information

Dr. Grigorios E. Koulouras was born in Athens, Greece, in 1978. He received his B.Sc. degree in Electrical & Electronic Engineering from the Technological Educational Institute of Athens, Greece, in 1999. He got his M.Sc. degree in Data Communication Systems from the Department of Electronic and Computer Engineering, Brunel University, U.K., in 2001. Meanwhile, he completed his compulsory military service as an Electronic Engineer in the Department of Electronic War of the Hellenic Army. In 2003, he received scholarship for Ph.D. from the State Scholarship Foundation and joined School of Engineering and Design, Brunel University, UK, for pursuing a Ph.D. degree under the supervision of Prof. John Stonham. In 2008 he obtained his Ph.D. from Brunel University. In 2010, he joined the Department of Electronic Engineering of the Technological Educational Institute of Athens. He is currently working as an Associate Professor in the Department of Electrical and Electronic Engineering of University of West Attica. He is also co-founder of the "Telecommunications, Signal Processing and Intelligent Systems Research Laboratory (TelSiP)".

Dr. Grigorios E. Koulouras has extensive research, academic and professional experience that lie in three fields. The first one is in electronic circuits design, microcontrollers, Embedded Systems, flash memories and Data Acquisition Systems. The second one focuses on IoT, Cloud Computing, virtualization, containerization and dockerization technologies, as well as on the automated management of virtual or non-virtual computer systems by the use of open source CM (Configuration Management) tools (i.e. Ansible). Finally, the third one deals with Telecommunications and in particular with the design of high-speed fiber optic and wireless networks. From 2007 to 2010 he worked for the Hellenic Telecommunications Organisation (O.T.E. S.A.) at the Department of Network Technologies as staff of the sub-department, which develops the cable infrastructure (both copper and fiber optics). He was responsible for the design, validation and acceptance of the backbone fiber optics network.

Dr. Grigorios E. Koulouras has supervised or is currently supervising more than 50 postgraduate and undergraduate theses, while he has an extensive teaching experience in the context of postgraduate and undergraduate taught courses focused on Embedded Systems, IoT and Cloud Computing. His published work includes more than 55 papers in international scientific conference proceedings, edited volumes, scientific journals and book chapters and also his research work has been cited more than [750 times](https://doi.org/10.1080/17447744.2018.1533622) (<https://goo.gl/3mca62>) in the scientific literature according to Google Scholar search engine. He has served as a guest editor and reviewer for international scientific conference proceedings and scientific journals. He has also served as a principal investigator or researcher in several research programs.

Dr. Grigorios E. Koulouras is Member of the Plenary of the Hellenic Telecommunications & Post Commission (EETT) since January 2018.

Education

- 2003 – 2007: Doctor of Philosophy – School of Engineering and Design – Electrical Engineering & Electronics Research – Brunel University – Middlesex – UK
PhD Title: "A Versatile Data Acquisition System for Capturing Electromagnetic Emissions in VHF Band."
(Hellenic NARIC Degree Recognition Number: 8-3049)
- 2000 – 2001: Master of Science in Data Communication Systems – Department of Electronic and Computer Engineering – Brunel University – Middlesex – UK
(Hellenic NARIC Degree Recognition Number: 8-1664)
- 1995 – 1999: Bachelor of Science – Department of Electronic Engineering – Technological Educational Institution of Athens – GR

Academic Appointments

- 04/2021 – Present: Associate Professor – University of West Attica, Department of Electrical and Electronic Engineering
- 03/2018 – 04/2021: Assistant Professor – University of West Attica, Department of Electrical and Electronic Engineering
- 07/2016 – 03/2018: Assistant Professor – Technological Educational Institute of Athens, Department of Electronic Engineering
- 10/2010 – 06/2016: Lecturer – Technological Educational Institute of Athens, Department of Electronic Engineering

Additional Scientific Appointments

01/2018 – Present: Member of the Plenary of the Hellenic Telecommunications & Post Commission (EETT)

Dr. Grigorios E. Koulouras is Member of the Plenary of the Hellenic Telecommunications & Post Commission (EETT) since January 2018 (Official Greek Government Gazette 7/YOΔΔ/11-01-2018). Until today, Dr. Grigorios Koulouras has participated in more than 85 plenary sessions and has dealt with more than 2000 issues on the agendas of his responsibilities. In addition to EETT's ad-hoc Hearing Committees, he participates in Permanent Hearing Committees (Official Greek Government Gazette 159/YOΔΔ/21-03-2018) aimed at speeding up the Authority's audit work:

- (A) Member of the Standing Committee on Hearings on Radio Equipment and Radio Links.
- (B) Member of the Standing Committee on Hearings on Domain Names.
- (C) Alternate Member of the Standing Committee on Hearings on Antenna Construction.
- (D) Alternate Member of the Standing Committee on Hearings on Multimedia Information Hearings.

According to the Official Greek Government Gazette 5567/B/12-12-2018, he also participates in Permanent Hearing Committees dealing with Postal Issues:

- (A) Member of the Standing Committee on Hearings on Audits Carried out in Postal Businesses.
- (B) Alternate Member of the Standing Committee on Repeat Hearings on Postal Issues.

By the Decision 34449/29-11-2019 of the President of EETT on "Designation of the Integrated Project Team Leader" and other roles for each program co-financed by the NSRF 2014-2020 and EETT, Dr. Koulouras appointed Head of the Project Management Team (IPT Leader) of the Program "Radio Frequency Spectrum Management System with Embedded Electronic Request Platform (RFSMS)", MIS 5029669.

Other Professional Appointments

03/2007 – 09/2010: Electronic Engineer at the O.T.E. S.A.. Staff of the Design and Cable Infrastructure (both copper and fiber optics) sub-department – Department of Network Technology (Responsible for the design, validation and acceptance of the backbone fiber optics network)

03/2005 – 02/2007: Electronic Engineer at the Geodynamic Institute of the National Observatory of Athens (Responsible for the technical maintenance and for monitoring the national seismic activity)

05/2000 – 12/2000: System Operator of Greek Data Network HellasCom (Administration Data Network HellasCom with NMS Software)

Honors and awards

- Three and half (3½) years scholarship from the State Scholarships Institution, for pursuing Ph.D. degree at Brunel University.
- Scholarship from the State Scholarships Institution for the performance excellence during my course at the Technological Educational Institute of Athens, Department of Electronic Engineering, in all academic years.

Language Skills

- Greek (Mother language)
- English

Research Grants

- 11/2018 – Today: Research – Create – Innovate, Greek General Secretariat of Research and Technology
Project: «i-React, Next Generation»
Consortium:
 - EMTech (Greece)
 - TELSIP – University of West Attica (Greece)**Coordinator:** Prof. Alex Alexandridis (Department of Electrical and Electronic Engineering – University of West Attica)
Research Team: Telecommunications, Signal Processing and Intelligent Systems Research Laboratory (TelSiP)
Funded: National Strategic Reference Framework (NSRF) 2014-2020
Project budget of TelSiP: 163.960,85 €.
Project budget of EMTech: 297.500,00 €.
Total project budget: 461.460,85 €.
Implementation Period: 01/11/2018 – 30/04/2021
- 04/2013 – 09/2015: Bilateral Collaboration in Research and Technology between Greece and China
Project: «Multi-channel Microwave Radiometry for Internal Body Temperature Measurements»
Consortium:
 - EMTech (Greece)
 - TELSIP – TEI of Athens (Greece)
 - MEDISP – TEI of Athens (Greece)
 - WLDCL – NTUA (Greece)
 - Beijing Guoke Huayi Technology Company Limited (China)**Coordinator:** Prof. Nassiopoulou Athanasios (Department of Electronic Engineering – TEI of Athens)
Research Team: Telecommunications and Signal Processing Research Laboratory (TelSiP) – TEI of Athens
Funded: EUROPEAN REGIONAL DEVELOPMENT FUND
Total project budget: 441.438,75 €.
Implementation Period: 01/04/2013 – 30/09/2015
- 12/2011 – 01/2014: Digital Plan
Project: «Services for virtual laboratories - TEI of Athens»
Sub-project: «Development of added-value services for virtual laboratories»
Coordinator: Dr. Founta Ifigenia (Assistant Professor – Department of Informatics – TEI of Athens)
Research Team: Telecommunications and Signal Processing Research Laboratory (TelSiP) – TEI of Athens
Funded: EUROPEAN REGIONAL DEVELOPMENT FUND
Total project budget: 340.000,00 €.
Implementation Period: 15/12/2011 – 31/01/2014
- 12/2012 – 09/2015: EPEAEK – Archimedes III
Project: «Reinforcement of Research Groups at the Technological Educational Institute (TEI of Athens)»
Sub-project: «Multidirectional study of pre-earthquake disorders with emphasis on E/M radiation» (No46)
Coordinator: Dr. Nomicos Constantinos (Emeritus Professor – Department of Electronic Engineering – TEI of Athens)
Funded: National Strategic Reference Framework (NSRF) 2007-2013
Total project budget: 100.000,00 €.
Implementation Period: 01/12/2012 – 30/09/2015
- 03/2012 – 08/2014: EPEAEK – Archimedes III
Project: «Reinforcement of Research Groups at the Technological Educational Institute (TEI of Athens)»
Sub-project: «SCODO - Experimental evaluation of new co-doped scintillator materials for use in combined tomographic imaging systems» (No26)
Coordinator: Prof. Kourkoutas Konstantinos (Department of Physics Chemistry and Material Technology – TEI of Athens)
Funded: National Strategic Reference Framework (NSRF) 2007-2013
Total project budget: 100.000,00 €.
Implementation Period: 01/03/2012 – 31/08/2014
- 05/2013 – 04/2014: EPEAEK – Archimedes III
Project: «Reinforcement of Research Groups at the Technological Educational Institute (TEI of Athens)»
Sub-project: «Novel applications of x-ray dual energy for early diagnosis in osteoporosis, mammography and angiography – XDUALGNOSIS» (No13)
Coordinator: Prof. Fountos George (Department of Biomedical Engineering – TEI of Athens)
Funded: National Strategic Reference Framework (NSRF) 2007-2013
Total project budget: 100.000,00 €.
Implementation Period: 01/05/2013 – 30/04/2014

12/2012 – 01/2013: Contract Research Agreement

Project: «Experimental Development of Telematics Array Transceiver by using DSRC Technology»

Coordinator: Dr. Koulouras Grigorios (Lecturer – Department of Electronic Engineering – TEI of Athens)

Funded: Bee Tech S.A.

Total project budget: 9.225,00 €.

Implementation Period: 14/12/2012 – 31/01/2013

09/2005 – 08/2007: EPEAEK – Archimedes II

Project: «Reinforcement of Research Groups at the Technological Educational Institute (T.E.I. of Athens)»

Sub-project: «Programs for environmental protection and environmental education» (No1)

Coordinator: Prof. Drakopoulos Panos (Department of Optics – TEI of Athens)

Funded: Third Community Support Framework (3rd CSF) 2000-2006

Total project budget: 414.975,00 €.

Implementation Period: 01/09/2005 – 31/08/2007

09/2005 – 08/2007: EPEAEK – Archimedes I

Project: «Reinforcement of Research Groups at the Technological Educational Institute (T.E.I. of Athens)»

Sub-project: «Electromagnetic Disturbances and Correlation with Earthquakes» (No16)

Task: «Design and Implementation of a new datalogger system»

Coordinator: Prof. Nomicos Constantinos (Department of Electronic Engineering – TEI of Athens)

Funded: Third Community Support Framework (3rd CSF) 2000-2006

Total project budget: 51.623,00 €.

Implementation Period: 01/04/2004 – 31/08/2006

Courses Taught

Dr. Grigorios E. Koulouras has supervised doctoral candidates and has taught both undergraduate and postgraduate programs.

Undergraduate Courses

During his tenure, he has taught at two (2) different Undergraduate Programs in the Departments of «Electrical and Electronic Engineering» and «Biomedical Engineering» of the University of Western Attica.

- (1) 5 years Bachelor Degree at the Department of «Electrical and Electronic Engineering»
- (2) 4 years Bachelor Degree at the Department of «Biomedical Engineering»

He has organized and taught five (5) different undergraduate courses in the above Undergraduate Programs.

- (1) «Internet of Things»
- (2) «Cloud Computing»
- (3) «Introduction to microcontroller Systems»
- (4) «Microprocessors – Programmable and Digital Systems»
- (5) «Microcontroller and Embedded Systems»

These courses are detailed below.

03/2018 – Today: **Module:** «Internet of Things», «Cloud Computing»

BSc Course Title: «Electrical and Electronic Engineering»

Department: Department of Electrical and Electronic Engineering

University: University of West Attica

10/2010 – 03/2018: **Module:** «Introduction to microcontroller systems», «Microprocessors – Programmable Digital Systems», «Microcontrollers and Embedded Systems»

BSc Course Title: «Electronic Engineering»

Department: Department of Electronic Engineering

University: TEI of Athens

10/2012 – 03/2018: **Module:** «Microprocessors – Programmable Digital Systems»

BSc Course Title: «Biomedical Engineering»

Department: Department of Biomedical Engineering

University: TEI of Athens

10/2011 – 07/2012: **Module:** «Object Oriented Programming – Applications»

BSc Course Title: «Electronic Engineering»

Department: Department of Electronic Engineering

University: TEI of Athens

Postgraduate Courses

During his tenure, he has taught at six (6) different Postgraduate Programs in the Departments of «Electrical and Electronic Engineering» and «Graphic Design and Visual Communication» of the University of Western Attica.

- (1) MSc Course Title: «Internet of Things and Intelligent Environments»
- (2) MSc Course Title: «Communications and Data Networks»
- (3) MSc Course Title: «Master of Science by Research in Electrical and Electronics Engineering»
- (4) MSc Course Title: «New Technologies and Marketing – Smart Packaging»
- (5) MSc Course Title: «Embedded and Telecommunication Systems»
- (6) MSc Course Title: «Design and Development of Advanced Electronic Systems»

He has organized and taught seven (7) different postgraduate courses in the above Postgraduate Programs.

- (1) «Internet of Things»
- (2) «Embedded and Real-time Systems»
- (3) «Cloud Computing and Data Analytics»
- (4) «Network Resources Management and Cloud Computing»
- (5) «Software and Data for Smart Packaging»
- (6) «Printed Antennas – Programming Environment in Smart Packaging»
- (7) «Embedded Systems»

These courses are detailed below.

03/2018 – Present: **Modules:** «IoT», «Embedded and Real-time Systems», «Cloud Computing and Data Analytics»

MSc Course Title: «Internet of Things and Intelligent Environments»

Department: Department of Electrical and Electronic Engineering

University: University of West Attica

03/2018 – Present: **Modules:** «IoT», «Network Resources Management and Cloud Computing»

MSc Course Title: «Communications and Data Networks»

Department: Department of Electrical and Electronic Engineering

University: University of West Attica

- 03/2018 – Present: **Modules:** «IoT», «Embedded and Real-time Systems», «Cloud Computing and Data Analytics», «Network Resources Management and Cloud Computing»
MSc Course Title: «Master of Science by Research in Electrical and Electronics Engineering»
Department: Department of Electrical and Electronic Engineering
University: University of West Attica
- 03/2018 – 09/2019: **Modules:** «Software and Data for Smart Packaging»
MSc Course Title: «New Technologies and Marketing – Smart Packaging»
Department: Department of Graphic Design and Visual Communication
University: University of West Attica
- 10/2017 – 03/2018: **Modules:** «Embedded Systems», «IoT»
MSc Course Title: «Embedded and Telecommunication Systems»
Department: Department of Electronic Engineering
University: TEI of Athens
- 10/2011 – 09/2017: **Module:** «Embedded Systems»
MSc Course Title: «Design and Development of Advanced Electronic Systems»
Department: Department of Electronic Engineering
University: TEI of Athens

Supervised Theses

Dr. Grigorios E. Koulouras has supervised or is currently supervising more than 50 postgraduate and undergraduate theses in the areas of Embedded Systems, Internet of Things (IoT), Cloud Computing and Computational Intelligence.

Supervision of PhD Candidates

Dr. Gregory E. Koulouras is currently supervising two (2) PhD candidates. Additionally, he participates in a total of four (4) three-member doctoral advisory committees.

Publications – Scientific Work

His published work includes more than 50 papers in international scientific conference proceedings, edited volumes, scientific journals and book chapters and also his research work has been cited more than [735 times](https://goo.gl/3mca62) (<https://goo.gl/3mca62>) in the scientific literature according to Google Scholar search engine. He has served as a guest editor and reviewer for international scientific conference proceedings and scientific journals.

Peer Review Activities:

- IEEE Transactions on Evolutionary Computation
- IEEE Sensors Journal
- Elsevier – Ad Hoc Networks
- MDPI – Sensors
- IEEE EDERC (European Embedded Design in Education and Research Conference)

Editorial Work:

- Future Internet (Guest Editor of the Special Issue entitled “Computational Intelligence in Internet of Things”)
- Computers (Guest Editor of the Special Issue entitled “Integration of Cloud Computing and IoT”)

Publications in Book Chapters:

- B01. Book Title: “Mobile Ad hoc Networks: Current Status and Future Trends” (Edited by Jonathan Loo, Jaime Lloret Mauri and Jesús Hamilton Ortiz), Publisher: CRC Press, 1 edition (3 Nov 2011), ISBN-13: 978-1439856505. Chapter 18: “Adaptive Routing Provision by Using Bayesian Inference” co-authored by Ilias Kiourktsidis, Jonathan Loo, and **Grigorios Koulouras**.
- B02. Book Title: “Mobile Ad hoc Networks: Current Status and Future Trends” (Edited by Jonathan Loo, Jaime Lloret Mauri and Jesús Hamilton Ortiz), Publisher: CRC Press, 1 edition (3 Nov 2011), ISBN-13: 978-1439856505. Chapter 19: “Adaptive Flow Control in Transport Layer Using Genetic Algorithm” co-authored by Ilias Kiourktsidis, Jonathan Loo, and **Grigorios Koulouras**.

Journal publications:

- J01. **Koulouras G.**, Kontakos K., Stavrakas I., Stonham J. and Nomicos C. (08/2005) – “Embedded Compact Flash™ – A new data storage system designed for a data acquisition system”, IEEE Circuits and Devices Magazine, Volume 21, Issue 4, pp. 27-34, ISSN: 8755-3996
- J02. Stavrakas I., Clarke M., **Koulouras G.**, Stavrakakis G. and Nomicos C. (02/2007) – “Study of directivity effect on Electromagnetic emissions in the HF band as earthquake precursors: Preliminary results on field observations”, Tectonophysics, Volume 431, Issue 1-4, pp. 263-271
- J03. Eftaxias K., Contoyiannis Y., Balasis G., Karamanos K., Kopanas J., Antonopoulos G., **Koulouras G.** and Nomicos C. (08/2008) – “Evidence of fractional-Brownian-motion-type asperity model for earthquake generation in candidate pre-seismic electromagnetic emissions”, Natural Hazards and Earth System Science, Volume 8, Issue 4, pp. 657-669
- J04. **Koulouras G.**, Balasis G., Kiourktsidis I., Nannos E., Kontakos K., Stonham J., Ruzhin Y., Eftaxias K., Kavouras D. and Nomicos C. (04/2009) – “Discrimination between preseismic electromagnetic anomalies and solar activity effects”, Physica Scripta, Volume 79, Issue 4, pp. 12, doi:10.1088/0031-8949/79/04/045901
- J05. Nikolopoulos D., Petraki E., Marousaki A., Potirakis S., **Koulouras G.**, Nomicos C., Panayiotaras D., Stonham J. and Louizi A. (02/2012) – “Environmental monitoring of radon in soil during a very seismically active period occurred in South West Greece.”, Journal of Environmental Monitoring, Volume 14, Issue 2, pp. 564-578, doi:10.1039/C1EM10387C
- J06. Petraki E., Nikolopoulos D., Fotopoulos A., Panayiotaras D., **Koulouras G.**, Zisos A., Nomicos C., Louizi A. and Stonham J. (02/2013) – “Self-organised critical features in soil radon and MHz electromagnetic disturbances: Results from environmental monitoring in Greece”, Applied Radiation and Isotopes, Volume 72, pp. 39–53, doi:10.1016/j.apradiso.2012.09.005
- J07. Gurkan Tuna, Orhan Arkoc, **Grigorios Koulouras**, Stelios M. Potirakis (10/2013) – “Navigation System of an Unmanned Boat for Autonomous Analyses of Water Quality”, Journal “Electronics and Electrical Engineering”, Volume 19, No. 8, pp.3-7, doi:10.5755/j01.eee.19.8.5387
- J08. Gurkan Tuna, Stelios M. Potirakis, **Grigorios Koulouras** (12/2013) – “Implementing a Trust and Reputation Model for Robotic Sensor Networks”, Journal “Electronics and Electrical Engineering”, Volume 19, No. 10, pp.3-8, doi:10.5755/j01.eee.19.10.5884
- J09. Theodoropoulos S., Kandris D., Samarakou M. and **Koulouras G.** (02/2014) – “Fuzzy Regulator Design for Wind Turbine Yaw Control”, The Scientific World Journal, doi:10.1155/2014/516394
- J10. Contoyiannis, Y., Potirakis S. M., Kopanas J., Antonopoulos G., **Koulouras G.**, Eftaxias K., and Nomicos C.. (02/2014) – “On the recent seismic activity at Kefalonia island (Greece): Manifestations of an Earth system in critical state.” arXiv preprint arXiv:1401.7458v2.
- J11. Michail C., Kalyvas N., Valais I., Fudos I., Fountos G., Dimitropoulos N., **Koulouras G.**, Kandris D., Samarakou M. and Kandarakis I. (05/2014) – “Figure of Image Quality and Information Capacity in Digital Mammography”, BioMed Research International, Volume 2014, Article ID 634856, 11 pages, doi:10.1155/2014/634856

- J12. Petraki E., Nikolopoulos D., Chaldeos Y., **Koulouras G.**, Nomicos C., Yannakopoulos H. P., Kottou S. and Stonham J. (07/2014) – “Fractal evolution of MHz electromagnetic signals prior to earthquakes: results collected in Greece during 2009.”, *Geomatics, Natural Hazards and Risk*, Volume 7, Number 2, pp. 550-564, (2016), doi: 10.1080/19475705.2014.945496
- J13. Nikolopoulos D., Petraki E., Nomicos C., **Koulouras G.**, Kottou S. & Yannakopoulos P. H. (01/2015) – “Long-memory trends in disturbances of radon in soil prior to the twin ML= 5.1 earthquakes of 17 November 2014 Greece.”, *Journal of Earth Science & Climatic Change*, 6(244), 2, doi: 10.4172/2157-7617.1000244
- J14. Potirakis S. M., Contoyiannis Y., Eftaxias K., **Koulouras G.** and Nomicos C. (03/2015). – “Recent field observations indicating an Earth system in critical condition before the occurrence of a significant earthquake.”, *Geoscience and Remote Sensing Letters, IEEE*, 12(3), 631-635., doi: 10.1109/LGRS.2014.2354374
- J15. **Koulouras G.**, Alexandridis A., Karabetsos S., Grispos S., Stoumpis G., Charamis P. and Nassiopoulou A. (04/2016). – “An Embedded PID Temperature Control Scheme with Application in a Medical Microwave Radiometer.”, *Journal of Engineering Science and Technology Review – JESTR*, Volume 9, Issue 4, pp. 56-60, ISSN: 1791-2377
- J16. Paterakis F., Nafpaktitis D., Darwish M., **Koulouras G.**, Janbey A., & Hloupis G. (12/2016). – “Implementation of Equal Areas-PWM in Multilevel Inverters.” *International Review of Electrical Engineering (IREE)*, 11(6), 558-566, doi: 10.15866/iree.v11i6.9812
- J17. Contoyiannis Y., Potirakis S. M., Kopanas J., Antonopoulos G., **Koulouras G.**, Eftaxias K., & Nomicos, C. (07/2017). “On the recent seismic activity at eastern Aegean Sea: Analysis of fracture-induced electromagnetic emissions in terms of critical fluctuations.”, arXiv preprint, arXiv:1708.00320.
- J18. Livanos N.-A., Hammal S., Nikolopoulos C., Baklezos A., Capsalis C., **Koulouras G.**, Charamis P., Vardiambasis I., Nassiopoulou A., Kostopoulos S., Asvestas P., Cavouras D. and Siores E. (12/2017). – “Design and Interdisciplinary Simulations of a Hand-held Device for Internal-Body Temperature Sensing Using Microwave Radiometry.”, *IEEE Sensors Journal*, (2018), doi: 10.1109/JSEN.2018.2791443
- J19. Paterakis F., Nafpaktitis D., Darwish M., and **Koulouras G.** (2018) – “A Modified Algorithm based on the Equal-Areas PWM for the Extend of Linear Operation of a Microprocessor-Controlled PWM-VSI.”, *International Journal of Robotics and Mechatronics*, 5(1), 12-19, doi: 10.21535/252Fijrm.v5i1.983
- J20. Potirakis S. M., Contoyiannis Y., Melis N. S., **Koulouras G.**, Kopanas J., Antonopoulos G., Eftaxias K., & Nomicos C. (11/2018) – “Preliminary results concerning the fracture-induced electromagnetic emissions recorded prior to the Mw 6.7 Earthquake on October 25, 2018 south of Zakynthos.”, arXiv preprint, arXiv:1811.11015v1.
- J21. Potirakis S. M., Schekotov A., Contoyiannis Y., Balasis G., **Koulouras G. E.**, Melis N. S., Eftaxias K., & Nomicos C. (03/2019)., “On Possible Electromagnetic Precursors to a Significant Earthquake (Mw= 6.3) Occurred in Lesvos (Greece) on 12 June 2017.”, *Entropy*, 21(3), 241, doi: 10.3390/e21030241
- J22. Zantalis F., **Koulouras G.**, Karabetsos S. and Kandris D. (04/2019). – “A review of Machine Learning and IoT in Smart Transportation.”, *Journal of Future Internet* 2019, 11(4), 94, doi: 10.3390/fi11040094
- J23. Korovesis N., Kandris D., **Koulouras G.**, and Alexandridis A. (11/2019) – “Robot Motion Control via an EEG-Based Brain-Computer Interface by using Neural Networks and Alpha Brainwaves.”, *Journal of Electronics* 2019, 8(12), 1387, doi:10.3390/electronics8121387
- J24. Kandris D., Nakas C., Vomvas D. and **Koulouras G.** (02/2020) – “Applications of Wireless Sensor Networks: An Up-to-Date Survey.”, *Applied System Innovation*, 3(1), 14, doi:10.3390/asi3010014

Conference publications:

- C01. Stavrakas I., **Koulouras G.**, Nomicos C., Melis N. and Stavrakakis G. (11/2003) - “Algorithmic analysis of Electromagnetic variations possibly related to earthquake events”, 1st International Conference on Earthquake Prediction, Athens – Greece
- C02. Kapiris P., Nomikos K., Kopanas J., Antonopoulos G., **Koulouras G.**, Skountzos P., Zissos A., Mylonas S. and Eftaxias K. (09/2004) - “Lessons from the Athens earthquake”, 4th International Workshop on magnetic, electric and electromagnetic methods in seismology and volcanology, La Londe les Maures – France
- C03. Piliouras N., Kalatzis I., Georgiadis P., Ninos D., **Koulouras G.**, Minadakis G., Cavouras D. and Nomikos C. (09/2004) - “Electromagnetic seismic signal analysis employing pattern recognition methods”, 1st International Conference “From Scientific Computing to Computational Engineering” – Athens – Greece, ISBN: 960-8457-28-9
- C04. **Koulouras G.**, Kontakos K., Minadakis G., Stavrakas I., Stonham J. and Nomicos C. (07/2005) - “A Data Acquisition System using Compact Flash™ memory”, 2005 WSEAS 2nd International Conference on ENGINEERING EDUCATION, Vouliagmeni – Athens – Greece, pp. 519-524, ISBN: 960-8457-28-9
- C05. Pelegris P., Petropoulos F., Klimopoulos A., **Koulouras G.**, Kontakos K., Chatzidiakos P., Nassiopoulou A. and Nomicos C. (07/2005) - “A telemetric system based on GPRS technology”, 2005 WSEAS 2nd International Conference on ENGINEERING EDUCATION, Vouliagmeni – Athens – Greece, pp. 528-531, ISBN: 960-8457-28-9
- C06. Georgiadis P., Piliouras N., Sidiropoulos K., **Koulouras G.**, Minadakis G., Cavouras D. and Nomicos C. (07/2005) - “Smartphone-based system for monitoring electromagnetic signals”, 2005 WSEAS 2nd International Conference on ENGINEERING EDUCATION, Vouliagmeni – Athens – Greece, pp. 525-527, ISBN: 960-8457-28-9

- C07. Tsiriggakis V., Efthimiatis K., **Koulouras G.**, Stavrakas I., Kapiris P., Ninos K., Katsimaglis G., Voudouris K., Banitsas K., Eftaxias K., Koulopoulos A., Panagiotopoulos L. and Nomicos C. (07/2005) - "A versatile telemetric system based on mixed Internet and wireless transmission", 2005 WSEAS 2nd International Conference on ENGINEERING EDUCATION, Vouliagmeni – Athens – Greece, pp. 532-536, ISBN: 960-8457-28-9
- C08. Stavrakas I., Clarke M., **Koulouras G.**, Stavrakakis G. and Nomicos C. (04/2006) - "Study of Electromagnetic emissions in the HF band earthquake precursors", European Geosciences Union 2006, Geophysical Research Abstracts, Vienna - Austria, Volume 8, SRef-ID: EGU06-A-07568
- C09. **Koulouras G.**, Kontakos K., Minadakis G., Stonham J., Stavrakakis G., Nomicos C. (04/2006) - "Capturing Electromagnetic Emissions in the VHF Band possibly related to Earthquake Activity", European Geosciences Union 2006, Geophysical Research Abstracts, Vienna - Austria, Volume 8, SRef-ID: EGU06-A-10156
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