

Curriculum Vitae

Personal Details

Surname : **Stavrakas**
 Name : **Ilias**
 Discipline : **Electrical circuits and electrical measurements technologies**
 Fathers name : Dimitrios
 Date of Birth : 12 – November – 1974
 Address : Aristophanous 37, Halandri, 15232, Athens.
 Telephone : (+30) 2105385391
 E-mail : ilias@uniwa.gr

Current Academic Status:

Professor of the Department of Electrical and Electronic Engineering of the University of West Attica. Discipline: Electrical circuits and electrical measurements technologies. Undergraduate studies teaching: Analog Electronics, Mixed Analog/Digital Electronics. Postgraduate Studies “MSc by research in Electrical and Electronic Engineering” supervising postgraduate students research topics and teaching “Electrical and Optical Characterization of Materials and Devices”. Since 2021 serving as Deputy Head of the Department of Electrical and Electronics Engineering.

Academic Titles

2004: PhD, BRUNEL University, London, UK.

PhD thesis: A contribution to the study of stress induced currents: Laboratory results and field observations.

1999: M.Sc in Data Communication Systems awarded with distinction. BRUNEL University, London, UK.

M.Sc. thesis: Design and Implementation of a Software System to Manage Earthquake Event Data.

1997: B.Sc. in Electronic Engineering, Department of Electronics, Technological Educational Institution of Athens.

Thesis: Low noise receiver for the study of pre-seismic variations of the electric field of the Earth.

Research interests and profile:

Member of the Electronic Devices and Materials Laboratory (edml.uniwa.gr) University of West Attica and Head of the Low Level Measurements Group. His research interests focus on the sectors of:

- Electrical Circuits,
- Electrical and Electronic Measurement Technologies, Measuring Systems and Devices, Integrated Measurement Systems,
- Non-Destructive Testing of Materials
- Electrical Characterization of Materials.

Specifically, most of his research and scientific work focuses on the design and development of modern electronic systems, measuring systems and electronic circuits that aim at material and system characterization. Furthermore, he is working on the design and prototyping new laboratory and field measurement techniques aiming at the design and implementation of new services and applications. His research activities also include modern teaching technologies and applications and computer networks.

Research and Professional Activity

2022 - 2025 Deputy Project Coordinator for the «Next generation optical communication systems in the o-band: a key enabler for capacity enhancement in existing fibre links» funded under the framework HFRI H.F.R.I. Research Projects to Support Faculty Members & Researchers, ΕΛΙΔΕΚ ΑΑ 2901.

2018 – 2021 **Research Group coordinator** of the University of West Attica under the project titled “Environmental monitoring integrated system using an IoT network”, that is funded under the Framework: RESEARCH-CREATE-INNOVATION”, GSRT, Research group Budget 131.200,00€

2018 - Today Member and Deputy Project Coordinator of the main research team of the University of West Attica under the project titled “Development of water based conductive inks based on graphene for gravure and flexography printing (GRAPHEIN)”, that is funded under the Framework: RESEARCH-CREATE-INNOVATION”, University of West Attica Budget 237.475,28€

2018 – 2019 **Research Group coordinator** of the University of West Attica under the project titled “Structural Investigation of Soil materials”, that is funded under the Framework: GSRT –Reward, Research

- Group Budget: 15.000,00€
- 2016 – 2020 COST Research Participant on the subject «Atmospheric Electricity Network: coupling with the Earth System, climate and biological systems» CA15211, 04-10-2016 – 03-10-2020, http://www.cost.eu/COST_Actions/ca/CA15211.
- 2016 – 2019 **Research Group coordinator** of the Technological Educational Institute research team under the Project «Collective awareness platform for outdoor air pollution» –hackAIR, code 688363, that is funded by the HORIZON 2020 program – ICT-2015». Budget: 62.000€
Coordination: DRAXIS SA
Budget assigned at the research group TEI Athens: 62.000€
- 2012 -2015 **Research Group coordinator** at the European project co-funded by the European Union (European Social Fund) and Greek National resources under the framework of the “Archimedes III”.
Project title: *Non destructive evaluation of cement based materials by studying weak electric signals generated by knocking mechanic load*.
Budget: 100.000 €
- 2012 -2015 Member of the main Research team at the European project co-funded by the European Union (European Social Fund) and Greek National resources under the framework of the “THALES”.
Project title: *Research and Development of Novel Multifunctional Polymer Nanocomposites*.
TEI of Athens research group Coordinator: D. Triantis,
Budget assigned at the research group TEI Athens: 90.000 €
Project Coordinator: A. Kanapitsas, Technological Educational Institute of Lamia.
- 2012 -2015 Member of the main Research team at the European project co-funded by the European Union (European Social Fund) and Greek National resources under the framework of the “THALES”.
Project title: *Integrated understanding of seismicity, using innovative methodologies of fracture mechanics along with earthquake and non extensive statistical physics – application to the geodynamic system of the Hellenic arc*.
TEI of Athens research group Coordinator: D. Triantis,
Budget assigned at the research group TEI Athens:85.000 €
Project Coordinator: F. Vallianatos, Technological Educational Institute of Greece.
- 2012 -2015 Member of the main Research team at the European project co-funded by the European Union (European Social Fund) and Greek National resources under the framework of the “THALES”.
Project title: *Development and assessment of innovative experimental techniques for the study of the mechanical behaviour of natural building stones: Applications to the conservation and restoration of monuments of Cultural Heritage*
TEI of Athens research group Coordinator: D. Triantis,
Budget assigned at the research group TEI Athens:145.000 €
Project Coordinator: S. Kourkoulis, National Technical University of Athens, Greece
- 2012 – 2014 Member of the Research team at the European project co-funded by the European Union (European Social Fund) and Greek National resources under the framework of the “Archimedes III”.
Project title: Multi-directional study of pre-seismic variations focused on the electromagnetic emissions.
Coordinator: Prof. C. Nomicos
- 2013-2015 Member of the main Research team at the European project co-funded by the European Union (European Social Fund) and Greek National resources under the framework of the “Archimedes III”.
Project title: *“Institutional coordination activity”*.
Coordinator: Prof. D. Triantis
- 2014 Consulting the projects that are supported by the Technological Educational Institute of Athens. Monitoring of software tools and upgrades. Integration of processes systems and documentation.
- 2014 Participation in the project of Continuous Training of Electronic Engineers. Project title “ Digital and Embedded Systems – Industrial Applications”
- 2013 Internal Evaluator of the career infrastructure of the TEI of Athens.
- 2010-2012 Participation at the “Undergraduate students practical training” project of the TEI of Athens. Study of good practices and methodology guides. Guiding of Undergraduate students during their practical training period.
- 2007-2008 Researcher for the program “Relay Based Wireless Network and Standard – REWIND. Work undertaken “Network Simulation using OPNET modelling”. EU funded framework “FP7-ICT-STREP”.

- 2006-2007 Researcher for the program MILDMAP MEDIA, INTERREG III B ARCHIMED founded by the EU. Design of experimental procedures and study of the experimental results dealing with the electric characterization of various geo-materials, also design of the database that manages the geo-data stored by all the partners participating to the project.
- 2005-2006 Post-doctoral Researcher for the program “Electric characterization of geo-materials under mechanical damaging due to axial stress”, in the EU funded framework “Archimedes II”. Design of the experiments dealing with Pressuring Stimulated Currents, Dielectric characterization, Isothermal discharge currents, resistivity measurements, etc. Scientific result extraction and evaluation. Preparation of journal publications.
- 2005-2006 Post-doctoral Researcher for the program “Electromagnetic variations and their correlation to earthquakes” in the EU funded framework “Archimedes I”. Computerized Analysis using modern methodologies (statistics, wavelets, neural networks, classification theory, signal processing) of the electromagnetic anomalies that are related to potential pre-earthquake activity. Scientific result extraction and evaluation. Preparation of journal publications.
- 2004-2005 Development of new laboratory assignments for the MSc in Data Communication Systems (Athens course).
- o AM – FM modulation Techniques
 - o Network Programming (OOP) with Java
- The course is organized by Brunel University and delivered at the TEI of Athens and it is approved by the Greek ministry of Education (Decision 738/ 18-5-2004).
- 2003-2004 Design and implementation of the website of the Department of Electronics of the TEI of Athens and integration with the portal in the projects “Rehabilitation of the undergraduate program of studies of the TEI of Athens”.
- Preparation and Elaboration of source material in order to be adopted by the asynchronous tele-education platform for the project “Redesign of undergraduate curriculums of the TEI of Athens”.
- Development and integration of the asynchronous tele-education platform of the TEI of Athens for the project “Redesign of undergraduate curriculums of the TEI of Athens”.
- 2000-2002 Technical support for the project “Technical support and maintenance of the Data and Voice Information Systems of the Hellenic Investments Co.”.
- 2000-2001 Technical support for the project “Technical support and maintenance of the Data and Voice Information Systems of the Institute of Anargirios and Corialenias School of Speches”.
- 2000-2001 Software design and implementation for the project “Multimedia Databases for controlled and leased access and optional submission through INTRANET/INTERNET.
- 1998-2000 Reports and consulting on preparing educational material on the program “Upgrade of curriculums of Departments of Electronics of TEIs.”.
- 1998-2000 Laboratory reports and technical support of the supplementary education program titled “Complete Design of telecommunication products.”
- 1998-2001 Laboratory technical support for the MSc in Data Communication Systems, Brunel University.
- 2000 Study of the wireless connection between Department of Electronics of the Technological Educational Institute of Athens and the Institute of Technological Education using 2Mbit radio-link.
- 1999 Study – Design of the Data Network of the Technological Educational Institution of Mesologi.
Technical Reports.

Teaching Experience

PhD Students

2019 – Today: Ioannis Christakis, Measuring and monitoring systems for environmental pollutants using "Internet of Things" technology., Department of Electrical and Electronic Engineering, University of West Attica.

2008 – Today: Appointed as recognized PhD supervisor from the BRUNEL University.

Postgraduate Courses

2022 : MSc titled «Conservation of cultural heritage» of the Department of “ Conservation of Antiquities and Works of Art”, University of West Attica: Special topics on Non-destructive testing.

2022 : MSc titled «Applied Physics» of the Department of Physics, School of Sciences, University of Thessaly: Experimental techniques for the characterization of materials

2018 – Today: MSc by research in Electrical and Electronic Engineering, Department of Electrical and Electronics Engineering, University of West Attica. Module: Electrical and Optical Characterization of Materials and Devices

2012-2016: "Design and development of Advanced Electronic Systems". Module title: Modern metrology systems. Department of Electronics Technological Educational Institute of Athens.

2017-2018: "Embedded and Telecommunication Systems" Module title: Technologies and Measurement Systems. Department of Electronics Technological Educational Institute of Athens.

2002-2010: Lecturer at the MSc course "Data Communication Systems" running in collaboration of the TEI of Athens and Brunel University. (Ministry of Education 738/18-5-2004).

1. Computer and system Networks
2. Software Engineering (Network Programming (OOP) with Java)
3. Satellite and Mobile Communication Systems.
4. AM – FM modulation Techniques
5. Compression and Encryption

Supervision of Postgraduate Theses at the Departments of Informatics of the University of Athens, Electrical and Electronics Engineering of the BRUNEL University, UK, and the Electronics Engineering of the Technological Educational Institute of Athens.

Undergraduate Courses

2008-2017: staff member of the Department of Electronics Engineering taught in the undergraduate course the following subjects:

1. Electrical Circuits and Measurements,
2. Analog Electronics
3. Scientific Methodology
4. Analog Filters
5. Oscillators
6. Project Management

2008-2017: Undergraduate courses of the Departments of Electronics Engineering, Informatics and Biomedical Engineering on the subjects of Analog and Digital Electronics and programming.

Under Contract University teaching

2006-2008: Senior Lecturer at the Department of Electronics of the Technological Educational Institution of Athens teaching theory of Electronic Filters and Oscillators, Programming I (windows, dos, Visual C), Programming II (Visual C), Computer Networks, Digital Electronics, Analog Electronics.

1998-2006: Lecturer at the Department of Electronics of the Technological Educational Institution of Athens teaching the laboratory courses of Electronic Filters, Programming, Computer Networks, Microcontrollers, and Digital Electronics.

1997-1999: Teaching Internet services to the undergraduate students of the Technological Educational Institution of Athens that were funded by "Action 3.1.c Networks".

1999: Teaching "Computer Networks and Internet" at Municipality of Menidi funded by European Union. January 2000.

1998: Teaching "Computer Networks and Information Theory at Philips Medical technical staff.

Lecture Notes

1. Lecture notes for the Continuous Training of Electronic Engineers project. Course title " Digital and Embedded Systems – Industrial Applications". Notes on module "Project management – Electronics platforms".
2. Lecture notes on «Modern Metrology Systems» For the Electronics department Postgraduate Program «Design and Development of Advanced Electronic Systems».
3. Lecture notes on Electrical Circuits and Measurements, Theory and Practice taught at the corresponding module of the Electronics Department of the Technological Educational Institution of Athens
4. Lecture notes on Analog Electronic Filters, Theory and Practice taught at the corresponding module of the Electronics Department of the Technological Educational Institution of Athens
5. Lecture Notes for the TEI-Philips educational program for Training staff on Information Technology and Computer Networks.
6. Lecture Notes on mailer pine "PINE – MAILING in the INTERNET".
7. Lecture Notes for "Digital and Logic Circuits" for the Department of Informatics of the TEI of Athens.

Foreign Languages

English

Funding profile - Scholarships - Distinctions

1. 2022 – Today: Scientific coordinator for the implementation of the MOU between the Electronic Devices and Materials Laboratory and the Libre Space Foundation aiming on the development and dissemination of the space and space missions open technologies.
2. 2018 – Today: Coordinator for the Institute of Educational Policy for the rehabilitation of the Technical and Vocational Training (sector: Electrical, Electronics and Automation eng.).
3. 2018 – 2021: Representative Member of the University of West Attica at the General Assembly of the Greek Foundation of Research and Innovation.
4. 2017 – Today: Associate researcher for the Child mental health center
5. 2017 – Today: Project Evaluator and consultant of the National Scholarship Foundation.
6. 2015 – Today: Member of the Internet of Things (IoT) European Community
7. 2014 – Today: Project Evaluator and consultant of the General Secretariat for Research and Technology of the Ministry of Education.
8. 2007 – Today: Recognized Supervisor of PhD students from BRUNEL University, UK.
9. 2005 – 2006: Postdoctoral Research funding in the frame of the Programme: “Archimedes II”, title: “Electric characterization of geo-materials under mechanical damaging due to axial stress”. Funding : 20.000,00 Euro (one year).
10. 2000 – 2004: Funding of the PhD research from the National Foundation of Scholarships. Funding: 35.000,00 UK pounds (three years).
11. 1999 The MSc title was awarded by the Brunel University with Distinction.
12. 1994 - 1997: Undergraduate scholarship from the National Foundation of Scholarships. Funding 1.000,00 Euro.

Reviewer for the following Scientific Journals – Conferences and Books

1. Member of the Technical Program Committee of the IEEE Conference [MOCAST 2023](#) held during 28-30 June 2023 in Athens Greece.
2. Member of the review and evaluation Committee of the STEM STAR GREECE, contest in the frame of Athens Science Festival, that is supported by the US Embassy, the Microsoft and is organized by the aid of the Ministry of Education.
3. Member of the Organizing Committee of the 38th Danubia-Adria Symposium on Advances in Experimental Mechanics, 20-23 September 2022, Poros, Greece.
4. Member of the Organizing Committee of the 2nd International Conference of the Greek Society of Experimental Mechanics of Materials 26-28 September 2020 Athens, <http://gsemm.gr/2020-conference/>
5. Member of the Organizing Committee of the 1st International Conference of the Greek Society of Experimental Mechanics of Materials, 10-12 May 2018, Athens, <http://gsemm.gr/conference/>
6. Member of the Scientific Committee of the 17th International Scientific Conference of Experimental Mechanics. (ICEM 2017), conducted during 3-7 July 2017 at Rhodes. <http://icem17.org/scientific-advisory-board.html>
7. Chair of the Organizing Committee of the International Scientific Conference Science in Technology (SCinTE, 2015), that was conducted during 5-7 November 2015 in Athens {<http://www.scinte.gr/committees.php>}
8. Member of the Scientific committee of the 6th National Conference of Porous Materials that was conducted in Kavala 9-10 September 2013. <http://pspm6.teikav.edu.gr/index.php/el/2013-05-19-07-49-39>
9. Rock Mechanics and Rock Engineering
10. Solid State Electronics
11. Frontiers in Earth Science
12. Sensors (MDPI)
13. Physical Sensors
14. Natural Hazards and Earth System Sciences
15. Elsevier Procedia CIRP
16. Open Journal of Applied Science
17. Reviewer of the Book titled «ELECTRONIC PRINCIPLES», - MALVINO-BATES.
Invited reviewer of the following international scientific conferences:
18. IEEE International Geoscience and Remote Sensing Symposium
19. Geography and Geology 2010 (WORLDGEO '10)
20. International Conference on Circuits, Systems and Signals (CSS'09)
21. International Conference on Communications and Information
22. Technology (CIT'09)
23. Fracture and Structural Integrity

24. Atmospheric Environment

Scientific Unions - Associations

1. Member of the Administration Board of the Greek Society of Experimental Mechanics of Materials
2. IET member since 2003
3. IEEE member since 1997
4. Member of Computer Scientists Union of Greece since 2003.
5. Member of the Hellenic Society of Non-Destructive Testing since 2007.

Projects

1. Study for the update of the electronic systems of the Department of Electronics of the Technological Educational Institution (TEI) of Athens due to millennium bugs. (Department of Electronics: 2175/8-11-99).
2. Study for the Network Administration policy and regulations of the Electronics Department of the TEI of Athens. Procedures and certification.
3. RIPE Document for the Electronics Department of the TEI of Athens for the IP range 195.130.107.xx. IP planning and utilization.
4. Study and implementation of the Beowulf cluster (titan) of the Department of Electronics of the TEI of Athens
5. Free-lancer as Network Engineer and Administrator for several companies (1997 – 2003). A brief description of the projects and the held positions follows:
6. Network Designer and implementation supervisor for the companies ACTIVE-Net Ltd and Technologin Ltd.
7. RIPE Document for the "ACTIVE-NET Ltd." for the IP range 195.97.20.xx. Network Administration and IP Planning.
8. RIPE Document for the "ACTIVE-NET Ltd." for the IP range 62.68.75.xx. Network Administration and IP Planning.
9. Network consultant for the company "Technologin Ltd".

Academic Administration work:

2021 - Today: Deputy Head of Department of Electrical and Electronics Engineering, University of West Attica.

2017 – 2021: Director of the Electronics and Materials Sector of the Department of Electrical and Electronics Engineering, University of West Attica.

2010 – 2016: vice- Director of the Electronics Sector of the Department of Electronics, Technological Educational Institute of Athens.

Participation at more than 200 committees during the last years. The committees included staff development assessments and equipment specifications and supply assessment for the TEI of Athens.

List of Publications

- **In Journals: 94**
- **In Conference Proceedings: 104**
- **Abstracts in Conferences: 76**
- **Book Chapters: 4**

Citation Scores

- **Scopus: [1421](#) (h-index: [19](#))**
- **Google Scholar: [2061](#) (h-index: [22](#))**
- **Research Gate: [1740](#) (h-index: [20](#))**
- **Web of Science: 1176**

Scientific Journal Editorial activity:

1. MDPI, *Toxics*, IF 4.146: Special Issue "[New Advances in Low-Cost Air Pollution Sensors](#)"
2. Frontiers, [Frontiers in Earth Science](#), IF 2.9
3. Italian Group of Fracture (IGF), [Fracture and structural integrity](#), IF 1.525
4. MDPI, [Acoustics](#), IF 2.1

Ph.D. Thesis I. D. Stavrakas: "Investigation of Pressure Stimulated Current in rock through laboratory induced stress measurements as a mechanism for electromagnetic emissions and its analysis as a precursor phenomenon of seismic events."

Journals

2024

- J94.** D. Triantis, **I. Stavrakas**, E.D. Pasiou, S.K. Kourkoulis, Exploring the acoustic activity in brittle materials in terms of the position of the acoustic sources and the power of the acoustic signals-Part II: Applications, **Forces in Mechanics**, 100265, 2024. <https://doi.org/10.1016/j.finmec.2022.100088>.
- J93.** D. Triantis, E.D. Pasiou, **I. Stavrakas**, S.K. Kourkoulis, Revealing the Proximity of Concrete Specimens to Their Critical Damage Level by Exploring the Cumulative Counts of the Acoustic Emissions in the Natural Time Domain, **Materials** 17 (5), 1017, 2024, <https://doi.org/10.3390/ma17051017>.
- J92.** Christakis, E. Sarri, O. Tsakiridis, **I. Stavrakas**, Investigation of LASSO Regression Method as a Correction Measurements' Factor for Low-Cost Air Quality Sensors, **Signals** 5 (1), 60-86, 2024, <https://doi.org/10.3390/signals5010004>.
- J91.** Christakis, E. Sarri, O. Tsakiridis, **I. Stavrakas**, Identification of the Safe Variation Limits for the Optimization of the Measurements in Low-Cost Electrochemical Air Quality Sensors, **Electrochem** 5 (1), 1-28, 2, 2023, <https://doi.org/10.3390/electrochem5010001>.
- J90.** I. Christakis, O. Tsakiridis, D. Kandris, **I. Stavrakas**, A Kalman Filter Scheme for the Optimization of Low-Cost Gas Sensor Measurements, **Electronics** 13 (1), 25, 2, 2023, <https://doi.org/10.3390/electronics13010025>.
- J89.** D. Triantis, N.V. Sarlis, A. Loukidis, E.D. Pasiou, **I. Stavrakas**, S.K. Kourkoulis, Criticality indices provided by the evolution of Pressure Stimulated Currents and Acoustic Emissions in the Natural Time Domain, **Theoretical and Applied Fracture Mechanics** 128, 104115, <https://doi.org/10.1016/j.tafmec.2023.104115>

2023

- J88.** Triantis, D.; **Stavrakas, I.**; Loukidis, A.; Pasiou, E.D.; Kourkoulis, S.K. Spatio-Temporal Distribution of the Sources of Acoustic Events in Notched Fiber-Reinforced Concrete Beams under Three-Point Bending. *Materials* 2023, 16, 5118. <https://doi.org/10.3390/ma16145118>
- J87.** Triantis, D.; **Stavrakas, I.**; Loukidis, A.; Pasiou, E.D.; Kourkoulis, S.K. A Study on the Fracture of Cementitious Materials in Terms of the Rate of Acoustic Emissions in the Natural Time Domain. *Appl. Sci.* 2023, 13, 6261. <https://doi.org/10.3390/app13106261>
- J86.** Angelica Mero, Spyridon Koutsoumpos, Panagiotis Giannios, **Ilias Stavrakas**, Konstantinos Moutzouris, Andrea Mezzetta, Lorenzo Guazzelli, Comparison of physicochemical and thermal properties of choline chloride and betaine-based deep eutectic solvents: The influence of hydrogen bond acceptor and hydrogen bond donor nature and their molar ratios, *Journal of Molecular Liquids*, Volume 377, 2023, 121563, ISSN 0167-7322, <https://doi.org/10.1016/j.molliq.2023.121563>.
- J85.** Christakis, I.; Tsakiridis, O.; Kandris, D.; **Stavrakas, I.** Air Pollution Monitoring via Wireless Sensor Networks: The Investigation and Correction of the Aging Behavior of Electrochemical Gaseous Pollutant Sensors. *Electronics* 2023, 12, 1842. <https://doi.org/10.3390/electronics12081842>
- J84.** Loukidis, A.; **Stavrakas, I.**; Triantis, D. Non-Extensive Statistical Mechanics in Acoustic Emissions: Detection of Upcoming Fracture in Rock Materials. *Appl. Sci.* 2023, 13, 3249. <https://doi.org/10.3390/app13053249>
- J83.** SK. Kourkoulis, A. Loukidis, ED. Pasiou, **I. Stavrakas**, D. Triantis, Response of fiber reinforced concrete while entering into the critical stage: An attempt to detect pre-failure indicators in terms of non-extensive statistical mechanics, *Theoretical and Applied Fracture Mechanics* 123, 103690, 2023.
- J82.** A. Loukidis, D. Tzagkarakis, A. Kyriazopoulos, **I. Stavrakas**, D. Triantis, Correlation of Acoustic Emissions with Electrical Signals in the Vicinity of Fracture in Cement Mortars Subjected to Uniaxial Compressive Loading, *Applied Sciences* 13 (1), 365, 2023.

2022

- J81.** P. Photopoulos, C. Tsonos, **I. Stavrakas**, D. Triantis, Remote and in-person learning: Utility versus social experience, *SN Computer Science* 4 (2), 116, 2022.
- J80.** D. Triantis, A. Loukidis, **I. Stavrakas**, E.D. Pasiou, S.K. Kourkoulis, Attenuation of the Acoustic Activity in Cement Beams under Constant Bending Load Closely Approaching the Fracture Load, *Foundations* 2 (3), 590-606, 2022.
- J79.** A. Loukidis, **I. Stavrakas**, D. Triantis, Electrical Methods for Sensing Damage in Cement Mortar Beams Combined with Acoustic Emissions, *Materials* 2022, 15(13), 4682; <https://doi.org/10.3390/ma15134682>
- J78.** G. Agalianos, D. Tzagkarakis, A. Loukidis, E. D. Pasiou, D. Triantis, S. K. Kourkoulis and **I. Stavrakas**, 2022, Correlation of Acoustic Emissions and Pressure Stimulated Currents recorded in Alfas-stone specimens under three-point bending. The role of the specimens' porosity: Preliminary results, *Structural Integrity Procedia* Volume 41, 2022, 452-460.
- J77.** C. Tsonos, S. Kriptou, K. Moutzouris, I. Stavrakas, G. Tsonos, L. Guazzelli, A. Mezzetta, A. Mero, Dielectric study of tetraalkyl ammonium and tetraalkyl phosphonium, levulinate ionic liquids, *International Journal of Molecular Sciences*, 2022, 23(10), 5642; <https://doi.org/10.3390/ijms23105642>
- J76.** Stavros K Kourkoulis, Ermioni D Pasiou, Christos F Markides, Andronikos Loukidis, **Ilias Stavrakas**, Dimos Triantis, The determination of mode-I fracture toughness (by means of the Brazilian disc configuration) in the light of data provided by the 3D digital image correlation technique, *International Journal of Building Pathology and Adaptation*, DOI 10.1108/IJBPA-02-2022-0032
- J75.** A. Mero, L. Guglielmero, F. D'Andrea, C. S. Pomelli, L. Guazzelli, S. Koutsoumpos, G. Tsonos, **I. Stavrakas**, K. Moutzouris, A. Mezzetta, Influence of the cation partner on levulinate ionic liquids properties, *Journal of Molecular Liquids*, Volume 354, 2022, 118850, ISSN 0167-7322, <https://doi.org/10.1016/j.molliq.2022.118850>.
- J74.** D Triantis, **I Stavrakas**, A Loukidis, ED Pasiou, SK Kourkoulis, Exploring the acoustic activity in brittle materials in terms of the position of the acoustic sources and the power of the acoustic signals-Part I: Founding the approach, *Forces in Mechanics*, 100088, 2022
- J73.** SK Kourkoulis, ED Pasiou, A Loukidis, **I Stavrakas**, D Triantis, Comparative Assessment of Criticality Indices Extracted from Acoustic and Electrical Signals Detected in Marble Specimens, *Infrastructures* 7 (2), 15, 2022.
- J72.** D Triantis, ED Pasiou, **I Stavrakas**, SK Kourkoulis, Hidden Affinities Between Electric and Acoustic Activities in Brittle Materials at Near-Fracture Load Levels, *Rock Mechanics and Rock Engineering*, 1-18, 2022.

- J71.** A Loukidis, D Triantis, **I Stavrakas**, ED Pasiou, SK Kourkoulis, Detecting Criticality by Exploring the Acoustic Activity in Terms of the “Natural-Time” Concept, [*Applied Sciences* 12 \(1\), 231, 2022.](#)

2021

- J70.** Nikos Papadakis, Nikos Koukoulas , Ioannis Christakis, **Ilias Stavrakas** and Dionisis Kandris, *An IoT-Based Participatory Antitheft System for Public Safety Enhancement in Smart Cities*, [*Smart Cities* 2021, 4\(2\), 919-937; <https://doi.org/10.3390/smartcities4020047>](#)
- J69.** Panagiotis Photopoulos, Christos Tsonos, **Ilias Stavrakas** and Dimos Triantis, *A method for the calculation the activation energies of thermally stimulated depolarization current peaks: Application in Polyvinylidene Fluoride/Graphene Nanocomposites*, [*Physica B: Physics of Condensed Matter*, 622, 2021, 413338.](#)
- J68.** Andronikos Loukidis, Dimos Triantis, **Ilias Stavrakas**, *Non-extensive statistical analysis of acoustic emissions: The variability of entropic index q during loading of brittle materials until fracture*, [*Entropy* 2021, 23, 276.](#)

2020

- J67.** Andronikos Loukidis, Dimos Triantis, **Ilias Stavrakas**, *Non-extensive statistical analysis of acoustic emissions recorded in marble and cement mortar specimens under mechanical load until fracture*, [*Entropy*, 2020, 22 \(10\), 1115](#)
- J66.** Andronikos Loukidis, Dimos Triantis, **Ilias Stavrakas**, Ermioni D. Pasiou, Stavros K. Kourkoulis, *Comparative I_b -value and F-function analysis of Acoustic Emissions from elementary and structural tests with marble specimens*, [*Material Design and Processing Communication*, 2020;e176.](#)
- J65.** S Koutsoumpos, P Giannios, **I Stavrakas**, K Moutzouris. The derivative method of critical-angle refractometry for attenuating media, [*Journal of Optics*, 22 \(2020\) 075601 \(10pp\), <https://doi.org/10.1088/2040-8986/ab8286>](#)
- J64.** **Dimos Triantis**, Dimitri K. Tsaousi, Ilias Stavrakas, Ermioni D. Pasiou, Panagiotis Douvis, Stavros K. Kourkoulis, *Electric and acoustic activity in notched fiber-reinforced concrete beams under three point bending*, [*Materials Today: Proceedings* 32 \(2020\) 148–155.](#)
- J63.** Mastrogiannis D, Andreopoulos SI, Potirakis SM, **Stavrakas I**, Triantis D, Pasiou ED, Modelling acoustic and electric signals emitted during structural tests in terms of log-periodic power-law models. [*Material Design and Processing Communication*, 2020;1–9, .<https://doi.org/10.1002/mdp2.134>](#)

2019

- J62.** **Stavrakas, I.**, Kourkoulis, S. and Triantis, D. (2019) “Damage evolution in marble under uniaxial compression monitored by Pressure Stimulated Currents and Acoustic Emissions ”, [*Fracture and Structural Integrity*, 13\(50\), pp. 573-583](#)
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