

**Evangelos N. Kaselouris****Detailed Curriculum Vitae**

| <b>1. Personal details</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| Date of birth:             | 25.05.1981                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Birthplace:                | Athens                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Marital status             | Single                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Position:                  | Assistant Professor<br>(ΦΕΚ 1812/τ.Γ'/17-07/2023)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Army duties:               | Fulfilled                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Nationality                | Hellenic                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| E-mail:                    | <a href="mailto:vagfem@hmu.gr">vagfem@hmu.gr</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Web:                       | <a href="https://orcid.org/0000-0002-7945-1140">https://orcid.org/0000-0002-7945-1140</a> (Orchid)<br><a href="https://scholar.google.gr/citations?user=2zDYZL8AAAAJ&amp;hl=en">https://scholar.google.gr/citations?user=2zDYZL8AAAAJ&amp;hl=en</a> (Google Scholar)<br><a href="https://www.scopus.com/authid/detail.uri?authorId=23004818400">https://www.scopus.com/authid/detail.uri?authorId=23004818400</a> (Scopus)<br><a href="https://www.researchgate.net/profile/Evangelos-Kaselouris-2/stats">https://www.researchgate.net/profile/Evangelos-Kaselouris-2/stats</a> (ResearchGate) |
| Phon.:                     | +30 28310 86314, +3028310 21923, +30 6947325018                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

| <b>2. Education</b>    |                                                                                                                                                                                                                                                                                                                                                                                              |
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| <b>10.2012-10.2016</b> | PhD diploma, Technical University of Crete, School of Production Engineering and Management, Thesis titles: « <i>Study of matter behaviour dynamics governed by the interaction with laser pulses and external strong currents</i> ». <a href="https://www.didaktorika.gr/eadd/handle/10442/39101">https://www.didaktorika.gr/eadd/handle/10442/39101</a>                                    |
| <b>10.2006-10.2008</b> | Master's degree in biomedical engineering, National Technical University of Athens and University of Patras, Specialization: Biomechanics of the Faculty of Mechanical Engineering (NTUA), General degree: 8,23. MSc thesis title: « <i>Investigation on biomechanical stresses and strains of a trochanteric fi-nail intramedullary implant fixation using the finite element method</i> ». |
| <b>10.2000-10.2006</b> | National Technical University of Athens, Faculty of Applied Mathematics and Physical Sciences. General degree: 7,01. Thesis title: <i>Experimental and theoretical investigation on the optical properties of skin (fluorescence, reflectivity) using laser pulses</i>                                                                                                                       |

| <b>3. Academic and Research positions</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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| <b>08.2023 - Today</b>                    | <b>Assistant Professor (Tenure-track)</b> (ΦΕΚ 1812/τ.Γ'/17-07/2023), Assumption of duties: 25/08/2023, Department of Music Technology and Acoustics, Hellenic Mediterranean University (HMU). <ul style="list-style-type: none"> <li>• <b>Subject Area:</b> "Vibroacoustic Simulations with Applications to Musical Instruments"</li> <li>• <b>Teaching:</b> Independent teaching, curriculum design, and development of undergraduate and postgraduate courses. Authoring of instructional materials. Design, refinement, and implementation of course laboratory exercises. Supervision and co-supervision of undergraduate theses. Co-supervision and evaluation of postgraduate master's theses (member of advisory and examination committees). Primary supervisor for PhD candidates and member of three-member PhD advisory committees.</li> <li>• <b>Research:</b> Research and development work within academic programs, serving in various roles (Deputy Principal Investigator, Member of the Core Research Team). Proposal writing and co-authoring. Monitoring and project management of competitive research grants. Development and administration of parallel processing computing systems for solving finite numerical method problems.</li> <li>• <b>Administration:</b> Service in administrative and institutional roles.</li> </ul> |

**4. Administrative work**

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| <b>08.2023 - Today</b> | <p>Active participation in numerous Committees (serving as Chair or Member), as well as active involvement in the governing bodies of the Department (General Assemblies, Councils), the School (Deanery), and the University (Committees, Assemblies). In detail:</p> <ul style="list-style-type: none"> <li>• <b>Internal Evaluation Committee (OMEA):</b> Member of the Department's OMEA (since 05/09/2023). Member of the three-member OMEA committee of the Department of Music Technology and Acoustics (since 01/09/2025).</li> <li>• <b>School Governing Body:</b> Member of the Deanery of the School of Music and Optoacoustic Technologies, Hellenic Mediterranean University (since 01/09/2025).</li> <li>• <b>Faculty Selection Committee (Fall 2024-2025):</b> Regular member of the evaluation committee for adjunct faculty positions for the Fall semester of the academic year 2024-2025, under the call "Lifelong Learning Actions in Higher Education (Acquisition of Academic Teaching Experience for Young PhD Holders) for the academic years 2024-2025, 2025-2026, and 2026-2027."</li> <li>• <b>Faculty Selection Committee (Spring 2024-2025):</b> Regular member of the evaluation committee for adjunct faculty positions for the Spring semester of the academic year 2024-2025.</li> <li>• <b>Faculty Selection Committee (Fall 2025-2026):</b> Regular member of the evaluation committee for adjunct faculty positions for the Fall semester of the academic year 2025-2026.</li> <li>• <b>Faculty Selection Committee (Spring 2025-2026):</b> Alternate member of the evaluation committee for adjunct faculty positions for the Spring semester of the academic year 2025-2026.</li> <li>• <b>Degree Audit Committee:</b> Chair of the degree audit committee, responsible for overseeing the entire graduation and degree completion process for undergraduate students of the MTA Department (since 31/05/2024).</li> <li>• <b>Internship Committee:</b> Regular member of the Department's three-member Internship Committee for a three-year term (since 21/03/2025).</li> <li>• <b>Academic Appointments Committee:</b> Member of the evaluation committee for applications submitted by academic fellows, postdoctoral researchers, and adjunct faculty members of the MTA Department (since 21/03/2025).</li> <li>• <b>Records Disposal Committee:</b> Chair of the Department's records and archives disposal committee (since 21/03/2025).</li> <li>• <b>Undergraduate Curriculum Committee:</b> Member of the Department's undergraduate curriculum committee (since 05/09/2023).</li> <li>• <b>Public Relations and Communication Committee:</b> Member of the Department's communication committee (since 05/09/2023).</li> <li>• <b>Scheduling and Platform Monitoring Committee:</b> Member of the committee for timetable monitoring and the MRBS platform (since 05/09/2023).</li> </ul> |
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**5. Research projects**

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| Participation in more than 15 competitive research and development grants/programs serving as Deputy Principal Investigator (Co-PI), Member of the Core Research Team, or Collaborating Researcher. |                                                                                                                                                                                                                                         |
| <b>Participation as a faculty member</b>                                                                                                                                                            |                                                                                                                                                                                                                                         |
| <b>10.10.2024-09.10.2027</b>                                                                                                                                                                        | Deputy Principal Investigator (Co-PI) for the project titled: "ElectroChemoMechanical (ECM) Gradient Synergy in Solid State Batteries (SSBs)"                                                                                           |
| <b>13.03.2025-31.12.2026</b>                                                                                                                                                                        | Deputy Principal Investigator (Co-PI) for the project titled: "Ακουστικές Τεχνολογίες - Συνέδρια, Ομιλίες"                                                                                                                              |
| <b>01.01.2024-31.12.2024</b>                                                                                                                                                                        | «Emerging technologies for crystal-based gamma-ray light sources (TECHNO-CLS)», funded by the European Commission. Participation in Work Packages: WP2. Theory and modelling, WP4. CLS technology. Member of the core research team.    |
| <b>01.01.2025-31.12.2025</b>                                                                                                                                                                        | «Emerging technologies for crystal-based gamma-ray light sources (TECHNO-CLS)», funded by the European Commission. Participation in Work Packages: WP2.Theory and modelling, WP3.Experimental issues. Member of the core research team. |
| <b>01.07.2025-31.12.2025</b>                                                                                                                                                                        | «Innovative Education & Training in Laser Inertial Fusion Energy», funded by the Greek State Scholarships Foundation (IKY). Participation in WP2, Physics and technology of IFE. Member of the core research team.                      |
| <b>03.11.2025-02.11.2028</b>                                                                                                                                                                        | «Laser-plasma high intensity ultrasounds generation and control for cancer research applications», funded by the Hellenic Foundation for Research and Innovation (HFRI). Participation in WP3. Thermo-                                  |

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|                                                                                      | mechanical effects of LPSS US beams, WP4. Application of LPSS US beams in cancer research, WP5. Dissemination and Communication. Member of the core research team.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>11.06.2026-31.12.2026</b>                                                         | "National Controlled Thermonuclear Fusion Program", funded by the European Commission through the National Centre for Scientific Research "Demokritos" (NCSR Demokritos). Participation in WPTE TASK RT06 Preparation of efficient Plasma Facing Components operation for ITER, DEMO and HELIAS. Member of the core research team.                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>27.02.2025-31.12.2025</b>                                                         | Own contribution / In-kind contribution within the framework of the "National Controlled Thermonuclear Fusion Program"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>12.03.2026-31.12.2026</b>                                                         | Own contribution / In-kind contribution within the framework of the "National Controlled Thermonuclear Fusion Program"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Participation as an external collaborator/researcher, postdoctoral researcher</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>01.03.2011-28.04.2011</b>                                                         | «European High Power laser Energy Research Facility (HiPER) – Preparatory Phase Study», which was funded under the framework established by the "HiPER - TECHNICAL WORK COLLABORATION AGREEMENT." Conducted research within the framework of Work Package 12 – "Fundamental Science Programme," TEI of Crete, Centre for Plasma Physics and Lasers (CPPL). External collaborator / researcher.                                                                                                                                                                                                                                                                                                                                                  |
| <b>01.09.2012-30.11.2014</b>                                                         | Member of the core research team within the framework of the "ARCHIMEDES III: STRENGTHENING RESEARCH GROUPS IN TEI" Program, for the project titled "Innovative optoacoustic setup for the three-dimensional spatiotemporal micro-characterization of composite materials based on ultrashort laser pulses," TEI of Crete, Department of Music Technology & Acoustics, CPPL. External collaborator / researcher.                                                                                                                                                                                                                                                                                                                                |
| <b>01.09.2013-31.10.2014</b>                                                         | "National Research Infrastructure for HiPER" (MIS code: 376841), co-funded by the European Regional Development Fund (ERDF) and National Funds. Scope of work: a) Participation in design and feasibility studies for the development of the infrastructure through plasma simulations generated by power optoelectronic devices and/or laser-matter interaction with applications in biomedicine and materials science. b) Authoring of the respective detailed technical report. Institution: TEI of Crete, CPPL. Role: External collaborator / researcher.                                                                                                                                                                                   |
| <b>03.11.2014-31.12.2015</b>                                                         | "National Research Infrastructure for HiPER" (MIS code: 376841), co-funded by the European Regional Development Fund (ERDF) and National Funds. Activities: a) Participation in research and design studies for the development of the infrastructure through plasma simulations generated by power optoelectronic devices and/or laser-matter interaction with applications in biomedicine and materials science. b) Authoring of the respective detailed technical report. Institution: TEI of Crete, CPPL. Role: External collaborator / researcher.                                                                                                                                                                                         |
| <b>01.09.2016-30.09.2016</b>                                                         | "Interdepartmental Centre for Plasma Physics and Lasers (CPPL Actions)," TEI of Crete, Centre for Plasma Physics and Lasers (CPPL). Activities: Participation in computational simulations of plasma generated by power optoelectronic devices and/or laser-matter interaction. Role: External collaborator / researcher.                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>11.10.2017-31.12.2017</b>                                                         | Subproject 1: "Study / design / development of a particle radiation production station" under the project titled "Enhancing the competitiveness of the Region of Crete in cutting-edge medical applications using secondary plasma radiation – ultra-powerful lasers," funded by the Region of Crete. Activities: Participation in the design of a prototype station for generating secondary radiation from ultra-powerful, ultrashort-pulse lasers, through the modeling and detection of plasma instabilities. Institution: TEI of Crete, Centre for Plasma Physics and Lasers (CPPL). Role: Postdoctoral researcher.                                                                                                                        |
| <b>15.06.2018-31.12.2019</b>                                                         | Subproject 2: "Participation of the TEI of Crete / CPPL in the HELLAS-CH project" under the Action "Synergy ELI – LASERLAB Europe, HiPER & IPERION-CH.gr" (MIS code: 5002735), co-funded by the European Regional Development Fund (ERDF). Activities: Participation in Work Package "WP 5 Collaborative Research Actions (CRA)," with responsibilities focusing on plasma simulations generated by power optoelectronic devices and/or laser-matter interaction with applications in materials science and/or biomedicine. Institution: TEI of Crete, Centre for Plasma Physics and Lasers (CPPL). Role: Postdoctoral researcher.                                                                                                              |
| <b>19.09.2018-31.07.2019</b>                                                         | Erasmus+ Program: "Innovative Education and Training in High Power Laser Plasmas / PowerLaPs "Project Scope: Development and production of educational material within the framework of Intellectual Outputs: O1: "Plasma Physics - Theory and Experiments", O2: "High Power Laser Matter Interactions / High Energy Density Physics - Theory and Experiments", O3: "Computational Modeling & Simulations in Laser Matter Interactions", O4: "Laser Plasma Diagnostics - Theory and Experiments". Activities per Output: Development and management of educational and supporting material sub-modules. Participation in the development and production of instructional material for specific sub-modules. Quality and completeness control of |

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|                              | deliverable educational materials. Participation as a lecturer/instructor in Learning, Teaching, and Training (LTT) activities (Intensive Programme IP1 in 2018 and IP2 in 2019). Institution: TEI of Crete, Centre for Plasma Physics and Lasers (CPPL). Role: Postdoctoral researcher.                                                                                                                                                                                                                                                                                                                                             |
| <b>24.02.2020-24.5.2021</b>  | "Study of plasma instability mitigation in Z-pinch devices using dielectric coatings" within the framework of the project "Support for Researchers with an Emphasis on Young Researchers – 2nd Cycle. "Activities: Proposal writing and active participation in the core research team. Institution: Hellenic Mediterranean University (HMU). Role: Postdoctoral researcher.                                                                                                                                                                                                                                                         |
| <b>20.12.2021-20.09.2023</b> | "Subcontracting agreement with the entity 'CARBON FIBER MUSICAL INSTRUMENTS LP' within the framework of the project 'Standardization of a Bouzouki Constructed from Carbon Fiber' (MIS/Project Code: T2EDK-01484)," funded by the Operational Programme "Competitiveness, Entrepreneurship & Innovation" (EPAnEK) 2014-2020 and co-funded by the European Regional Development Fund (ERDF). Implementation: Department of Music Technology and Acoustics. Activities: Modeling and simulation of the vibrational and acoustic behavior of the optimized carbon-fiber instrument. Role: Postdoctoral researcher (Primary Researcher). |
| <b>01.02.2022-31.03.2023</b> | "Pump-probe reflectivity studies of ultrashort laser-induced acoustic strains in layered materials" within the framework of the "2nd Call for HFRI Research Projects to Support Postdoctoral Researchers. "Activities: Participation in Work Packages: WP5. Computational models and simulations, WP6. Dissemination and promotion. Scope of work focused on computational models and simulations for studying the vibrational and acoustic behavior of layered materials. Role: Member of the core research team.                                                                                                                   |
| <b>01.04.2022-31.12.2022</b> | "National Controlled Thermonuclear Fusion Program", funded by the European Commission (EC) through the National Centre for Scientific Research "Demokritos" (NCSR Demokritos). Activities: Focused on mitigation strategies for hydrodynamic instabilities, and specifically studying the thermomechanical behavior of materials in inertial confinement fusion targets and its impact on the development of plasma instabilities (WPENR). Role: Postdoctoral Researcher, Member of the research team.                                                                                                                               |
| <b>04.11.2022-24.08.2023</b> | "Emerging technologies for crystal-based gamma-ray light sources (TECHNO-CLS)", funded by the European Commission. Activities: Implementation of Finite Element Method (FEM) simulations to study the generation of acoustic waves in crystals excited by piezoelectric transducers and/or pulsed lasers. Participation in Work Packages: CLS technology, Experimental issues, Theory and modelling. Role: Postdoctoral Researcher, Member of the research team.                                                                                                                                                                     |
| <b>2016 - Today</b>          | Core member of the Institute of Plasma Physics and Laser (IPPL) simulation research team, with active involvement in proposal writing and participation in ten (10) successfully completed research grants utilizing the National High-Performance Computing (HPC) system "ARIS" of GRNET (Greek Research and Technology Network): LaMIS, PluPS I-II, LaMIPlaS I, II, III, and LaMPIOS I, II, III, IV. Currently, the ongoing project is LaMPIOS V ("Laser Matter/Plasma Interactions and Optoacoustic Simulations").                                                                                                                |

## 6. Reviewer / Evaluator

### Peer reviewer for international scientific journals

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| <b>2018 - Today</b> | <ul style="list-style-type: none"> <li>Optics and Laser technology, Applied Acoustics, Results in Engineering, Measurement, Computers in Biology and Medicine, High Energy Density Physics, Materials and Design, Computers &amp; Structures – <b>Elsevier</b></li> <li>Materials, Applied Sciences, Acoustics, Sensors, Micromachines, Machines, Modelling, Mathematics, Crystals, Designs, Axioms, Coatings, Algorithms, Metrology, Processes, Molecules, Photonics, Automation, Nanomaterials, Vibration – <b>MDPI</b></li> <li>Plasma Physics and Controlled Fusion, Physica Scripta, Modelling and Simulation in Materials Science and Engineering, Journal of Instrumentation – <b>IOP Publishing</b></li> <li>Journal of the Acoustical Society of America, Physics of Fluids – <b>AIP Publishing</b></li> <li>Journal of Zhejiang University SCIENCE A, Applied Physics A, Lasers in Medical Science – <b>Springer Nature</b></li> <li>High Power Laser Science and Engineering – <b>Cambridge University Press</b></li> <li>Physical Review Letters – <b>American Physical Society (APS)</b></li> <li>Journal of Vibration and Control – <b>SAGE</b></li> <li>Nanoscale – <b>Royal Society of Chemistry</b></li> <li>Engineering Reports – <b>Wiley</b></li> <li>Acta Acustica – <b>EDP Sciences</b></li> <li>International Journal of Applied Mechanics and Engineering – <b>Sciencedirect</b></li> </ul> |
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**Member of Scientific Committees and Organizations**

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| <b>2018</b>                                                     | Member of the Scientific Organizing Committee of the 35th European Conference on Laser Interaction with Matter (ECLIM 2018), <a href="https://eclim2018.mitos.com.gr/">https://eclim2018.mitos.com.gr/</a>                                                                                      |
| <b>2023</b>                                                     | Member of the Scientific Organizing Committee of the 5 <sup>th</sup> European Conference on Plasma Diagnostics – ECPD 2023<br><a href="https://ecpd2023.eventsadmin.com/Home/Welcome">https://ecpd2023.eventsadmin.com/Home/Welcome</a>                                                         |
| <b>2024</b>                                                     | Member of the Hellenic Institute of Acoustics (HELINA)<br>Member of the Scientific Organizing Committee of the 12th Panhellenic Conference on Acoustics of HELINA, <a href="https://conferences.helina.gr/2024/">https://conferences.helina.gr/2024/</a> Role: Communications Officer           |
| <b>2025</b><br><b>2026</b>                                      | Guest Editor of the Special Issue " <a href="#">Advances in Modelling and Simulation of Materials in Applied Sciences</a> " and of the Special Issue " <a href="#">Advances in Modelling and Simulation of Materials in Applied Sciences (2nd Edition)</a> " for the journal Materials of MDPI. |
| <b>Evaluator / Reviewer of International Research Proposals</b> |                                                                                                                                                                                                                                                                                                 |
| <b>2026</b>                                                     | Evaluator of 4 proposals of the National Science Centre Poland, Funding scheme: SONATA-17 in the field of Production and processes engineering (i.e. chemical-, civil-, environmental-, mechanical-, biomechanical-, energy-, transport-, biological- processes and models)                     |

**7. Teaching****Teaching undergraduate courses as a faculty member**

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| <b>09.2023-08.2024</b> | Assistant Professor, Department of Music Technology and Acoustics, HMU<br>Independent course teaching: <ul style="list-style-type: none"> <li>- Multimedia Technology (1<sup>st</sup> semester)</li> <li>- Scientific Computing (5<sup>ou</sup> εξαμήνου)</li> <li>- Multimedia Research Methods (8<sup>th</sup> semester)</li> <li>- Seminar (8<sup>th</sup> semester)</li> </ul> |
| <b>09.2024-08.2025</b> | Assistant Professor, Department of Music Technology and Acoustics, HMU<br>Independent course teaching: <ul style="list-style-type: none"> <li>- Multimedia Technology (1<sup>ou</sup> εξαμήνου)</li> <li>- Scientific Computing (5<sup>ou</sup> εξαμήνου)</li> <li>- Multimedia Research Methods (8<sup>th</sup> semester)</li> <li>- Seminar (8<sup>th</sup> semester)</li> </ul> |
| <b>09.2025-08.2026</b> | Assistant Professor, Department of Music Technology and Acoustics, HMU<br>Independent course teaching: <ul style="list-style-type: none"> <li>- Multimedia Technology (1<sup>ou</sup> εξαμήνου)</li> <li>- Scientific Computing (5<sup>ou</sup> εξαμήνου)</li> <li>- Multimedia Research Methods (8<sup>th</sup> semester)</li> <li>- Seminar (8<sup>th</sup> seminar)</li> </ul>  |

**Teaching courses in Undergraduate Programs as external associate and postdoctoral researcher**

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| <b>10.2011-02.2012</b> | Laboratory Associate at the Department of Music Technology and Acoustics, Technological Educational Institute (TEI) of Crete.<br>Laboratory course:<br>Electronic components and circuits                                            |
| <b>02.2012-06.2012</b> | Laboratory Associate, TEI of Crete, Department of Music Technology and Acoustics Engineering, and Department of Electronics. Laboratory courses:<br>Physics-Waves<br>Microprocessor Systems                                          |
| <b>10.2012-02.2013</b> | Laboratory Associate, TEI of Crete, Department of Music Technology and Acoustics Engineering, and Department of Electronics. Laboratory courses:<br>Electronic components and circuits<br>Physics-Waves<br>Optoelectronics and Laser |

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| <b>10.2014-02.2015</b>                                                   | Laboratory Associate at the Department of Music Technology and Acoustics, Technological Educational Institute (TEI) of Crete. Laboratory courses:<br>Physics-Waves<br>Digital Electronics                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>02.2015-06.2015</b>                                                   | Laboratory Associate at the Department of Music Technology and Acoustics, Technological Educational Institute (TEI) of Crete. Laboratory course:<br>Physics-Waves                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>10.2015-02.2016</b>                                                   | Laboratory Associate at the Department of Music Technology and Acoustics, Technological Educational Institute (TEI) of Crete. Laboratory course:<br>Physics-Waves                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>10.2016-02.2017</b>                                                   | Laboratory Associate, TEI of Crete, Department of Music Technology and Acoustics Engineering, and Department of Natural Resources and Environmental Engineering.<br><br>Theory Courses: Environmental Statistics, Digital Electronics<br>Laboratory Courses: Environmental Statistics                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>24.03.2017-30.06.2017</b>                                             | Independent teaching of the course "Special Topics in Antennas, Propagation, Scattering, and Electromagnetic Wave Radiation" within the framework of the program "Acquisition of Academic Teaching Experience for Young PhD Holders" at the Department of Electronic Engineering, TEI of Crete.                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>09.10.2017-09.02.2018</b>                                             | Independent teaching of the course "Electromagnetic Wave Propagation in Waveguides" within the framework of the program "Acquisition of Academic Teaching Experience for Young PhD Holders" at the Department of Electronic Engineering, TEI of Crete.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>16.04.2018-29.06.2018</b>                                             | Independent teaching of the course "Special Topics in Antennas, Propagation, Scattering, and Electromagnetic Wave Radiation" within the framework of the program "Acquisition of Academic Teaching Experience for Young PhD Holders" at the Department of Electronic Engineering, TEI of Crete.                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>24.10.2018-28.06.2019</b>                                             | Independent teaching of the courses "Optoelectronics," "Electromagnetic Compatibility," and "Special Topics in Scattering and Electromagnetic Wave Radiation" within the framework of the program "Acquisition of Academic Teaching Experience for Young PhD Holders" at the Department of Electronic Engineering, TEI of Crete.                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>31.10.2019-07.02.2020</b>                                             | Independent teaching of the course "Digital Electronics" (Theory and Laboratory) within the framework of the program "Acquisition of Academic Teaching Experience for Young PhD Holders" at the Department of Music Technology and Acoustics, Hellenic Mediterranean University.                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>06.11.2020-12.02.2021</b>                                             | Independent teaching of the courses "Digital Electronics" (Theory and Laboratory) and "Finite Elements in Acoustics" within the framework of the program "Acquisition of Academic Teaching Experience for Young PhD Holders" at the Department of Music Technology and Acoustics, Hellenic Mediterranean University.                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>18.10.2021-11.02.2022</b>                                             | Independent teaching of the courses "Digital Electronics and Microprocessors" (Theory and Laboratory) and "Finite Elements in Acoustics" within the framework of the program "Acquisition of Academic Teaching Experience for Young PhD Holders" at the Department of Music Technology and Acoustics, Hellenic Mediterranean University.                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>21.02.22-30.06.22</b>                                                 | Part-time (25% appointment) Adjunct Lecturer under Presidential Decree 407/80, at the rank of Assistant Professor, for teaching the course "Wave and Sound Physics (Laboratory)" during the Spring semester, at the Department of Music Technology and Acoustics, School of Music and Optoacoustic Technologies.                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>01.11.22-30.06.23</b>                                                 | Independent teaching of the courses "Scientific Computing" (Winter semester) and "Multimedia Research Methods" (Spring semester) within the framework of the program "Acquisition of Academic Teaching Experience for Young PhD Holders" at the Department of Music Technology and Acoustics, Hellenic Mediterranean University.                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Professional Development Instruction 07-2018, 07-2019 and 10-2020</b> | Teaching of the laboratory courses "Laser-Matter Interactions: Hands-on FEM Simulations Part I & II" and "Plasma Pinch: Hands-on MHD Simulations," alongside the development of instructional material for the unit "Computational Modeling and Simulations in Laser-Matter Interactions," within the framework of the European Erasmus+ Intensive Programme for postgraduate students "PowerLaPs" (Innovative Education and Training in High Power Laser Plasmas). Teaching of the laboratory course "Laser-Matter Interactions: Hands-on FEM and MHD Simulations" within the framework of the 1st Training School of the European COST Action TUMIEE (CA17126): "Towards Understanding and Modelling Intense Electronic Excitation." |

**Teaching Postgraduate courses as a faculty member**

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| <b>09.2024-08.2025</b> | Assistant Professor, Department of Music Technology and Acoustics, HMU<br>Independent course instruction <ul style="list-style-type: none"> <li>- Lasers and Plasma Simulations (MSc Program "Lasers, Plasma and Applications – LAPLA", Department of Electrical and Computer Engineering, HMU). Assignment of partial course instruction.</li> </ul>                                                                                                                                                                                      |
| <b>09.2025-08.2026</b> | Assistant Professor, Department of Music Technology and Acoustics, HMU<br>Independent courses instruction <ul style="list-style-type: none"> <li>- Lasers and Plasma Simulations (MSc Program "Lasers, Plasma and Applications – LAPLA", Department of Electrical and Computer Engineering, HMU). Assignment of partial course instruction.</li> <li>- "Special Topics in Acoustics" (MSc Program "Sound and Music Technologies", Department of Music Technology and Acoustics, HMU). Assignment of partial course instruction.</li> </ul> |

**8. Supervision / Co-supervision of Bachelor's Theses**

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| <b>2013-Today</b> | <p>Supervision / Co-supervision of the following completed undergraduate theses as a faculty member in the Department of Music Technology and Acoustics</p> <ol style="list-style-type: none"> <li>1. "Vibroacoustic study of traditional stringed musical instruments: A literature review," by Dimitrios Kontomichalos and Georgios Pentezidis (Supervised, completed in 2026).</li> <li>2. "Vibroacoustic Study of Thin Metallic Plates and Disks," by Theodora-Maria Maroulaki (Supervised, completed in 2026).</li> <li>3. "Audio Technologies in Virtual Reality Environments: A Literature Review," by Nikolaos Sparasellos and Evangelos Chatzigiannis (Supervised, completed in 2026).</li> <li>4. "Parametric design of a bouzouki soundboard in CAD and natural frequency analysis using the finite element method," by Alkiviadis Kaminaris (Co-supervised with Professor Vasilis Dimitriou, completed in 2025).</li> <li>5. "Tzouras design and natural frequency analysis using the finite element method," by Athanasios Skoutelis and Georgios Skoutelis (Co-supervised with Professor Vasilis Dimitriou, completed in 2024).</li> </ol> <p>Supervision / Co-supervision of the following completed undergraduate theses as adjunct faculty / postdoctoral researcher:</p> <ol style="list-style-type: none"> <li>6. "Parametric design of drum cymbals in CAD and natural frequency analysis using the finite element method," by Maximillian Francis Campouj (Co-supervised, completed in 2023). Department of MTA.</li> <li>7. "Study of vibrational characteristics in a violin using numerical simulation models," by Theocharis Panagiotakis and Charilaos Marakis (Co-supervised, completed in 2021). Department of MTA.</li> <li>8. "Evaluation of finite element cutting simulation parameters on their influence on the surface quality of final turning specimens," by Christos Papadakis (Completed, 2019). Department of Natural Resources and Environment, Technological Educational Institute (TEI) of Crete. Auxiliary Co-supervision.</li> <li>9. "Finite element simulation of material removal in machining operations reduced to orthogonal cutting using the ALE formulation," by Eleni Variantza (Completed, 2018). Department of Natural Resources and Environment, Technological Educational Institute (TEI) of Crete. Auxiliary Co-supervision.</li> <li>10. "Modeling and simulation of seismic building vibrations using finite elements and Matlab ANSeismic," by Mary Kolliou (Completed, 2017). Department of Natural Resources and Environment, Technological Educational Institute (TEI) of Crete. Auxiliary Co-supervision.</li> <li>11. "Modeling and Simulation of the acoustic behavior of a drum using FEM," by Manolis Kokkinakis (Completed, 2013). Department of MTA. Auxiliary Co-supervision.</li> </ol> |
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**9. Participation and Co-supervision of Master's Theses**

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| <b>2015-<br/>Today</b> | <p>Member of the three-member advisory committee and the examining committee for completed Master's theses:</p> <ol style="list-style-type: none"> <li>1. Master's Thesis by Nikolaos Charalampidis: "Upgrade and automation of a 3D-ADM system for the excitation and acquisition of acoustic signals from percussion instruments," (Completed, 2026). MSc Program in Audio and Music Technologies, Department of MTA.</li> <li>2. Master's Thesis by Georgios Spyridakis: "Automated Classification of Vibration Modes in Instruments of the Bouzouki Family using Machine Learning Techniques and Advanced Interferometric Image Processing," (Completed, 2026). MSc Program in Audio and Music Technologies, Department of MTA.</li> <li>3. Master's Thesis by Despoina-Dimitra Grigoriou: "Study and Analysis of the Vibrational Behavior of Baglamas Wooden Soundboards," (Completed, 2025). MSc Program in Audio and Music Technologies, Department of MTA.</li> <li>4. Master's Thesis by Alexandros Gkostas: "FEM simulations of continuous wave laser machining processes on a 3-axis milling machine," (Completed, 2025). MSc Program "LaPIA", Department of Electronic Engineering, HMU.</li> <li>5. Master's Thesis by Efstathios Kamposos: "Computer Numerical control of a 3-axis milling machine for continuous wave laser machining processes," (Completed, 2025). MSc Program "LaPIA", Department of Electronic Engineering, HMU.</li> <li>6. Master's Thesis by Antonios Kavroulakis: "Plasma dynamics studies in a z-pinch device with coated single-wire loads," (Completed, 2025). MSc Program "LaPIA", Department of Electronic Engineering, HMU.</li> <li>7. Master's Thesis by Antonios Vourvachakis: "Study of Membrane Tension Uniformity in the Bendir Musical Instrument Using Electronic Speckle Pattern Interferometry and Electronic Pressure Sensors," (Completed, 2025). MSc Program in Audio and Music Technologies, Department of MTA.</li> </ol> <p>Auxiliary co-supervision as adjunct faculty / postdoctoral researcher</p> <ol style="list-style-type: none"> <li>8. Master's Thesis by Eleni Papadaki: "Finite element study of the dynamic behavior of Si targets in sequential irradiation by ns laser pulses," (Completed, 2021). MSc Program "LaPIA", Department of Electronic Engineering, HMU.</li> <li>9. Master's Thesis by Andreas Baroutsos: "Finite element simulations of Laser Assisted Machining Methods for multi scale modeling techniques," (Completed, 2020). MSc Program "PLAPA", Department of Electronic Engineering, HMU.</li> <li>10. Master's Thesis by Emmanouil Skarvelakis: "Investigation of the thermomechanical behavior of metallic specimens with defects irradiated by laser pulses using Finite Element method simulations," (Completed, 2015). Department of Production Engineering and Management, Technical University of Crete.</li> </ol> |
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**10. Supervision / Co-supervision of Doctoral Dissertations**

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| <b>2024-<br/>Today</b> | <ol style="list-style-type: none"> <li>1. Primary Supervisor for the Doctoral Dissertation of Markos Katsipis: "The effect of modern and alternative materials on the vibrational behavior of stringed musical instruments," Department of MTA, Hellenic Mediterranean University (HMU) (In progress, started 2024).</li> <li>2. Doctoral Dissertation of Antonios Kavroulakis: "Finite element simulations of the thermomechanical behavior of thermonuclear fusion reactor materials," Department of Electronic Engineering, Hellenic Mediterranean University (HMU) (In progress, started 2025). Member of the three-member supervisory committee.</li> <li>3. Doctoral Dissertation of Despoina-Dimitra Grigoriou: "Vibroacoustic analysis and design optimization of stringed musical instruments of the bouzouki family," Department of MTA, Hellenic Mediterranean University (HMU) (In progress, started 2025). Member of the three-member supervisory committee.</li> </ol> |
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**11. Research Distinctions**

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| <b>2008<br/>and<br/>2009</b> | <p>Thomaidion award 2008 και 2009 of NTUA for the conference papers: "Investigation on the distal screw of a trochanteric Fi-nail intramedullary implant in a healed femur", Third Congress of the Hellenic Society of Biomechanics, Conference Proceedings, Athens 26-28 September 2008 and "Investigation of the mechanical behavior of typical scaphoid fractures during their healing process using the finite element method", 2nd South-East European Conference on Computational Mechanics, 22-24 June 2009, Rhodes.</p> |
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| 2014 | The article: "Three dimensional transient behavior of thin films surface under pulsed laser excitation", V. Dimitriou, E. Kaselouris, Y. Orphanos, M. Bakarezos, N. Vainos, M. Tatarakis, N. A. Papadogiannis. Applied Physics Letters, Vol.103, 114104 (2013), was selected as Article of the month for April 2014 in applied physics from Advances in Engineering On-line Journal: ( <a href="https://advanceseng.com/applied-physics/three-dimensional-transient-behavior-thin-films-surface-pulsed-laser-excitation/">https://advanceseng.com/applied-physics/three-dimensional-transient-behavior-thin-films-surface-pulsed-laser-excitation/</a> ).                                                                                                           |
| 2018 | The article: E Kaselouris, V Dimitriou, I Fitis, A Skoulakis, G Koundourakis, EL Clark, M Bakarezos, IK Nikolos, NA Papadogiannis, M Tatarakis, "The influence of the solid to plasma phase transition on the generation of plasma instabilities", <i>Nature Communications</i> 8, 1713 (2017), Impact Factor 12, was selected as one of the most important articles in the collection of nature communications plasma physics journals ( <a href="https://www.nature.com/collections/lhrzlgblpr">https://www.nature.com/collections/lhrzlgblpr</a> ).                                                                                                                                                                                                              |
| 2020 | The article: S. Passalidis, O. Ettlinger, G.S. Hicks, N.P. Dover, Z. Najmudin, E.P. Benis, E. Kaselouris, N.A. Papadogiannis, M. Tatarakis and V. Dimitriou, "Hydrodynamic computational modelling and simulations of collisional shockwaves in gas jet targets", <i>High Power Laser Science and Engineering</i> , 8, E7. was selected from the journal's editors <a href="#">Editors' Picks</a> .                                                                                                                                                                                                                                                                                                                                                                 |
| 2023 | The article: Kaselouris, E., Skoulakis, A., Dimitriou, V., Fitis, I., Chatzakis, J., Bakarezos, M., Papadogiannis, N., & Tatarakis, M. Progress on the electro-thermo-mechanical instability and its role as seed on plasma instabilities, <i>Plasma Physics and Controlled Fusion</i> , 64(10), 105008 (2022)." was selected by the scientific committee of the world-wide and high-profile Canadian organization Advances in Engineering in June 2023 as a pioneering scientific work in the scientific field of Applied Physics ( <a href="https://advanceseng.com/progress-electro-thermo-mechanical-instability-role-seed-plasma-instabilities/">https://advanceseng.com/progress-electro-thermo-mechanical-instability-role-seed-plasma-instabilities/</a> ). |
| 2023 | The article "A computational study on the optical shaping of gas targets via blast wave collisions for magnetic vortex acceleration", published in <i>High Power Laser Science and Engineering</i> was awarded as the <a href="#">excellent article</a> of the 10 <sup>th</sup> anniversary of the journal and was featured on the <a href="#">cover</a> of the journal.                                                                                                                                                                                                                                                                                                                                                                                            |
| 2024 | Article in Vima Science regarding the European research project TECHNO-CLS, with the participation of researchers from the Institute of Plasma Physics & Lasers (IPPL) of the Hellenic Mediterranean University (HMU). <a href="https://www.tovima.gr/print/science/damazontas-ta-kymata/">https://www.tovima.gr/print/science/damazontas-ta-kymata/</a>                                                                                                                                                                                                                                                                                                                                                                                                            |
| 2026 | Participation, through the TECHNO-CLS project, in an innovation recognized by the European Innovation Council via the Innovation Radar: 'Acoustic Wave Crystalline Undulators for tunable $\gamma$ -ray generation' <a href="https://innovation-radar.ec.europa.eu/innovation/63722">https://innovation-radar.ec.europa.eu/innovation/63722</a>                                                                                                                                                                                                                                                                                                                                                                                                                     |

## 12. Publications

### 12.1 Peer-Reviewed Articles in International Journals

The scientific output is reflected in numerous publications in scientific journals and conference proceedings from 2007 to the present: 53 articles in recognized peer-reviewed journals (52 international + 1 Greek), 3 book chapters, 46 full-text peer-reviewed conference papers, and an additional 61 oral and poster presentations at scientific conferences with abstract review.

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| A01 | M. Makropoulou, <b>E. Kaselouris</b> , E. Drakaki, A. A. Serafetinides, J. A. Sianoudis, A diffusion approximation model of light transport in multilayered skin tissue, <i>Proc. SPIE 6628, Diagnostic Optical Spectroscopy in Biomedicine IV</i> , 662818, (2007). DOI: <a href="https://doi.org/10.1117/12.726876">https://doi.org/10.1117/12.726876</a>                                                                                         |
| A02 | E. Drakaki, <b>E. Kaselouris</b> , M. Makropoulou, A.A. Serafetinides, A. Tsenga, A.J. Stratigos, A.D. Katsambas, C. Antoniou, Laser-Induced Fluorescence and Reflectance Spectroscopy for the Discrimination of Basal Cell Carcinoma from the Surrounding Normal Skin Tissue, <i>Skin Pharmacol. Physiol.</i> 22(3), 158-165, (2009). DOI: <a href="https://doi.org/10.1159/000211912">https://doi.org/10.1159/000211912</a>                       |
| A03 | <b>E. N. Kaselouris</b> , D.T. Venetsanos, C.G. Provatidis, F.N. Xypnitos, V. Nikolaou, J. Lazarettos, N.E. Efstathopoulos, Investigation of a trochanteric fi-nail intramedullary implant fixation using the finite element method, <i>J. Orthop.</i> 6(4), e1, (2009). DOI: <a href="http://www.jortho.org/2009/6/4/e1">http://www.jortho.org/2009/6/4/e1</a>                                                                                     |
| A04 | N. Efstathopoulos, V.S. Nikolaou, F.N. Xypnitos, D. Korres, I. Lazarettos, K. Panousis, <b>E. N. Kaselouris</b> , D. Venetsanos, C. Provatidis, Investigation on the distal screw of a Trochanteric Fi-Nail Intramedullary Implant Using a Simplified Finite Element Model, <i>Injury Int. J. Care Injured</i> 41(3), 259-265, (2010). DOI: <a href="https://doi.org/10.1016/j.injury.2009.09.006">https://doi.org/10.1016/j.injury.2009.09.006</a> |
| A05 | E.V. Brilakis, <b>E. Kaselouris</b> , F. Xypnitos, C.G. Provatidis, N.E Efstathopoulos, Effects of foot posture to fifth metatarsal fractures' biomechanics. A Finite Element Study, <i>J. Foot Ankle Surg.</i> 51(6), 720-728, (2012). DOI: <a href="https://doi.org/10.1053/j.ifas.2012.08.006">https://doi.org/10.1053/j.ifas.2012.08.006</a>                                                                                                    |

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| A06 | Y. Orphanos, V. Dimitriou, <b>E. Kaselouris</b> , E. Bakarezos, N. Vainos, M. Tatarakis, and N.A. Papadogiannis, An integrated method for material properties characterization based on pulsed laser generated surface acoustic waves, <i>Microelectron. Eng.</i> 112, 249-254, (2013). DOI: <a href="https://doi.org/10.1016/j.mee.2013.03.146">https://doi.org/10.1016/j.mee.2013.03.146</a>                                                                                                                                                                                        |
| A07 | V. Dimitriou, <b>E. Kaselouris</b> , Y. Orphanos, M. Bakarezos, N. Vainos, M. Tatarakis, and N. A. Papadogiannis, Three-dimensional transient behavior of thin films surface under pulsed laser excitation, <i>Appl. Phys. Lett.</i> 103, 114104, (2013). DOI: <a href="https://doi.org/10.1063/1.4821274">https://doi.org/10.1063/1.4821274</a>                                                                                                                                                                                                                                      |
| A08 | <b>E. Kaselouris</b> , I.K. Nikolos, Y. Orphanos, E Bakarezos, N. A. Papadogiannis, M. Tatarakis, V. Dimitriou, A Review of simulation methods of laser matter interactions focused on nanosecond laser pulsed systems, <i>J. Multiscale Model.</i> 05, 1330001, (2013). DOI: <a href="https://doi.org/10.1142/S1756973713300013">https://doi.org/10.1142/S1756973713300013</a>                                                                                                                                                                                                       |
| A09 | V. Dimitriou, <b>E. Kaselouris</b> , Y. Orphanos, E Bakarezos, N. Vainos, I.K. Nikolos, M. Tatarakis, N. A. Papadogiannis, The thermo-mechanical behavior of thin metal films on dielectric substrates under nanosecond laser pulse excitation above the thermoelastic regime, <i>Appl. Phys. A.</i> 118, 739-748, (2015). DOI: <a href="https://doi.org/10.1007/s00339-014-8792-6">https://doi.org/10.1007/s00339-014-8792-6</a>                                                                                                                                                     |
| A10 | <b>E. Kaselouris</b> , I.K. Nikolos, Y. Orphanos, E Bakarezos, N. A. Papadogiannis, M. Tatarakis, V. Dimitriou, Elastoplastic study of nanosecond-pulsed laser interaction with metallic films using 3D multiphysics fem modeling, <i>Int. J. Damage Mech.</i> 25(1), 42-55, (2016). DOI: <a href="https://doi.org/10.1177/1056789515576553">https://doi.org/10.1177/1056789515576553</a>                                                                                                                                                                                             |
| A11 | <b>E. Kaselouris</b> , E. Skarvelakis, I. K Nikolos, G. Stavroulakis, Y. Orphanos, E. Bakarezos, N. A Papadogiannis, M. Tatarakis and Vasilios Dimitriou, Simulation of the Transient Behavior of Matter with Characteristic Geometrical Variations & Defects Irradiated by Nanosecond Laser Pulses Using FEA, <i>Key Eng. Mater.</i> 665, 157-160, (2016). DOI: <a href="https://doi.org/10.4028/www.scientific.net/KEM.665.157">https://doi.org/10.4028/www.scientific.net/KEM.665.157</a>                                                                                          |
| A12 | <b>E. Kaselouris</b> , T. Papadoulis, E. Variantza, A. Baroutsos, V. Dimitriou, A study of explicit numerical simulations in orthogonal metal cutting, <i>Solid State Phenom.</i> 261, 339-346, (2017). DOI: <a href="https://doi.org/10.4028/www.scientific.net/SSP.261.339">https://doi.org/10.4028/www.scientific.net/SSP.261.339</a>                                                                                                                                                                                                                                              |
| A13 | <b>E. Kaselouris</b> , V. Dimitriou, I. Fitis, A. Skoulakis, G. Koundourakis, I. K. Nikolos, E. L. Clark, M. Bakarezos, N. A. Papadogiannis and M. Tatarakis, The influence of the solid to plasma phase transition on the generation of plasma instabilities, <i>Nature Commun.</i> 8 (1), 1713, (2017). DOI: <a href="https://doi.org/10.1038/s41467-017-02000-6">https://doi.org/10.1038/s41467-017-02000-6</a>                                                                                                                                                                    |
| A14 | <b>E. Kaselouris</b> , V. Dimitriou, I. Fitis, A. Skoulakis, G. Koundourakis, I. K. Nikolos, E. L. Clark, J. Chatzakis, M. Bakarezos, N. A. Papadogiannis and M. Tatarakis, Preliminary investigation on the use of low current pulsed power Z-pinch plasma devices for the study of early stage plasma instabilities, <i>Plasma Phys. Contr. Fusion</i> 60 (1), 014031, (2018). DOI: <a href="https://doi.org/10.1088/1361-6587/aa8ab0">https://doi.org/10.1088/1361-6587/aa8ab0</a>                                                                                                 |
| A15 | E.V. Brilakis, <b>E. Kaselouris</b> , K. Markatos, D. Mastrokalos, C. Provatidis, N. Efstathopoulos, E.Chronopoulos, Mitchell's osteotomy augmented with bio-absorbable pins for the treatment of hallux valgus: A comparative finite element study, <i>J. Musculoskelet. Neuronal Interact.</i> 19(2), 234–244, (2019). DOI: <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6587079/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6587079/</a>                                                                                                                               |
| A16 | J. Pasley, G. Andrianaki, A. Baroutsos, D. Batani, E.P. Benis, M. Borghesi, E. Clark, D. Cook, E. D'Humieres, V. Dimitriou, B. Dromey, M. Ehret, I. Fitis, A. Grigoriadis, S. Kar, <b>E. Kaselouris</b> , et al., Innovative Education and Training in High Power Laser Plasmas (PowerLaPs) for Plasma Physics, High Power Laser Matter Interactions and High Energy Density Physics - Theory and Experiments, <i>High Power Laser Sci.</i> 7, e23, (2019). DOI: <a href="https://doi.org/10.1017/hpl.2019.7">https://doi.org/10.1017/hpl.2019.7</a>                                  |
| A17 | Y. Orphanos, K. Kosma, <b>E. Kaselouris</b> , N. Vainos, V. Dimitriou, M. Bakarezos, M. Tatarakis and N. A. Papadogiannis, Integrated nanosecond laser full-field imaging for femtosecond laser generated surface acoustic waves in metal film-glass substrate multilayer materials, <i>Appl. Phys. A.</i> 125, 269, (2019). DOI: <a href="https://doi.org/10.1007/s00339-019-2552-6">https://doi.org/10.1007/s00339-019-2552-6</a>                                                                                                                                                   |
| A18 | <b>E. Kaselouris</b> , A. Baroutsos, T. Papadoulis, N.A. Papadogiannis, M. Tatarakis, and V. Dimitriou, A study on the influence of laser parameters on laser-assisted machining of AISI H-13 steel, <i>Key Engineering Materials</i> 827, 92-97, (2020). DOI: <a href="https://doi.org/10.4028/www.scientific.net/KEM.827.92">doi.org/10.4028/www.scientific.net/KEM.827.92</a>                                                                                                                                                                                                      |
| A19 | <b>E. Kaselouris</b> , A. Skoulakis, Y. Orphanos, K. Kosma, T. Papadoulis, I. Fitis, E. Clark, A.P. Markopoulos, M. Bakarezos, N.A. Papadogiannis, M. Tatarakis, and V. Dimitriou, Analysis of the heat affected zone and surface roughness during laser micromachining of metals, <i>Key Engineering Materials</i> 827, 122-127, (2020). DOI: <a href="https://doi.org/10.4028/www.scientific.net/KEM.827.122">doi.org/10.4028/www.scientific.net/KEM.827.122</a>                                                                                                                    |
| A20 | J. Pasley, G. Andrianaki, A. Baroutsos, D. Batani, E.P. Benis, A. Ciardi, D. Cook, V. Dimitriou, B. Dromey, I. Fitis, G. Gatti, A. Grigoriadis, M. Huault, J.A.P. Hernández, <b>E. Kaselouris</b> , et al., “Innovative education and training in high power laser plasmas (PowerLaPs) for plasma physics, high power laser matter interactions and high energy density physics: experimental diagnostics and simulations”, <i>High Power Laser Science and Engineering</i> , 8, e5, (2020). DOI: <a href="https://doi.org/10.1017/hpl.2020.4">https://doi.org/10.1017/hpl.2020.4</a> |

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| A21                                                                     | S. Passalidis, O. Ettlinger, G.S. Hicks, N.P. Dover, Z. Najmudin, E.P. Benis, <b>E. Kaselouris</b> , N.A. Papadogiannis, M. Tatarakis and V. Dimitriou, Hydrodynamic computational modelling and simulations of collisional shockwaves in gas jet targets, <i>High Power Laser Science and Engineering</i> , 8, E7, (2020). DOI: <a href="https://doi.org/10.1017/hpl.2020.5">https://doi.org/10.1017/hpl.2020.5</a>                                                                                                                                                                       |
| A22                                                                     | G. Koundourakis, A. Skoulakis, <b>E. Kaselouris</b> , I. Fitis, E. L. Clark, J. Chatzakis, M. Bakarezos, N. Vlahakis, N. A. Papadogiannis, V. Dimitriou, M. Tatarakis, A numerical study on laboratory plasma dynamics validated by low current x-pinch experiments, <i>Plasma Phys. Contr. Fusion</i> 62, 125012, (2020). DOI: <a href="https://doi.org/10.1088/1361-6587/abbebf">https://doi.org/10.1088/1361-6587/abbebf</a>                                                                                                                                                            |
| A23                                                                     | <b>E. Kaselouris</b> , I. Fitis, A. Skoulakis, Y. Orphanos, G. Koundourakis, E. L. Clark, J. Chatzakis, M. Bakarezos, N. A. Papadogiannis, V. Dimitriou, M. Tatarakis, The importance of the laser pulse-ablator interaction dynamics prior to the ablation plasma phase in inertial confinement fusion studies, <i>Philosophical Transactions of the Royal Society A</i> 378, 20200030, (2020). DOI: <a href="https://doi.org/10.1098/rsta.2020.0030">https://doi.org/10.1098/rsta.2020.0030</a>                                                                                          |
| A24                                                                     | <b>E. Kaselouris</b> , K. Kosma, Y. Orphanos, A. Skoulakis, I. Fitis, A. P. Markopoulos, M. Bakarezos, M. Tatarakis, N. A. Papadogiannis, V. Dimitriou, Downscaled Finite Element Modeling of Metal Targets for Surface Roughness Level under Pulsed Laser Irradiation, <i>Appl. Sci.</i> 11, 1253, (2021). DOI: <a href="https://doi.org/10.3390/app11031253">https://doi.org/10.3390/app11031253</a>                                                                                                                                                                                     |
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| A26                                                                     | E. L. Clark, A. Grigoriadis, S. Petrakis, I. Tazes, G. Andrianaki, A. Skoulakis, Y. Orphanos, <b>E. Kaselouris</b> , I. Fitis, J. Chatzakis, E. Bakarezos, V. Dimitriou, E. P. Benis, N. A. Papadogiannis and M. Tatarakis, High intensity laser driven secondary radiation sources using the ZEUS 45 TW laser system at the Institute of Plasma Physics and Lasers of the Hellenic Mediterranean University Research Centre, <i>High power laser science and engineering</i> , 9, e53, (2021). DOI: <a href="https://doi.org/10.1017/hpl.2021.38">https://doi.org/10.1017/hpl.2021.38</a> |
| A27                                                                     | A. Skoulakis, <b>E. Kaselouris</b> , A. Kavroulakis, C. Karvounis, I. Fitis, J. Chatzakis, V. Dimitriou, N. A. Papadogiannis, M. Tatarakis, Characterization of an X-ray Source Generated by a Portable Low-Current X-Pinch, <i>Appl. Sci.</i> 11, 11173 (2021). DOI: <a href="https://doi.org/10.3390/app112311173">https://doi.org/10.3390/app112311173</a>                                                                                                                                                                                                                              |
| A28                                                                     | A. Skoulakis, G. Koundourakis, A. Ciardi, <b>E. Kaselouris</b> , I. Fitis, J. Chatzakis, M. Bakarezos, N. Vlahakis, N. A. Papadogiannis, M. Tatarakis, V. M. Dimitriou, High performance simulations of a single X-pinch, <i>Plasma Phys. Contr. Fusion</i> 64, 025003, (2022). DOI: <a href="https://doi.org/10.1088/1361-6587/ac3deb">https://doi.org/10.1088/1361-6587/ac3deb</a>                                                                                                                                                                                                       |
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| A30                                                                     | <b>E. Kaselouris</b> , C. Alexandraki, M. Bakarezos, M. Tatarakis, N. A. Papadogiannis, V. Dimitriou, A Detailed FEM Study on the Vibro-acoustic Behaviour of Crash and Splash Musical Cymbals, <i>Int. J. Circuits, Syst. Signal Process.</i> 16, 948-955 (2022). DOI: <a href="https://npublications.com/journals/articles.php?id=390">https://npublications.com/journals/articles.php?id=390</a>                                                                                                                                                                                        |
| A31                                                                     | I. Tazes, S. Passalidis, <b>E. Kaselouris</b> , I. Fitis, M. Bakarezos, N.A. Papadogiannis, M. Tatarakis, V. Dimitriou, A computational study on the optical shaping of gas targets via blast wave collisions for magnetic vortex acceleration, <i>High Power Laser Science and Engineering</i> 10, e31, (2022). DOI: <a href="https://doi.org/10.1017/hpl.2022.16">https://doi.org/10.1017/hpl.2022.16</a>                                                                                                                                                                                |
| A32                                                                     | <b>E. Kaselouris</b> , A. Skoulakis, V. Dimitriou, I. Fitis, J. Chatzakis, M. Bakarezos, N.A. Papadogiannis and M. Tatarakis, Progress on the electro-thermo-mechanical instability and its role as seed on plasma instabilities <i>Plasma Physics and Controlled Fusion</i> 64, 105008, (2022). DOI: <a href="https://doi.org/10.1088/1361-6587/ac8a15">https://doi.org/10.1088/1361-6587/ac8a15</a>                                                                                                                                                                                      |
| A33                                                                     | <b>E. Kaselouris</b> , S. Paschalidou, C. Alexandraki, and V. Dimitriou, FEM-BEM Vibroacoustic Simulations of Motion Driven Cymbal-Drumstick Interactions, <i>Acoustics</i> 5, 165-176, (2023). DOI: <a href="https://doi.org/10.3390/acoustics5010010">https://doi.org/10.3390/acoustics5010010</a>                                                                                                                                                                                                                                                                                       |
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| A37                                                                     | H. Papadaki, <b>E. Kaselouris</b> , M. Bakarezos, M. Tatarakis, N.A. Papadogiannis, V. Dimitriou, A Computational Study of Solid Si Target Dynamics under ns Pulsed Laser Irradiation from Elastic to Melting Regime, <i>Computation</i> 11(12):240 (2023). DOI: <a href="https://doi.org/10.3390/computation11120240">https://doi.org/10.3390/computation11120240</a>                                                                                                                                                                                                                     |

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| A38 | S. Brezas, S. Paschalidou, C. Alexandraki, M. Bakarezos, C. Georgatou, K. Kaleris, M. Kaliakatsos-Papakostas, E. Kaniolakis-Kaloudis, <b>E. Kaselouris</b> et al., Research in the Department of Music Technology and Acoustics of the Hellenic Mediterranean University: An Overview and Prospects, <i>WSEAS Trans. Acoust. Music.</i> 11, 1-19, (2024). DOI: <a href="https://wseas.com/journals/articles.php?id=9074">https://wseas.com/journals/articles.php?id=9074</a>   |
| A39 | S. Brezas, <b>E. Kaselouris</b> , Y. Orphanos, M. Tatarakis, M. Bakarezos, N. A. Papadogiannis, V. Dimitriou, Vibrational Analysis of a Splash Cymbal by Experimental Measurements and Parametric CAD-FEM Simulations, <i>Vibration</i> 7(1), 146-160, (2024). DOI: <a href="https://doi.org/10.3390/vibration7010008">https://doi.org/10.3390/vibration7010008</a>                                                                                                            |
| A40 | I. Tazes, S. Passalidis, <b>E. Kaselouris</b> , D. Mancelli, C. Karvounis, A. Skoulakis, I. Fitis, M. Bakarezos, N.A. Papadogiannis, V. Dimitriou, M. Tatarakis, Efficient Magnetic Vortex Acceleration by femtosecond laser interaction with long living optically shaped gas targets in the near critical density plasma regime, <i>Sci. Rep.</i> 14, 4945, (2024). DOI: <a href="https://doi.org/10.1038/s41598-024-54475-1">https://doi.org/10.1038/s41598-024-54475-1</a> |
| A41 | S. Brezas, M. Katsipis, K. Kaleris, H. Papadaki, D. T. G. Katerelos, N. A. Papadogiannis, M. Bakarezos, V. Dimitriou, <b>E. Kaselouris</b> , Review of manufacturing processes and vibro-acoustic assessments of composite and alternative materials for musical instruments, <i>Appl. Sci.</i> 14(6), 2293, (2024). DOI: <a href="https://doi.org/10.3390/app14062293">https://doi.org/10.3390/app14062293</a>                                                                |
| A42 | S. Brezas, A. Skoulakis, M. Kaliakatsos-Papakostas, A. Sarantis-Karamesinis, Y. Orphanos, M. Tatarakis, N. A. Papadogiannis, M. Bakarezos, <b>E. Kaselouris</b> , V. Dimitriou, Audio Recognition of the Percussion Sounds Generated by a 3D Auto-Drum Machine System via Machine Learning, <i>Electronics</i> 13(9), 1787, (2024). DOI: <a href="https://doi.org/10.3390/electronics13091787">https://doi.org/10.3390/electronics13091787</a>                                 |
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| A44 | I. Mirza, J. Sládek, Y. Levy, A. V Bulgakov, V. Dimitriou, H. Papadaki, <b>E. Kaselouris</b> , P. Gečys, G. Račiukaitis and N. M. Bulgakova, Coherence effects in LIPSS formation on silicon wafers upon picosecond laser pulse irradiations, <i>J. Phys. D: Appl. Phys.</i> 58, 085307, (2025). DOI: <a href="https://doi.org/10.1088/1361-6463/ad9d51">https://doi.org/10.1088/1361-6463/ad9d51</a>                                                                          |
| A45 | K. Kaleris, <b>E. Kaselouris</b> , V. Dimitriou, E. Kaniolakis-Kaloudis, M. Bakarezos, M. Tatarakis, N. A. Papadogiannis, G. B. Sushko, A. V. Korol, A. V. Solov'yov, Narrowband -ray radiation generation by acoustically driven crystalline undulators, <i>Phys. Rev. Accel. Beams</i> 28, 033502, (2025). DOI: <a href="https://doi.org/10.1103/PhysRevAccelBeams.28.033502">https://doi.org/10.1103/PhysRevAccelBeams.28.033502</a>                                        |
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| A47 | <b>E. Kaselouris</b> , Advances in Modelling and Simulation of Materials in Applied Sciences (Editorial). <i>Materials</i> , 18(17), 4141, (2025). DOI: <a href="https://doi.org/10.3390/ma18174141">https://doi.org/10.3390/ma18174141</a>                                                                                                                                                                                                                                    |
| A48 | H. Papadaki, I. Mirza, N. M. Bulgakova, <b>E. Kaselouris</b> , V. Dimitriou, Thermomechanical investigation of silicon wafer dynamics within the melting regime driven by picosecond laser pulses for surface structuring, <i>Materials</i> 18(24), 5506, (2025). DOI: <a href="https://doi.org/10.3390/ma18245506">https://doi.org/10.3390/ma18245506</a>                                                                                                                     |
| A49 | <b>E. Kaselouris</b> , A. Gosta, E. Kamposos, D. Rouchotas, G. Vernardos, H. Papadaki, A. Skoulakis, Y. Orphanos, M. Bakarezos, I. Fitis, N. A. Papadogiannis, M. Tatarakis, V. Dimitriou, Numerical and Experimental Study of Laser Surface Modification Using a High-Power Fiber CW Laser, <i>Materials</i> 19(2), 343, (2026). DOI: <a href="https://doi.org/10.3390/ma19020343">https://doi.org/10.3390/ma19020343</a>                                                     |
| A50 | I. Tazes, S. Passalidis, G. Andrianaki, A. Skoulakis, C. Karvounis, D. Mancelli, J. Pasley, <b>E. Kaselouris</b> , I. Fitis, M. Bakarezos, E.P. Benis, N.A. Papadogiannis, V. Dimitriou, M. Tatarakis, Laser-driven ion acceleration in long-lived optically shaped gaseous targets enhanced by magnetic vortices, <i>Phys. Rev. Research</i> 8, 023010, (2026). DOI: <a href="https://doi.org/10.1103/v4d2-2b9j">https://doi.org/10.1103/v4d2-2b9j</a>                        |
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| A52 | N. Vianello et al. Results from the last DD and DT JET campaigns in the framework of the EUROfusion Tokamak Exploitation Work Package activity, <i>Nuclear Fusion</i> 66, 116010, (2026). DOI: <a href="https://www.doi.org/10.1088/1741-4326/ae71ec">https://www.doi.org/10.1088/1741-4326/ae71ec</a>                                                                                                                                                                         |

## 12.2 Scientific Article in a Peer-Reviewed National Journal

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| AE01 | Φ. Ν. Ξυπνητός, Γ. Κ. Παπαχρήστου, Π. Χατζηγρηγόρης, Ε. Χρονόπουλος, <b>Ε. Ν. Κασελοῦρης</b> , Δ. Τ. Βενετσάνος, Χ. Γ. Προβατίδης, Τρισδιάστατη διερεύνηση της άρθρωσης της πηχεοκαρπικής με τη χρήση των πεπερασμένων στοιχείων, <i>Ορθοπαιδική</i> 22, 85-93, (2009). |
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**12.3 Chapters in Edited Volumes / Guest Editor**

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| KB01 | E. Bakarezos, Y. Orphanos, E. Kaselouris, V. Dimitriou, M. Tatarakis, N. A. Papadogiannis 251-268, 2019 (Ed. R. Bader) Laser-Based Interferometric Techniques for the Study of Musical Instruments, Chapter in Computational Phonogram Archiving, DOI: <a href="https://doi.org/10.1007/978-3-030-02695-0_12">https://doi.org/10.1007/978-3-030-02695-0_12</a>                                                                                                                                                                                                                                        |
| KB02 | Tools for investigating electronic excitation: experiment and multi-scale modelling, 2021, Edited by: T. Apostolova, J. Kohanoff, N. Medvedev, E. Oliva, and A. Rivera; N. Papadogiannis: Chapter 3 Ultrafast-laser high electronic excitation for nano-acoustic wave generation: new horizons in the materials probing, V. Dimitriou: Chapter 11 FEM Modeling and Simulations in Laser Matter Interactions and Plasma MHD problems and E. <b>Kaselouris</b> , G. Koundourakis, V. Dimitriou: Chapter 18 Case studies on FEM and MHD, <a href="https://oa.upm.es/69109/">https://oa.upm.es/69109/</a> |
| KB03 | E. Bakarezos, Y. Orphanos, <b>E. Kaselouris</b> , V. Dimitriou, M. Tatarakis, N.A. Papadogiannis, (2024). Laserbasierte interferometrische Techniken zur Untersuchung von Musikinstrumenten. In: Bader, R. (eds) Computergestützte Archivierung von Tonträgern. Springer Vieweg, Cham. <a href="https://doi.org/10.1007/978-3-031-49640-0_12">https://doi.org/10.1007/978-3-031-49640-0_12</a>                                                                                                                                                                                                        |
| GE01 | Guest Editor του Reprint του Special Issue “Advances in Modelling and Simulation of Materials in Applied Sciences” for the journal Materials, MDPI <a href="https://www.mdpi.com/books/reprint/11786-advances-in-modelling-and-simulation-of-materials-in-applied-sciences">https://www.mdpi.com/books/reprint/11786-advances-in-modelling-and-simulation-of-materials-in-applied-sciences</a>                                                                                                                                                                                                        |

**12.4 Full-Text Peer-Reviewed Conference Papers**

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| Σ01 | E. Drakaki, <b>E. Kaselouris</b> , M. Makropoulou, A.A. Serafetinides, Laser induced fluorescence spectroscopy for ex vivo diagnosis and classification of basal cell carcinoma, Sixth European Symposium on Biomedical Engineering, (ESBME), Chania, Crete, 19-21 June, Conference Proceedings CD, 2008.                                                                                                                                                                                   |
| Σ02 | <b>E. N. Kaselouris</b> , D. T. Venetsanos, C. G. Provatidis, J. Lazarettos, V. S. Nikolaou, F. N. Xypnitos, N. E. Efstathopoulos, Investigation on the distal screw of a trochanteric Fi-nail intramedullary implant in a healed femur, Third Congress of the Hellenic Society of Biomechanics, Athens, 26-28 September, Conference Proceedings pp. 71-72, 2008.                                                                                                                           |
| Σ03 | E. Kolliakou, F. N. Xypnitos, <b>E. Kaselouris</b> , A. Gouliamos, C. Provatidis, D.S. Korres, Normal and dysplastic hip joint mechanical behavior: a comparison study, 9th Domestic Meeting of the EUROPEAN HIP SOCIETY, 9-11 September, Athens Hilton Hotel, Hip International 20(3), 383, 2010.                                                                                                                                                                                          |
| Σ04 | I. Ορφανός, Β. Δημητρίου, <b>Ε. Κασελούρης</b> , Σ. Μπρέζας, Ε. Μπακαρέζος, Μ. Ταταράκης, Ν. Βάινος, Ν.Α. Παπαδογιάννης, Τρισδιάστατη απεικόνιση ολικού πεδίου νανο-ακουστικών κυμάτων σε μεταλλικές και διηλεκτρικές επιφάνειες με τη χρήση παλμικών πηγών laser, 6ο Πανελλήνιο Συνέδριο Ακουστικής, Πρακτικά ΣΣ. 120-127, Κέρκυρα, 8-10 Οκτωβρίου, 2012.                                                                                                                                  |
| Σ05 | <b>E. Kaselouris</b> , Y. Orphanos, V. Dimitriou, E. Bakarezos, N. Vainos, M. Tatarakis, N. A. Papadogiannis, 3D finite element modeling of laser-generated surface acoustic waves in film-substrate systems validated by experiments, 10th HSTAM International Congress on Mechanics, Chania, Greece, 25-27 May, Conference Proceedings ISBN 978-960-8475-18-2, Technical University of Crete Publishing House, 2013.                                                                      |
| Σ06 | <b>E. Kaselouris</b> , V. Dimitriou, I.K. Nikolos, Y. Orphanos, E. Bakarezos, N.A. Papadogiannis, M. Tatarakis, Numerical simulations for the study of matter behavior dynamics governed by the interaction with laser pulses or external strong currents, 10th HSTAM International Congress on Mechanics, Chania, Greece, 25-27 May, Conference Proceedings ISBN 978-960-8475-18-2, Technical University of Crete Publishing House, 2013.                                                  |
| Σ07 | V. Dimitriou, <b>E. Kaselouris</b> , Y. Orphanos, E. Bakarezos, N. Vainos, I.K. Nikolos, N.A. Papadogiannis, M. Tatarakis, Matter dynamics under the interaction with laser pulses in the thermoelastic & plasma regimes, 40th EPS Conference on Plasma Physics, Espoo, Finland, 1-5 July 2013.                                                                                                                                                                                             |
| Σ08 | <b>E. Kaselouris</b> , V. M. Dimitriou, A. Skoulakis, I. Fitis, Y. Orphanos, I. Nikolos, E. Bakarezos, N. Papadogiannis, M. Tatarakis, Experimental and numerical study of the initial stages of explosion of thick single wire z-pinch, 41st EPS Conference on Plasma Physics, Berlin, Germany, 23-27 June 2014.                                                                                                                                                                           |
| Σ09 | <b>E. Kaselouris</b> , I. K. Nikolos, Y. Orphanos, E. Bakarezos, N. Vainos, N.A. Papadogiannis, M. Tatarakis and V. Dimitriou, 3D multiphysics FEM modeling of nanosecond pulsed laser interaction with metallic films, Joint 11th World Congress on Computational Mechanics, WCCM, the 5th European Conference on Computational Mechanics, ECCM and the 6th European Conference on Computational Fluid Dynamics, ECFD, Barcelona, Spain, 20-25 July, Proceedings Vol II, p. 758-769, 2014. |
| Σ10 | I. Σιδηράς, Ε. Κοκκινάκης, I. Ορφανός, Ε. Μπακαρέζος, <b>Ε. Κασελούρης</b> , Β. Δημητρίου, και Ν.Α. Παπαδογιάννης, Δονητικά χαρακτηριστικά παραδοσιακών κρουστών μουσικών οργάνων με τη χρήση λέιζερ και θεωρητικών προσομοιώσεων, 7ο Πανελλήνιο Συνέδριο Ακουστικής, Πρακτικά ΣΣ. 12-19, Θεσσαλονίκη, 20-21 Οκτωβρίου, 2014.                                                                                                                                                               |

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| Σ11 | E. Τζιανάκη, Ι. Ορφανός, <b>E. Κασελούρης</b> , E. Μπακαρέζος, B. Δημητρίου, N. Βάϊνος, M. Ταταράκης, και N.A. Παπαδογιάννης, Ναυοακουστικά κύματα με τη χρήση υπερβραχέων παλμών λέιζερ και οι εφαρμογές τους σε σύνθετα υλικά, 7ο Πανελλήνιο Συνέδριο Ακουστικής, Πρακτικά ΣΣ. 270-277, Θεσσαλονίκη, 20-21 Οκτωβρίου, 2014.                                                                                                                                                                                                                                             |
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| Σ13 | I. Fitis, A. Skoulakis, <b>E. Kaselouris</b> , I. K. Nikolos, E. Bakarezos, N. A. Papadogiannis, V. M. Dimitriou, M. Tatarakis, Experimental and numerical investigation of the early time dynamics of single wire plasma explosions, 42nd EPS Conference on Plasma Physics, Lisbon, Portugal, 22-26 June 2015.                                                                                                                                                                                                                                                           |
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| Σ15 | <b>E. Kaselouris</b> , A. Skoulakis, V.M. Dimitriou, I. Fitis, I. K. Nikolos, E. Bakarezos, N. A. Papadogiannis, M. Tatarakis, Finite Element study of the initial stages of explosion of single wire z-pinch validated by experiments, 8th GRACM International Congress on Computational Mechanics, Volos, Greece, 12-15 July, Electronic Proceedings ISBN 978-960-9439-36-7 (e-book), University of Thessaly Press, 2015.                                                                                                                                               |
| Σ16 | M. Bakarezos, V. Dimitriou, Y. Orphanos, I. Sidiras, <b>E. Kaselouris</b> , M. Tatarakis and N. A. Papadogiannis, Vibrational features of the traditional percussion instrument bendir using laser holographic interferometry and finite element analysis methods, 9th GRACM International Congress on Computational Mechanics, Chania, Greece, 4-6 June, Electronic Proceedings ISBN 978-618-81537-5-2 (e-book), Technical University of Crete Press, p. 417-423, 2018.                                                                                                  |
| Σ17 | <b>E. Kaselouris</b> , T. Papadoulis, A. Skoulakis, A. Baroutsos, I. Fitis, Y. Orphanos, E. Bakarezos, N. A. Papadogiannis, M. Tatarakis and Vasilis Dimitriou, Simulations of laser assisted machining and conventional cutting of AISI H-13 steel, 9th GRACM International Congress on Computational Mechanics, Chania, Greece, 4-6 June, Electronic Proceedings ISBN 978-618-81537-5-2 (e-book), Technical University of Crete Press, p. 304-311, 2018.                                                                                                                |
| Σ18 | A. Skoulakis, G. Koundourakis, <b>E. Kaselouris</b> , I. Fitis, E. Bakarezos, E.L. Clark, N. Vlahakis, N. A. Papadogiannis, V. Dimitriou and M. Tatarakis, Preliminary computational study of plasma dynamic evolution produced by low current table-top pinch plasma devices, 9th GRACM International Congress on Computational Mechanics, Chania, Greece, 4-6 June, Electronic Proceedings ISBN 978-618-81537-5-2 (e-book), Technical University of Crete Press, p. 294-303, 2018.                                                                                      |
| Σ19 | E. Μπακαρέζος, Ι. Ορφανός, <b>E. Κασελούρης</b> , B. Δημητρίου, M. Ταταράκης και N. A. Παπαδογιάννης, Εφαρμογή συμβολομετρικών μεθόδων laser στη μελέτη των παραδοσιακών και αρχαίων Ελληνικών μουσικών οργάνων, 9ο Πανελλήνιο Συνέδριο Ακουστικής, Πρακτικά συνεδρίου AK18_11, Πανεπιστήμιο Πατρών, 8-9 Οκτωβρίου, 2018.                                                                                                                                                                                                                                                 |
| Σ20 | K. Κοσμά, Ι. Ορφανός, <b>E. Κασελούρης</b> , B. Δημητρίου, E. Μπακαρέζος, N. Βάϊνος, M. Ταταράκης και N. A. Παπαδογιάννης, Μεθοδολογίες για το ναυοσκοπικό δυναμικό χαρακτηρισμό υλικών, με τη χρήση επιφανειακών ακουστικών κυμάτων παραγόμενων από υπερβραχείς παλμούς laser, 9ο Πανελλήνιο Συνέδριο Ακουστικής, Πρακτικά συνεδρίου AK18_13, Πανεπιστήμιο Πατρών, 8-9 Οκτωβρίου, 2018.                                                                                                                                                                                  |
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| Σ23 | I. Fitis, A. Skoulakis, E. L. Clark, <b>E. Kaselouris</b> , M. Bakarezos, J. Chatzakis, V. Dimitriou, N. A. Papadogiannis and M. Tatarakis, A tabletop plasma focus neutron source, 2nd International Symposium in Electronic engineering, Information Technology & Education, EEITE2020, p. 73-79, 12-14 October 2020, Chania, Greece.                                                                                                                                                                                                                                   |
| Σ24 | <b>E. Kaselouris</b> , A. Skoulakis, I. Fitis, Y. Orphanos, I. Tazes, K. Kosma, M. Bakarezos, N. Papadogiannis, M. Tatarakis, V. Dimitriou, Dynamics of the heat affected zone and induced strains in laser machining below ablation threshold, ModTech International Conference, Modern Technologies in Industrial Engineering, June 23 <sup>rd</sup> -27 <sup>th</sup> 2020, Eforie Nord, Romania, IOP Conf. Ser.: Mater. Sci. Eng. 916, 012050, 2020. DOI: <a href="https://doi.org/10.1088/1757-899X/916/1/012050">https://doi.org/10.1088/1757-899X/916/1/012050</a> |

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| Σ25                                                                     | <b>E. Kaselouris</b> , Y. Orphanos, K. Kosma, A. Skoulakis, I. Fitis, M. Bakarezos, N. Papadogiannis, M. Tatarakis and V. Dimitriou, On the micro-modelling of surface roughness in pulsed laser machining, 24th Innovative Manufacturing Engineering and Energy International Conference (IManEE 2020) 14th-15th December 2020, Athens, Greece, <i>IOP Conf. Ser.: Mater. Sci. Eng.</i> 1037, 012007, 2021. DOI: <a href="https://doi.org/10.1088/1757-899X/1037/1/012007">https://doi.org/10.1088/1757-899X/1037/1/012007</a>                                                   |
| Σ26                                                                     | <b>E. Kaselouris</b> , G. Tamiolakis, V. Dimitriou, M. Tatarakis, The influence of the load's geometrical characteristics on the generation of the electro-thermo-mechanical instability in a single wire Z-pinch, 9th International Conference on Mathematical Modeling in Physical Sciences (IC-MSQUARE), 7-10 September 2020, Tinos island, Greece, <i>Journal of Physics: Conference Series</i> 1730, 0120192, 2021. DOI: <a href="https://iopscience.iop.org/article/10.1088/1742-6596/1730/1/012092">https://iopscience.iop.org/article/10.1088/1742-6596/1730/1/012092</a> |
| Σ27                                                                     | <b>E. Kaselouris</b> , Y. Orphanos, M. Bakarezos, M. Tatarakis, N. A. Papadogiannis, V. Dimitriou, Influence of the plate thickness and material properties on the violin top plate modes, Inter-Noise 2021, 50th International Congress and Exposition on Noise Control Engineering, 1-5 August 2021, Washington DC, USA. DOI: <a href="https://doi.org/10.3397/IN-2021-2387">https://doi.org/10.3397/IN-2021-2387</a>                                                                                                                                                           |
| Σ28                                                                     | <b>E. Kaselouris</b> , C. Alexandraki, Y. Orphanos, M. Bakarezos, M. Tatarakis, N. A. Papadogiannis, V. Dimitriou, Acoustic analysis of impact sound on vibrating circular membranes, Inter-Noise 2021, 50th International Congress and Exposition on Noise Control Engineering, 1-5 August 2021, Washington DC, USA. DOI: <a href="https://doi.org/10.3397/IN-2021-2389">https://doi.org/10.3397/IN-2021-2389</a>                                                                                                                                                                |
| Σ29                                                                     | <b>E. Kaselouris</b> , A. Skoulakis, I. Tazes, Y. Orphanos, I. Fitis, M. Bakarezos, N.A. Papadogiannis, V. Dimitriou, M. Tatarakis, Preliminary study of early time dynamics during pulsed laser interaction with a CH ablator target, 48th EPS Conference on Plasma Physics, Online Meeting, 27 June- 1 July 2022.                                                                                                                                                                                                                                                               |
| Σ30                                                                     | I. Tazes, G. Andrianaki, A. Grigoriadis, S. Passalidis, A. Skoulakis, <b>E. Kaselouris</b> , J. Chatzakis, I. Fitis, M. Bakarezos, E.P. Benis, V. Dimitriou, N.A. Papadogiannis and M. Tatarakis, Optical shaping of high-pressure gas-jet targets for proton acceleration experiments in the near-critical density regime, 48th EPS Conference on Plasma Physics, Online Meeting, 27 June- 1 July 2022.                                                                                                                                                                          |
| Σ31                                                                     | <b>E. Kaselouris</b> , V. Dimitriou, Study of transient wave and vibro-acoustic response of a cymbal during laser impact via FEM-BEM numerical simulations, 11 <sup>th</sup> International Conference on Mathematical Modeling in Physical Sciences, IC-MSQUARE, 5-8 September 2022, held virtually, <i>AIP Conf. Proc.</i> 2872, 120057 (2023). DOI: <a href="https://doi.org/10.1063/5.0162843">https://doi.org/10.1063/5.0162843</a>                                                                                                                                           |
| Σ32                                                                     | K. Κοσμά, K. Καλέρης, <b>E. Κασελούρης</b> , E. Κανιολάκης Καλούδης, Β. Δημητρίου, Ε. Μπακαρέζος, Μ. Ταταράκης και Ν. Α. Παπαδογιάννης, Μελέτη υπερβραχέων ακουστικών κυμάτων σε διαστρωματωμένα υλικά με την μέθοδο άντλησης – ανίχνευσης με ακτινοβολία λέιζερ, 11ο Πανελλήνιο Συνέδριο Ακουστικής, Αριστοτέλειο Πανεπιστήμιο Θεσσαλονίκης, 16-18 Οκτωβρίου, 2022.                                                                                                                                                                                                              |
| Σ33                                                                     | <b>E. Kaselouris</b> , V. Dimitriou, Vibro-acoustics time domain FEM-BEM analysis of a Titian Stradivari violin: the role of the bridge, 2022 International Conference on Acoustics, Fluid Mechanics and Engineering and the 12th Green's Function Seminar (AFME&GFS 2022), 25-27 November 2022, held virtually, <i>Journal of Physics: Conference Series</i> 2458, 012009, (2023). DOI: <a href="https://doi.org/10.1088/1742-6596/2458/1/012009">https://doi.org/10.1088/1742-6596/2458/1/012009</a>                                                                            |
| <b>Following Election as Assistant Professor (Feb 24, 2023–Present)</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Σ34                                                                     | S. Brezas, <b>E. Kaselouris</b> , Y. Orphanos, M. Bakarezos, V. Dimitriou and N.A. Papadogiannis, Experimental and Computational Vibroacoustic Study of Cymbals, Forum Acusticum 2023, pp. 1177-1180, 11-15 September, Torino, Italy. DOI: <a href="https://www.doi.org/10.61782/fa.2023.0309">https://www.doi.org/10.61782/fa.2023.0309</a>                                                                                                                                                                                                                                      |
| Σ35                                                                     | S. Brezas, M. Katsipis, Y. Orphanos, <b>E. Kaselouris</b> et al., Carbon fiber bouzouki design, Forum Acusticum 2023, pp. 3413-3417, 11-15 September, Torino, Italy. DOI: <a href="https://www.doi.org/10.61782/fa.2023.0539">https://www.doi.org/10.61782/fa.2023.0539</a>                                                                                                                                                                                                                                                                                                       |
| Σ36                                                                     | S. Brezas, <b>E. Kaselouris</b> , D. Grigoriou, H. Papadaki, Y. Orphanos, M. Bakarezos, N. A. Papadogiannis, V. Dimitriou, Vibration analysis of 3D printed cymbals and Tzouras top plates, <i>INTER-NOISE and NOISE-CON Congress and Conference Proceedings</i> , INTER-NOISE24, Nantes, France, pp. 6741-6749. DOI: <a href="https://doi.org/10.3397/IN_2024_3864">https://doi.org/10.3397/IN_2024_3864</a>                                                                                                                                                                     |
| Σ37                                                                     | K Καλέρης, <b>E Κασελούρης</b> , Ε Κανιολάκης Καλούδης, Ε Παπαδάκη, Μ Μπακαρέζος, Β Δημητρίου, Μ Ταταράκης, Ν Παπαδογιάννης, Πυρηνική φυσική με ακουστικά κύματα: καινοτόμοι ακουστικοί κρυσταλλικοί κυματιστές για παραγωγή ακτίνων-γ στενού φάσματος, Πρακτικά 12ου Πανελληνίου Συνεδρίου Ακουστικής, Ελληνικό Μεσογειακό Πανεπιστήμιο, pp. 441-447, 17-19 Οκτωβρίου, Σπίτι του Πολιτισμού, Ρέθυμνο 2024.                                                                                                                                                                       |
| Σ38                                                                     | Ε. Παπαδάκη, Ε. Κανιολάκης Καλούδης, Κ. Καλέρης, Β. Σαμολαδάς, Μ. Μπακαρέζος, Μ. Ταταράκης, Ν. Α. Παπαδογιάννης, <b>E. Κασελούρης</b> , Β. Δημητρίου, Υπολογιστική μελέτη της παραγωγής και διάδοσης υπερήχων σε στερεούς στόχους πυριτίου υπό την επίδραση παλμών laser, Πρακτικά 12ου Πανελληνίου Συνεδρίου Ακουστικής, pp. 456-463, Ελληνικό Μεσογειακό Πανεπιστήμιο, 17-19 Οκτωβρίου, Σπίτι του Πολιτισμού, Ρέθυμνο 2024.                                                                                                                                                     |

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| Σ39 | Ε. Κανιολάκης Καλούδης, Κ. Καλέρης, <b>Ε. Κασελούρης</b> , Γ. Ορφανός, Μ. Μπακαρέζος, Β. Δημητρίου, Μ. Ταταράκης, Ν. Α. Παπαδογιάννης, Χαρακτηρισμός και έλεγχος υπερ-υψίσυχων τρεχόντων ακουστικών κυμάτων σε κρυσταλλικά στερεά με την χρήση ταχείας φασικής απεικόνισης με την χρήση ns λέιζερ, Πρακτικά 12ου Πανελλήνιου Συνεδρίου Ακουστικής, pp. 555-563, Ελληνικό Μεσογειακό Πανεπιστήμιο, 17-19 Οκτωβρίου, Σπίτι του Πολιτισμού, Ρέθυμνο 2024.            |
| Σ40 | Μ. Κατσιπής, Ο. Μιχαηλίδης, Α. Σκουτέλης, Γ. Σκουτέλης, Σ. Μπρέζας, Ι. Ορφανός, Ν. Παπαδογιάννης, Μ. Μπακαρέζος, Β. Δημητρίου, <b>Ε. Κασελούρης</b> , Διερεύνηση δονητικής συμπεριφοράς παραδοσιακού ξύλινου και εκτυπωμένου τζουρά, Πρακτικά 12ου Πανελλήνιου Συνεδρίου Ακουστικής, Ελληνικό Μεσογειακό Πανεπιστήμιο, pp. 240-249, 17-19 Οκτωβρίου, Σπίτι του Πολιτισμού, Ρέθυμνο 2024.                                                                          |
| Σ41 | Σ. Μπρέζας, Δ. Γρηγορίου, <b>Ε. Κασελούρης</b> , Ε. Παπαδάκη, Ι. Ορφανός, Ε. Μπακαρέζος, Ν. Α. Παπαδογιάννης, Β. Δημητρίου, Δονητική ανάλυση κυμβάλων και καπακιών τζουρά, Πρακτικά 12ου Πανελλήνιου Συνεδρίου Ακουστικής, pp. 294-301, Ελληνικό Μεσογειακό Πανεπιστήμιο, 17-19 Οκτωβρίου, Σπίτι του Πολιτισμού, Ρέθυμνο 2024.                                                                                                                                    |
| Σ42 | Σ. Πασχαλίδου, Κ. Τσάμης, Χ. Αλεξανδράκη, <b>Ε. Κασελούρης</b> , Β. Δημητρίου, Εισαγωγή κινησιολογικών δεδομένων αλληλεπίδρασης μουσικού-μπαγκέτας-κυμβάλου σε FEM-BEM μοντέλα δονητικής και ακουστικής απόκρισης, Πρακτικά 12ου Πανελλήνιου Συνεδρίου Ακουστικής, Ελληνικό Μεσογειακό Πανεπιστήμιο, pp. 480-489, 17-19 Οκτωβρίου, Σπίτι του Πολιτισμού, Ρέθυμνο 2024.                                                                                            |
| Σ43 | S. Brezas, H. Papadaki, M. Katsipis, D. Grigoriou, Y. Ophanos, M. Bakarezos, N. A. Papadogiannis, <b>E. Kaselouris</b> , V. Dimitriou, Investigation of the vibrational characteristics of tzouras 3D printed top plates, Innovative Manufacturing Engineering and Energy - IManEE2024, <i>Materials Research Proceedings</i> , Vol. 46, pp 82-89, (2024). DOI: <a href="https://doi.org/10.21741/9781644903377-11">https://doi.org/10.21741/9781644903377-11</a> |
| Σ44 | A. Gosta, E. Kamposos, A. Skoulakis, Y. Orphanos, H. Papadaki, N. A. Papadogiannis, M. Tatarakis, <b>E. Kaselouris</b> , V. Dimitriou, Laser machining with a high-power CW fiber laser, Innovative Manufacturing Engineering and Energy- IManEE2024, <i>Materials Research Proceedings</i> , Vol. 46, pp 235-242, (2024). DOI: <a href="https://doi.org/10.21741/9781644903377-31">https://doi.org/10.21741/9781644903377-31</a>                                 |
| Σ45 | A. Kavroulakis. T. Rizzi, S. Ratynskaia, P. Tolias, M. Tatarakis, <b>E. Kaselouris</b> , V. Dimitriou, A Computational Study of Runaway Electron Effects on Graphite Plasma-Facing Components, 7th International Conference in Electronic engineering & Information Technology, EEITE2026, IEEE Proceedings, 3-5 June 2026, Chania, Greece.                                                                                                                       |
| Σ46 | T.-M. Maroulaki, D. Grigoriou, Y. Orphanos, N. A. Papadogiannis, V. Dimitriou, and <b>E. Kaselouris</b> , Vibro-Acoustic Analysis of a Thin Aluminum Plate with a Clamped Central Hole Using FEM and Acoustic Radiation Model, International Conference on Electronics, Engineering Physics and Earth Science (EEPES 2026), 24-27 June 2026, Bandirma, Turkey (will be published in Engineering Proceedings, MDPI).                                               |

## 12.5 Oral & Poster Presentations at Peer-Reviewed Conferences (Abstract Review)

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| ΠΕ01 | Ε. Drakaki, <b>E. Kaselouris</b> , M. Makropoulou, A.A. Serafetinides, A. Tsenga, A.J. Stratigos, A.D. Katsambas, C. Antoniou, Laser Induced Fluorescence and Reflectance Spectroscopy for the discrimination of basal cell carcinoma from the surrounding normal skin tissue, International conference in Advanced Laser Technologies (ALT08), Poster, Siofok, Hungary, 13-18 September, 2008.                                                                                               |
| ΠΕ02 | N. Efstathopoulos, F. Xypnitos, V. Nikolaou, J. Lazarettos, <b>E. Kaselouris</b> , D. Venetsanos, C. Provatidis, Investigation of a trochanteric FI-Nail intramedullary implant using a simplified finite element model, 10th EFORT Congress, Vienna, Austria, 3 – 6 June Poster P1944, 2009.                                                                                                                                                                                                 |
| ΠΕ03 | F. Xypnitos, G. Papachristou, N. Efstathopoulos, <b>E. Kaselouris</b> , D. Venetsanos, C. Provatidis, Investigation of the mechanical behavior of typical scaphoid fractures during their healing process using the finite element method, SEECCM 2009 (2nd South-East European Conference on Computational Mechanics), Rhodes, Greece, 22–24 June, Conference Proceedings ISBN 978-960-254-683-3, Publisher: Inst. of Structural Analysis and Seismic Research, National Techn. Univ., 2009. |
| ΠΕ04 | F. Xypnitos, G. Papachristou, P. Grigoris, E. Chronopoulos, <b>E. Kaselouris</b> , D. Venetsanos, C. Provatidis, E. Kolliakou, N. Efstathopoulos, A Preliminary three-dimensional investigation of the radiocarpal joint using the finite element method, 3rd International Conference on Experiments/Process/System Modeling/Simulation & Optimization (3rd IC-EpsMsO), Athens, Greece, 8-11 July, Conference Proceedings, 2009.                                                             |
| ΠΕ05 | N. Ε. Ευσταθόπουλος, Φ.Ν. Ξυπνητός, Β. Νικολάου, Ι. Λαζαρέττος, Ε. Κολλιάκου, <b>Ε. Κασελούρης</b> , Δ. Βενετσάνος, Χ. Προβατίδης, Χρήση της εγγύς ή της άπω περιφερικής βίδας σε ενδομυελικό ήλο διατροχαντηρίων καταγμάτων. Εμβιομηχανική μελέτη, 20ο Πανκύπριο Ορθοπαιδικό Συνέδριο, Πάφος, Κύπρος, 6-8 Νοεμβρίου 2009.                                                                                                                                                                    |

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| ΠΕ06 | Ε. Κολλιιάκου, Φ. Ξυπνητός, <b>Ε. Κασελούρης</b> , Α. Γουλιάμος, Δ. Κορρές, Χ. Προβατίδης, Συγκριτική μελέτη της μηχανικής συμπεριφοράς της φυσιολογικής και δυσπλαστικής άρθρωσης του ισχίου, Πρακτικά 4ου Συνεδρίου ΕΛΕΜΒΙΟ (Ελληνικής εταιρείας Εμβιομηχανικής), Ιωάννινα, 4-6 Ιουνίου 2010.                                                                                                                                                                                                    |
| ΠΕ07 | Ε. Κολλιιάκου, Φ. Ξυπνητός, <b>Ε. Κασελούρης</b> , Α. Γουλιάμος, Δ. Κορρές, Χ. Προβατίδης, Συγκριτική μελέτη της μηχανικής συμπεριφοράς της άρθρωσης του ισχίου επί δυσπλασίας και χαμηλού εξάρθρηματος, 66ο Πανελλήνιο Ορθοπαιδικό Συνέδριο, Αθήνα, 13-16 Οκτώβρη 2010.                                                                                                                                                                                                                           |
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| ΠΕ10 | Ε. Μπριλάκης, <b>Ε. Κασελούρης</b> , Φ. Ξυπνητός, Χ. Προβατίδης, Ν. Ευσταθόπουλος, Εμβιομηχανική Μελέτη Καταγμάτων 5ου Μεταταρσίου με τη Μέθοδο των Πεπερασμένων Στοιχείων, 68ο Πανελλήνιο Ορθοπαιδικό Συνέδριο, Αθήνα, 3-6 Οκτωβρίου 2012.                                                                                                                                                                                                                                                        |
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| ΠΕ18 | Μ. Ταταράκης, Α. Σκουλάκης, Ι. Φυτίλης, S.M. Hassan, E.L. Clark, <b>Ε. Κασελούρης</b> , Θ.Γ. Παπαδουλής, Β. Δημητρίου, Ι. Χατζάκης, P. Lee, Κ. Πετρίδης, Γ. Ανδρουλάκης, Ι.Κ. Νικολός, Ε. Δρακάκης, Κ. Κοσμίδης, Μ. Μπακαρέζος, Ν.Α. Παπαδογιάννης, Σχεδίαση και ανάπτυξη πηγής νετρονίων με εφαρμογή στην ανίχνευση εκρηκτικών υλών, Αρχιμήδης III-Ενίσχυση Ερευνητικών Ομάδων στο ΤΕΙ Κρήτης, Ηράκλειο, Διημερίδα 28-29 Σεπτεμβρίου, 2015.                                                       |
| ΠΕ19 | Β. Δημητρίου, <b>Ε. Κασελούρης</b> , Γ. Ορφανός, Ε. Μπακαρέζος, Μ. Ταταράκης και Ν. Α. Παπαδογιάννης, Δυναμική ανάλυση της συμπεριφοράς λεπτών μεταλλικών υμενίων κατά την αλληλεπίδραση με ns παλμούς Laser με τη Μέθοδο των Πεπερασμένων Στοιχείων – FEM, Αρχιμήδης III-Ενίσχυση Ερευνητικών Ομάδων στο ΤΕΙ Κρήτης, Ηράκλειο, Διημερίδα 28-29 Σεπτεμβρίου, 2015.                                                                                                                                 |
| ΠΕ20 | Ν. Α. Παπαδογιάννης, Γ. Ορφανός, <b>Ε. Κασελούρης</b> , Ι. Τζιανάνη, Γ. Τσιμπίδης, Π. Α. Λουκάκος, Ν. Βάινος, Κ. Κοσμίδης, Β. Δημητρίου, Ε. Μπακαρέζος, Μ. Ταταράκης «Νανοακουστικά κύματα με τη χρήση υπερβραχέων παλμών LASER και οι εφαρμογές τους στο χαρακτηρισμό υλικών, τα κύρια επιστημονικά αποτελέσματα του υποέργου 19», Αρχιμήδης III-Ενίσχυση Ερευνητικών Ομάδων στο ΤΕΙ Κρήτης, Ηράκλειο, Διημερίδα 28-29                                                                            |

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|      | Σεπτεμβρίου, 2015.                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| ΠΕ21 | <b>E. Kaselouris</b> , E. Skarvelakis, Y. Orphanos, M. Bakarezos, M. Tatarakis, N.A. Papadogiannis and V. Dimitriou, FEM simulation of SAWs dynamics generated by ns Laser pulses in thin films as a diagnostic of defects in matter, ScinTE2015 International Conference Science in Technology, Athens, Poster, 5-7 November 2015.                                                                                                                                                      |
| ΠΕ22 | <b>E. Kaselouris</b> , T. Papadoulis, E. Variantza, A. Baroutsos, V. Dimitriou, A study of explicit numerical simulations in orthogonal metal cutting, 9th International Congress on Precision Machining (ICPM 2017), Athens, 6-9 September 2017.                                                                                                                                                                                                                                        |
| ΠΕ23 | G. Andrianaki, A. Grigoriadis, I. Tazes, E. L. Clark, I. Fitis, A. Skoulakis, <b>E. Kaselouris</b> , M. Bakarezos, I. K. Nikolos, V. Dimitriou, E. P. Benis, N. A. Papadogiannis and M. Tatarakis, Energetic particles source using the Zeus 45 TW laser at CPPL, 35th European Conference on Laser interaction with matter, Poster, Rethymno, 22-26 October 2018.                                                                                                                       |
| ΠΕ24 | G. Koundourakis, A. Skoulakis, <b>E. Kaselouris</b> , I. Fitis, M. Bakarezos, E.L. Clark, N. Vlahakis, N.A. Papadogiannis, V. Dimitriou and M. Tatarakis, Computational study of plasma dynamic evolution produced by low current table-top pinch plasma devices, 35th European Conference on Laser interaction with matter, Poster, Rethymno, 22-26 October 2018.                                                                                                                       |
| ΠΕ25 | <b>E. Kaselouris</b> , Y. Orphanos, K. Kosma, V. Dimitriou, M. Bakarezos, M. Tatarakis and N. A. Papadogiannis, Surface Acoustic Waves generated on thin films after irradiation by femtosecond laser pulses, 35th European Conference on Laser interaction with matter, Poster, Rethymno, 22-26 October 2018.                                                                                                                                                                           |
| ΠΕ26 | <b>E. Kaselouris</b> , I. Fitis, A. Skoulakis, G. Koundourakis, V. Dimitriou, E. Bakarezos, E.L. Clark, N.A. Papadogiannis and M. Tatarakis «Pinch ETM instabilities», Towards understanding and modelling intense electronic excitation, COST Action 17126, TUMIEE, Porto, Portugal March 4, 2019.                                                                                                                                                                                      |
| ΠΕ27 | Y. Orphanos, M. Bakarezos, K. Kosma, E. Tzianaki, <b>E. Kaselouris</b> , V. Dimitriou, G. Tsibidis, P.A. Loukakos, N. Vainos, M. Tatarakis and N. A. Papadogiannis, «Ultrafast laser-generated nano-acoustics waves, experimental methods for validation of theoretical simulations», Towards understanding and modelling intense electronic excitation, COST Action 17126, TUMIEE, Porto, Portugal March 4, 2019.                                                                       |
| ΠΕ28 | V. Dimitriou, <b>E. Kaselouris</b> , Y. Orphanos, M. Bakarezos, N. A. Papadogiannis and M. Tatarakis. “Simulations on matter dynamics under fs laser excitation”, Towards understanding and modelling intense electronic excitation, COST Action 17126, TUMIEE, Porto, Portugal, March 4, 2019.                                                                                                                                                                                          |
| ΠΕ29 | E. L. Clark, A. Grigoriadis, I. Tazes, G. Andrianaki, I. Fitis, S. Petrakis, A. Skoulakis, <b>E. Kaselouris</b> , T.G. Maris, I. Tsiapa, M. Bakarezos, I. K. Nikolos, V. Dimitriou, E. P. Benis, N. A. Papadogiannis and M. Tatarakis, Novel gel dosimetry diagnostic for the secondary sources of ZEUS 45TW laser system at CPPL, 3rd European Conference on Plasma Diagnostics (ECPD), Poster, Lisbon, Portugal, 6-9 May 2019.                                                         |
| ΠΕ30 | E. L. Clark, A. Grigoriadis, I. Tazes, G. Andrianaki, I. Fitis, S. Petrakis, A. Skoulakis, <b>E. Kaselouris</b> , T.G. Maris, I. Tsiapa, M. Bakarezos, I. K. Nikolos, V. Dimitriou, E. P. Benis, N. A. Papadogiannis and M. Tatarakis, Secondary sources generated with the ZEUS 45TW laser system at CPPL, The 2019 International conference on applications of nuclear techniques (Crete 2019), Poster, June 9-15, 2019.                                                               |
| ΠΕ31 | <b>E. Kaselouris</b> , A. Baroutsos, T. Papadoulis, N.A. Papadogiannis, M. Tatarakis, and V. Dimitriou, A study on the influence of laser parameters on laser-assisted machining of AISI H-13 steel, 18th international conference on fracture and damage mechanics (FDM 2019), 16-18 September 2019.                                                                                                                                                                                    |
| ΠΕ32 | <b>E. Kaselouris</b> , A. Skoulakis, Y. Orphanos, K. Kosma, T. Papadoulis, I. Fitis, E. Clark, A.P. Markopoulos, M. Bakarezos, N.A. Papadogiannis, M. Tatarakis, and V. Dimitriou, Analysis of the heat affected zone and surface roughness during laser micromachining of metals, 18th international conference on fracture and damage mechanics (FDM 2019), 16-18 September 2019.                                                                                                      |
| ΠΕ33 | S. Passalidis, O. Ettlinger, G. Hicks, N. Dover, Z. Najmudin, E.P. Benis, <b>E. Kaselouris</b> , N.A. Papadogiannis, M. Tatarakis, V. Dimitriou, Hydrodynamic modelling and simulations of collisional shockwaves in gas targets for the optimisation of collisionless shock acceleration of ions, Poster, 15-20 September 2019, Prague, Czech Republic.                                                                                                                                 |
| ΠΕ34 | M. Tatarakis, A. Grigoriadis, G. Andrianaki, I. Tazes, S. Petrakis, <b>E. Kaselouris</b> , Y. Orphanos, I. Fitis, K. Kosma, A. Skoulakis, E. Clark, I. Chatzakis, M. Bakarezos, V. Dimitriou, N. A. Papadogiannis, High Power laser-plasma secondary sources and their potential applications in IPPL, access point of the Hellenic Research Infrastructure “HELLAS-CH”, Towards understanding and modelling intense electronic excitation, Poster, Warsaw, Poland, 17-18 February 2020. |

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| ΠΕ35                                                                     | I. Tazes, K. Kaleris, J. F. Ong, O. Tesileanu, K. A. Tanaka, A. Grigoriadis, G. Andrianaki, T. Papadoulis, S. Passalidis, A. Baroutsos, G. Koundourakis, Y. Orphanos, I. Fitis, K. Kosma, A. Skoulakis, S. Petrakis, E. Clark, <b>E. Kaselouris</b> , I. Chatzakis, E. Bakarezos, N.A. Papadogiannis, M. Tatarakis, V. Dimitriou, "Simulations of the experimental research activities in IPPL (Institute of Plasma Physics & Lasers)", Towards understanding and modelling intense electronic excitation, Poster, Warsaw, Poland, 17-18 February 2020. |
| ΠΕ36                                                                     | V. Dimitriou, <b>E. Kaselouris</b> , I. Tazes, J. F. Ong, O. Tesileanu, K. A. Tanaka, A. Grigoriadis, G. Andrianaki, S. Petrakis, Y. Orphanos, I. Fitis, K. Kosma, A. Skoulakis, N. A. Papadogiannis, M. Tatarakis, "Multiphysics modelling and simulations from solid to plasma regime for MHD and PIC studies", Towards understanding and modelling intense electronic excitation, Poster, Warsaw, Poland, 17-18 February 2020.                                                                                                                       |
| ΠΕ37                                                                     | I. Fitis, A. Skoulakis, <b>E. Kaselouris</b> , E. L. Clark, J. Chatzakis, M. Bakarezos, V. Dimitriou, N. A. Papadogiannis, M. Tatarakis, "Double plasma shock after pinching in table-top plasma focus device", 47th IEEE International Conference on Plasma Science (ICOPS), Singapore (Virtual), 6-10 December 2020. DOI: <a href="https://ieeexplore.ieee.org/document/9717503">https://ieeexplore.ieee.org/document/9717503</a>                                                                                                                     |
| ΠΕ38                                                                     | I. Fitis, <b>E. Kaselouris</b> , A. Skoulakis, A. Kavroulakis, G. Koundourakis, E. L. Clark, M. Bakarezos, J. Chatzakis, N. A. Papadogiannis, V. Dimitriou, M. Tatarakis, "Influence of z-pinch wire geometrical characteristics on the generation of the electrothermomechanical and plasma instabilities", 47th IEEE International Conference on Plasma Science (ICOPS), Singapore (Virtual), 6-10 December 2020. DOI: <a href="https://ieeexplore.ieee.org/document/9717692">https://ieeexplore.ieee.org/document/9717692</a>                        |
| ΠΕ39                                                                     | I. Tazes, G. Andrianaki, A. Grigoriadis, S. Passalidis, A. Skoulakis, <b>E. Kaselouris</b> , J. Chatzakis I. Fitis, M. Bakarezos, E. Clark, E.P. Benis, V. Dimitriou, N.A. Papadogiannis, M. Tatarakis, Development and optimization of laser-induced particle accelerators in IPPL, 17th Direct Drive and Fast Ignition Workshop, May 3-5, 2022, Madrid, Spain.                                                                                                                                                                                        |
| ΠΕ40                                                                     | I. Fitis, <b>E. Kaselouris</b> , I. Tazes, G. Andriannaki, G. Grigoriadis, Y. Orphanos, E. Bakarezos, E.L. Clark, E.P. Benis, V. Dimitriou, N.A. Papadogiannis, and M. Tatarakis, The research activities at IPPL/HMU for the Advanced SI for DD inertial fusion, 17th Direct Drive and Fast Ignition Workshop, May 3-5, 2022, Madrid, Spain.                                                                                                                                                                                                           |
| ΠΕ41                                                                     | I. Tazes, G. Andrianaki, A. Grigoriadis, S.Petrakis, A. Skoulakis, Y. Orphanos, <b>E. Kaselouris</b> , I. Fitis, E.L. Clark, E. Bakarezos, E. P. Benis, V. Dimitriou, N. A. Papadogiannis and Michael Tatarakis, Particle Acceleration and Radiation Emission Studies at IPPL, TUMIEE COST Action 17126, MEETING IN HERAKLION (CRETE, GREECE), 18 July 2022.                                                                                                                                                                                            |
| ΠΕ42                                                                     | K. Kosma, K. Kaleris, <b>E. Kaselouris</b> , M. Kaniolakis-Kaloudis, M. Bakarezos, M. Tatarakis, V. Dimitriou, and N. A.Papadogiannis, Pump-probe Reflectivity Studies of Ultrashort Laser-induced Acoustic Strains in Layered Materials, XXXVI Pan-Hellenic conference on Solid-State Physics and Materials Science, Heraklion, 26-28 September 2022.                                                                                                                                                                                                  |
| ΠΕ43                                                                     | K. Kaleris, <b>E. Kaselouris</b> , E. Kaniolakis-Kaloudis, V. Dimitriou, M. Bakarezos, M. Tatarakis, N. A. Papadogiannis, Dynamic acoustic bending of crystalline structures for the generation of gamma radiation via undulation of super-relativistic electron/positron beams, Towards understanding and modelling intense electronic excitation, COST Action CA17126, Hamburg, Germany, 9 December 2022.                                                                                                                                             |
| ΠΕ44                                                                     | <b>E. Kaselouris</b> , H. Papadaki, K. Kaleris, I. Tazes et al, Multiphysics modelling and simulations of the experiments in IPPL, Towards understanding and modelling intense electronic excitation, Poster, COST Action CA17126, Hamburg, Germany, 9 December 2022.                                                                                                                                                                                                                                                                                   |
| <b>Following my election as Assistant Professor on February 24, 2023</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| ΠΕ45                                                                     | K. Kaleris, <b>E. Kaselouris</b> , E. Kaniolakis-Kaloudis et al., Progress on dynamic structural lattice modulation of single crystals for CLS applications, International Conference "Dynamics of Systems on the Nanoscale" (DYSON), April 24-26, 2023, Prague, Czech Republic.                                                                                                                                                                                                                                                                        |
| ΠΕ46                                                                     | H. Papadaki, <b>E. Kaselouris</b> et al., Ablator - laser preheating simulations for diagnostic optimization, 5 <sup>th</sup> European Conference on Plasma Diagnostics (ECPD), Poster, 23-27 April 2023, Rethymno, Greece.                                                                                                                                                                                                                                                                                                                             |
| ΠΕ47                                                                     | I. Mirza, Y.Levy, J. Sladek, H. Papadaki, <b>E. Kaselouris</b> , V. Dimitriou, N. Bulgakova, Coherence Effects in LIPSS Formation on Silicon upon Picosecond Laser Pulse Irradiations, CLEO®/Europe-EQEC, 26-30 June 2023, Munich, Germany.                                                                                                                                                                                                                                                                                                             |
| ΠΕ48                                                                     | E. Kaniolakis-Kaloudis, K. Kaleris, <b>E. Kaselouris</b> et al., Efficient optoacoustic transduction for ultra-high-frequency strain generation in nanostructured materials, XXXVII Pan-Hellenic conference on Solid-State Physics and Materials Science, Poster, Thessaloniki, 17-20 September 2023.                                                                                                                                                                                                                                                   |
| ΠΕ49                                                                     | K. Kaleris, <b>E. Kaselouris</b> , V. Dimitriou, A. V. Korol, A. V. Solov'yov, E. Kaniolakis-Kaloudis, M. Bakarezos, M. Tatarakis, N. A. Papadogiannis, Computational study of narrowband γ-ray radiation generated by novel acoustically driven crystalline undulators, DySoN-MultiChem 2024 Conference, Tbilisi, Georgia 8-12 April 2024.                                                                                                                                                                                                             |

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| ΠΕ50                                                           | E. Kaniolakis Kaloudis, K. Kaleris, <b>E. Kaselouris</b> , M. Tatarakis, V. Dimitriou, M. Bakarezos, N. A. Papadogiannis, Progress on controlled multi-MHz acoustic excitation for ultrarelativistic positron beam crystalline undulators, DySoN-MultiChem 2024 Conference, Tbilisi, Georgia 8-12 April 2024.                                                                                                      |
| ΠΕ51                                                           | E. Kaniolakis Kaloudis, K. Kaleris, K. Kosma, <b>E. Kaselouris</b> , S. Petrakis, Y. Orphanos, E. Gagoudakis, V. Binas, M. Bakarezos, V. Dimitriou, M. Tatarakis, N. A. Papadogiannis, Ultrafast Photoacoustic Phenomena in Metal/Silicon multilayer materials and their application in dynamic acoustic crystalline undulators, DySoN-MultiChem 2024 Conference, Tbilisi, Georgia 8-12 April 2024.                |
| ΠΕ52                                                           | K. Kaleris, E. Kaniolakis-Kaloudis, <b>E. Kaselouris</b> , M. Bakarezos, M. Tatarakis, V. Dimitriou, J. Mourjopoulos, N. A. Papadogiannis, "New applications of laser generated sound sources", 23rd International Conference «Anglo-French Physical Acoustics Conference» (AFPAC 2025), France, 22-24 January (2025).                                                                                             |
| ΠΕ53                                                           | E. Kaniolakis-Kaloudis, K. Kaleris, <b>E. Kaselouris</b> , Y. Orphanos, V. Dimitriou, M. Bakarezos, M. Tatarakis, N. A. Papadogiannis, "Characterization & control of multi MHz acoustic waves in acoustic crystalline undulators", 23rd International Conference «Anglo-French Physical Acoustics Conference» (AFPAC 2025), France, 22-24 January (2025).                                                         |
| ΠΕ54                                                           | E. Kaniolakis-Kaloudis, K. Kaleris, <b>E. Kaselouris</b> , Y. Orphanos, V. Dimitriou, M. Bakarezos, M. Tatarakis, N. A. Papadogiannis, "Radiography of plasmas using gamma rays generated via acoustically excited crystalline undulators", 6th International Conference in Electronic Engineering & Information Technology (EEITE 2025), 04-06 June (2025).                                                       |
| <b>Research Contributions to Invited Talks by Team Members</b> |                                                                                                                                                                                                                                                                                                                                                                                                                    |
| ΠΕ55                                                           | V. Dimitriou, <b>E. Kaselouris</b> , Y. Orphanos, E. Bakarezos, N. Vainos, N. A. Papadogiannis, and M. Tatarakis, <u>V. Dimitriou Invited talk</u> : "FEM Modeling for the study of the dynamics of Laser-matter Interactions in thin metal film/substrate systems", Drive Innovation with Simulation, 6th PhiloNet CAE Conference, Megaron, Athens, 23 May 2013.                                                  |
| ΠΕ56                                                           | V. Dimitriou, <b>E. Kaselouris</b> , I.K. Nikolos, Y. Orphanos, E. Bakarezos, N.A. Papadogiannis and M. Tatarakis, <u>V. Dimitriou Invited talk</u> : "Simulations of ns laser matter interactions (the phase change problem)", Workshop LMJ-PETAL and COST, "Developing the Physics and the Scientific Community for Inertial Confinement Fusion at the time of NIF ignition", Bordeaux, France, 5-7 March, 2014. |
| ΠΕ57                                                           | V. Dimitriou, <b>E. Kaselouris</b> , I. Fitis, A. Skoulakis, Y. Orphanos, M. Bakarezos, N. Papadogiannis and M. Tatarakis, <u>V. Dimitriou Invited talk</u> : Studying the initial stages of plasma generation using ns laser pulsed systems and strong currents, SPIE. OPTICS + OPTOELECTRONICS, Prague, Czech Republic 13-16 April 2015.                                                                         |
| ΠΕ58                                                           | N. A. Papadogiannis, Y. Orphanos, I. Tzianaki, E. Kaselouris, V. Dimitriou, M. Bakarezos, G. Tsibidis, P. A. Loukakos, M. Tatarakis, <u>N. Papadogiannis Invited talk</u> : Monitoring matter dynamics under ultrafast laser excitation, CECAM workshop on Multi-scale modelling of matter under extreme irradiation, Dublin, 17-20 June 2015.                                                                     |
| ΠΕ59                                                           | <b>E. Kaselouris</b> , I. Fitis, A. Skoulakis, G. Koundourakis, V. Dimitriou, E. L. Clark, M. Bakarezos, N. A. Papadogiannis and M. Tatarakis, <u>M. Tatarakis Invited talk</u> : Plasma instabilities: the influence on plasma instabilities during the solid-plasma phase transition, Conference: 27th Symposium on Plasma Physics and Technology, Prague, 20-23 June 2016.                                      |
| ΠΕ60                                                           | <b>E. Kaselouris</b> , V. Dimitriou, I. Fitis, A. Skoulakis, G. Koundourakis, I. K. Nikolos, E. L. Clark, M. Bakarezos, N. A. Papadogiannis and M. Tatarakis, <u>M. Tatarakis Invited talk</u> : "The influence of the solid to plasma phase transition on the generation of plasma instabilities", 44th EPS Conference on Plasma Physics, Belfast, 26-30 June 2017.                                               |
| ΠΕ61                                                           | Y. Orphanos, <b>E. Kaselouris</b> , K. Kosma, M. Bakarezos, N. Vainos, V. Dimitriou, M. Tatarakis and N.A. Papadogiannis, <u>N. Papadogiannis Invited talk</u> : "Ultrafast Laser generated Rayleigh surface acoustic waves: physics and applications on material diagnosis", 7th International Conference "Micro&Nano 2018", Aristotle University of Thessaloniki 5-7 November 2018.                              |

### 13. Academic Recognition (till 31/08/2026)

Google Scholar Αναφορές: **h-index: 17, Citations: 832**  
<https://scholar.google.gr/citations?user=2zDYZL8AAAAJ&hl=en>  
 SCOPUS Αναφορές, Author ID: 23004818400: **h-index: 14, Citations: 551**  
<https://www.scopus.com/authid/detail.uri?authorId=23004818400>  
 ResearchGate Αναφορές: **h-index: 15, Citations: 716**  
<https://www.researchgate.net/profile/Evaggelos-Kaselouris-2/stats>  
 Orchid link:  
<https://orcid.org/0000-0002-7945-1140>

#### 14. Foreign Languages, Technical and Special Knowledge and Skills

|                             |                                                                                                                                                                          |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>English:</b>             | First certificate in English                                                                                                                                             |
| <b>French:</b>              | Sorbonne I                                                                                                                                                               |
| <b>Operational systems:</b> | Windows -X, LINUX -X                                                                                                                                                     |
| <b>Programming:</b>         | Matlab, Visual Basic, C, C++, Pascal, Fortran                                                                                                                            |
| <b>Software knowledge:</b>  | ANSYS Multiphysics, ANSYS-Workbench, LS-DYNA, FLUENT CFD, Comsol Multiphysics, PLUTO MHD Code, GORGON MHD code, Materialise Mimics, Matlab-Simulink, Inventor, CorelDRAW |

From 2012 to present:

- Participation in the development, supervision, and maintenance of the Website [www.cppl.teicrete.gr](http://www.cppl.teicrete.gr) (older version site of the Institute of Plasma and Laser Physics, IPPL site) of the CPPL Plasma and Laser Physics Research Center, TEI of Crete.
- Participation in the development and Supervision of the Website <https://powerlaps.chania.teicrete.gr/> within the framework of the PowerLaPs program.
- Responsible for the development, supervision, and maintenance of the Website <https://ippl.hmu.gr/en/institute-of-plasma-physics-and-lasers/> of the IPPL of the Hellenic Mediterranean University.
- Parallel processing of computational simulation models in High Performance Computing – HPC. Install and manage programs in MPI environments for HPC.
- Participation in the development and Supervision of the Website <https://laserfusion.hmu.gr/> within the framework of the Innovative Education & Training in Laser Inertial Fusion Energy, LaserFusion program.

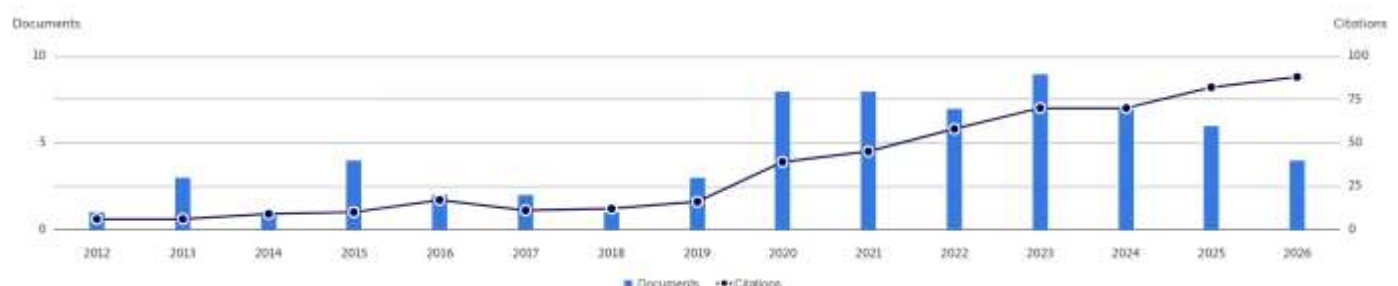
#### 15. Research activity and interests

The main scientific and research interests concern computational modeling and simulation of problems in the fields of applied physics and materials engineering. The published articles concern:

- modeling and simulation of phenomena of multiple coupled fields of physics and mechanics (multiphysics), with primary numerical method the finite element method
- the interaction of laser pulses with matter and fluid/plasma and the propagation and generation of acoustic waves at the macroscopic, microscopic and nano-scopic level
- vibrational acoustics with applications in the study of musical instruments
- the study of matter dynamics in all states of matter (solid, liquid, gas and plasma) through pulsed powered devices
- mechanical constructions and laser assisted machining at a macroscopic and microscopic level but also for the detection and diagnosis of imperfections and discontinuities in the material

#### 16. Citation Growth Rate (till 06/08/2026)

High growth rate the last 5 years  
Scopus (Documents+Citations)



|            | Όλα | Από το 2021 |
|------------|-----|-------------|
| Παραθέσεις | 832 | 617         |
| h-index    | 17  | 14          |
| i10-index  | 29  | 25          |

