

Curriculum Vitae

Personal Information

Surname: Karvounis

Name: Christos

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Hellenic Mediterranean University – Department of Electronic Engineering & Institute of Plasma Physics and Lasers – IPPL

Tria Monastiria, Rethymno 74100, Greece

Education

09/2022- present: PhD student at Hellenic Mediterranean University/Department of Electronic Engineering with PhD dissertation: “High current generated dense plasma and secondary emission studies”

10/2020 – 07/2022: LaPIA Postgraduate MSc degree program in Laser, Plasma & Applications in Hellenic Mediterranean University/Department of Electronic Engineering. Master thesis: “Characterization of plasma focus machine as neutron source”

09/2013 – 07/2020: Bachelor in Physics in University of Ioannina/Department of Physics.

Publications

- Efficient Magnetic Vortex Acceleration by femtosecond laser interaction with long living optically shaped gas targets in the near critical density plasma regime’ I. Tazes, ..., **C.Karvounis**, M. Tatarakis, et al., Scientific Reports 14(1) (2024) [10.1038/s41598-024-54475-1](https://doi.org/10.1038/s41598-024-54475-1)
- **Karvounis C.**, Skoulakis A.,... Fitis I., Upgrading of Mather-type dense plasma focus machine for advanced plasma dynamics studies. Athena Research Book, Volume 2, doi: <https://doi.org/10.18690/um.4.2023>

- Vrouvaki E., Tazes I.,...**Karvounis C.**,...Tatarakis M., Numerical and Experimental Study of Gas-Jet Targets for Ion Acceleration in the Near-Critical Density Regime. ATHENA Research Book , Volume 2, doi: <https://doi.org/10.18690/um.4.2023>
- Skoulakis A., Kaselouris E., Kavroulakis A., **Karvounis, C.**, Ftilis I., Chatzakis J., ... & Tatarakis M., Characterization of an X-ray Source Generated by a Portable Low-Current X-Pinch. *Applied Sciences* doi: <https://doi.org/10.3390/app112311173>

International Conferences

- **C.Karvounis**, A. Skoulakis, ... I. Ftilis, Measurement of the magnetic field in a miniature plasma focus machine ,European Conference on Plasma Diagnostics (ECPD 2025), Prague (poster session)
- **5**, A. Skoulakis, ... I Ftilis, Characterization of a miniature Mather-type plasma focus machine as neutron source, Conference in Electronic Engineering, Information Technology & Education (EEITE 2023), Chania (Oral)
- **C.Karvounis**, A. Skoulakis, ... I. Ftilis, High pressure miniature plasma focus characterization for efficient plasma emission ,European Conference on Plasma Diagnostics (ECPD 2023), Rethymno (poster session)

Summer Schools

- PowerLaPs Multiplier Event on Innovative Education & Training in High Power Laser Plasmas, University of Ioannina, Ioannina
- PowerLaPs IP 2 on Plasma Physics & High Power Laser Matter Interactions/High Energy Density Physics – Theory and Experiments, TEI of Crete, Rethymno
- PowerLaPs LTT Course on Laser Plasma Diagnostics – Theory and Experiments, University of Salamanca, Salamanca
- PowerLaPs LTT Course on Computational Modeling & Simulations in Laser Matter Interactions, Czech Technical University, Prague
- PowerLaPs IP on Plasma Physics & High Power Laser Matter Interactions/High Energy Density Physics – Theory and Experiments, TEI of Crete, Rethymno
- PowerLaPs LTT Course on High Power Laser Matter Interactions/High Energy Density Physics – Theory and Experiments, Queen’s University Belfast, Belfast
- PowerLaPs LTT Course on Plasma Physics – Theory and Experiments, University of Bordeaux, Bordeaux

Contribution in research programs

- EUROfusion project: Advancing shock ignition for direct-drive inertial fusion (ENR-IFE.01.CEA) October 2022 – present

Educational Experience

- Auxiliary teaching at Department of Electronic Engineering of the Hellenic Mediterranean University. Subject: “Optoelectronics & Laser”

Computer skills

- Software: Mathematica, SIMION
- Programming languages: Matlab, C, C++, Flash MHD code

Languages

- English: LRN Level 3 Certificate in ESOL International (CEF C2)