

Georgia Andrianaki

Mobile phone: +30 6977749417

E-mail: gandrianaki@hmu.gr

Education:

- 03/18-today PhD candidate at School of Production Engineering and Management of Technical University of Crete (TUC). PhD subject: "Particle acceleration using High Intensity Laser Facility". Supervisor: Professor J. Nicolos
- 10/14 – 03/18 MSc at Department of Electronic Engineering in Plasma Physics and Applications (PlaPa). Master thesis title "Experimental and simulation studies on Laser Induced Ion acceleration" conducted in collaboration with Bordeaux University and Centre Lasers Intenses et Applications (Celia). Supervisors: Professor M. Tatarakis, Researcher J. E. Ducret
- 09/05/-12/11 BSc at Physics School of Aristotle University of Thessaloniki (AUTH)

Research topics:

High power laser interaction with matter and acceleration of particles:

- Laser Wakefield Acceleration: Electrons acceleration using a pulsed gas jet
- Target Normal Sheath Acceleration: Ions acceleration using foils
- Betatron Radiation: X-ray production
- Simulation study and design of nozzles for the optimization of gas density profiles for the laser-gas jet interaction

Contribution to research programs:

- HELLAS-CH, "ELI - LASERLAB Europe Synergy, HiPER & IPERION-CH.gr" (MIS: 5002735). Member of the research team for the interaction of ultra-short pulses with matter and the development of secondary plasma sources (3/19 – 7/19).
- "Development of a coherent X-ray multispectral microscopy system", co-financed by the European Regional Development Fund of the European Union and Greek national funds through the Operational Program Competitiveness, Entrepreneurship and Innovation, under the call RESEARCH – CREATE – INNOVATE (project code: T1EDK-04549). Member of the research team

Funding:

- Grand co-financed by Greece and the European Union (European Social Fund-ESF) through the Operational Program «Human Resources Development, Education and Lifelong Learning 2014-2020» in the context of the project “Development and optimization of a betatron type source generated by ultra-intense electromagnetic laser fields” (MIS 5048172) – PhD Scholarship (2/20 – 5/21).

Publications:

- E. L. Clark, A. Grigoriadis, S. Petrakis, I. Tazes, **G. Andrianaki**, A. Skoulakis, Y. Orphanos, E. Kaselouris, I. Ftilis, 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’, High Power Laser Science and Engineering 1-28. doi:10.1017/hpl.2021.38
- A. Grigoriadis, **G. Andrianaki**, M. Tatarakis, E.P. Benis, and N.A. Papadogiannis, ‘Betatron-type laser-plasma x-ray sources generated in multi-electron gas targets’, Appl. Phys. Lett. **118**, 131110 (2021).
- **G. Andrianaki**, A. Grigoriadis, E. P. Benis, and N. A. Papadogiannis, ‘Pointing characteristics of x-rays generated by relativistic electron acceleration via 45 tw fs laser-he plasma’ in The 22nd International Conference on Ultrafast Phenomena (Optical Society of America, 2020).
- J. Pasley, **G. Andrianaki** 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’, High Power Laser Science and Engineering **8**, (2020).
- J. Pasley, **G. Andrianaki** 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’, High Power Laser Science and Engineering **7**, (2019)
- D. Giulietti, G. Boutoux, M. Aïche, **G. Andrianaki** et al., ‘D+D fusion reactions in 10^{18} W/cm² intensity and repetitive laser plasma interactions’, Europhysics Letters (EPL), **119** 65001 (2017)

Posters:

- I. Tazes, K. Kaleris, J. F. Ong, O. Tesileanu, K.A. Tanaka, A. Grigoriadis, **G. Andrianaki** et al., ‘Simulations of the experimental research activities in IPPL Institute of Plasma Physics & Lasers Hellenic Mediterranean University’,

Towards understanding and modelling intense electronic excitation (COST Action CA17126 MEETING), 16-17 February 2020, Warsaw, Poland.

- E.L. Clark, A. Grigoriadis, I. Tazes, **G. Andrianaki** et al., 'Novel gel dosimetry diagnostic for the secondary sources of ZEUS 45TW laser system at CPPL', 3rd European Conference on Plasma Diagnostics – ECPD2019, 6-9 May 2019, Lisbon, Portugal.
- E. L. Clark, A. Grigoriadis, I. Tazes, **G. Andrianaki** et al., 'Secondary sources generated with the ZEUS 45TW laser system at CPPL', International Conference on Applications of Nuclear Techniques – Crete19, 9-15 June 2019, Rethymno, Greece.
- **Andrianaki G.** et al., 'Energetic particles source using the Zeus 45 TW laser at CPPL', 35th European Conference on Laser Interaction with Matter (ECLIM 2018), 22-26 October 2018, Rethymno, Greece.
- Petrakis P., **Andrianaki G.** et al., 'CPPL and IMSLP Research Activities within HELLAS-CH Project', 35th European Conference on Laser Interaction with Matter (ECLIM 2018), 22-26 October 2018, Rethymno, Greece.

Summer School Attendance:

- Extreme Light Infrastructure Summer School (ELISS), 28/8– 01/9/2017
Cheile Gradistei – Fundata, Rumania
- Innovative Education and Training In High Power Laser Plasmas PowerLaPs LTT_01, 22/1/2018, Bordeaux, France
- Innovative Education and Training In High Power Laser Plasmas PowerLaPs Annual Intensive Program, 02 – 13/7/2018, Rethymno, Greece
- Laser Plasma Summer School (LaPlaSS), 17-21/9/2018, Salamanca, Spain
- Innovative Education and Training In High Power Laser Plasmas PowerLaPs Annual Intensive Program, 01 – 12/7/2019, Rethymno, Greece
- COST action CA17126: "Towards understanding and modeling intense electronic excitation" 23/9-4/10/19, Rethymno, Greece
- **Organizing and auxiliary training:**
- "Plasma Focus", "Plasma Pinch" & "Laser Matter Interactions and Plasma PIC simulations", Innovative Education and Training In High Power Laser Plasmas PowerLaPs Annual Intensive Program, 02–13/7/2018 και 01–12/2019, Rethymno, Greece

Languages:

- Greek: Native
- English: Certificate of Proficiency in English, University of Michigan
- French: Certificat Pratique de la langue Francaise 1er degre, Universite de Paris-Sorbonne (Paris IV)

