Curriculum vitae

Alexandros Skoulakis received his Bachelor's degree in Electronic Engineering in 2004 from the Department of Electronic Engineers of Technological Educational Institute (TEI) of Crete, Greece. He is currently a postgraduate student in MSc degree programme (Plasma Physics & Applications-PLAPA) of the Department of Electronic Engineers of School of Science, Technological Educational Institute (TEI) of Crete. His research interests and activities are aligned to his expertise on the plasma production, as well as laser-based optoelectronic detection techniques.

He has participated at various capacities in a large number of Nationally funded / co-funded research projects. Indicative programs: **i)** "*Strengthening of the Competitiveness of the Region of Crete in state of the art medical applications by using secondary plasma radiation -ultrapower laser*", sub-project 1: "*Study / design / development of a particle radiation production station*", object: design, implementation and initial use of the station, development of laser-probing diagnostics for plasma., **ii)** "*Interdepartmental Center for Plasma Physics & Lasers (CPPL acts)*", object: design and development of optoelectronic experimental setups used as diagnostics for dense plasma., **iii)** *"National research infrastructure for HiPER"* (funded by the European Regional Development Fund and National Funds through the Operational Programme "Competitiveness and Entrepreneurship")., **iv)** Archimedes III "*Strengthening of Research Groups at TEI of Crete*" entitled "*Design and development of neutron source with application in explosions detection*" (MIS 380353, sub-project 16), for developing and carrying out experiments for the study of the plasma formation. **v)** EPEAEK II "*Pythagoras-Environment-Research Groups in the Technical University of Crete*" entitled "*Interaction of laser radiation with the atmosphere - Applications to Air Pollution",* object: Development of algorithms and numerical solutions of non-linear equations.

vi) "*Curriculum of choice*" entitled "Department of Telecommunications and Computer Networks", object: the construction of a system of controlled charging and discharging of a capacitor bank on the development of X-ray diagnostic methods for the study of electronic nanostructures.

Selected publications

- E. Kaselouris, V. Dimitriou, I. Fitilis, A. Skoulakis, G. Koundourakis, E.L. Clark, M. Bakarezos, I.K. Nikolos, N.A. Papadogiannis and M. Tatarakis, "The influence of the solid to plasma phase transition on the generation and the dynamics of plasma instabilities", *Nature Communications* **8** (2017) #1713.
- E. Kaselouris, V. Dimitriou, I. Fitilis, A. Skoulakis, G. Koundourakis, E.L. Clark, J. Chatzakis, M. Bakarezos, I.K. Nikolos, 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", *Plasma Physics and Controlled Fusion* 60 (2018) #014031
- I. Fitilis, A. Skoulakis, E. Kaselouris, I.K. Nikolos, M. Bakarezos, N.A. Papadogiannis, V. Dimitriou and M. Tatarakis, "Experimental and numerical investigation of the early time dynamics of single wire plasma explosions", 42nd EPS Conference on Plasma Physics, Lisbon, Portugal, June 22-26, 2015
- I. Fitilis, A. Skoulakis, E. Kaselouris, I.K. Nikolos, E. Bakarezos, N.A. Papadogiannis, V. Dimitriou and M. Tatarakis, "Diagnosing the initial stages from solid to plasma phase for dense plasma explosions", First EPs Conference on Plasma Diagnostics (1st ECPD), Frascati (Rome), Italy, April 14-17, 2015
- E. Kaselouris, V. Dimitriou, A. Skoulakis, I. Fitilis, Y. Orphanos, I.K. Nikolos, E. Bakarezos, N.A. Papadogiannis and 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, June 23-27, 2014
- A.Skoulakis, G. C. Androulakis, E.L. Clark, S. M. Hassan, P. Lee, J. Chatzakis, M. Bakarezos, V. Dimitriou, C. Petridis, N. A. Papadogiannis and M. Tatarakis, "A Portable Pulsed Neutron Generator", the 2013 International Conference on Applications of Nuclear Techniques, Rethymno, June 23-29, 2013, INTERNATIONAL JOURNAL OF MODERN PHYSICS: CONFERENCE SERIES, VOL. 27, 1460127 (2014).

- V.V. Vikhrev, G.C. Androulakis, E.O. Baronova, S.M. Hassan, E.L. Clark, Gopal, S. Minardi, Petridis, J. Chatzakis, A. Skoulakis, Tzianaki, M. Bakarezos, N.A. Papadogiannis, M. Tatarakis, "MHD Simulation of X-pinch plasma dynamics". — 35th EPS Conference on Plasma Phys. Hersonissos, 9 - 13 June 2008, ECA Vol. 32, P-2.154, 2008.
- S.D. Moustaizis, M. Tatarakis**,** A. Skoulakis, N. Kortsalioudakis, "An Innovative Scheme for Fast Charged Particles Propagation", Fourth International Conference on Inertial Fusion Sciences and Applications, Biarritz France, September 2005.