

## CURRICULUM VITAE

### Personal data

**First Name:** George

**Last Name:** Koundourakis

**Nationality:** Hellenic

**Date of birth:** 09/11/68

**Place of birth:** Rethymnon

**Army Duties:** Fulfilled

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### Education

**October of 2024 till today:** Hellenic Open University - Master degree candidate in the Postgraduate Program on "Advanced Studies in Physics".

**2022-2024:** Hellenic Open University - Master degree candidate and diploma in the Postgraduate Program on "Science Communication". Master thesis title: "Pseudoscience and irrationality: from astrology to the "quantum" New Age" (<https://apothesis.eap.gr/archive/item/207286?lang=el>).

**2014-2022:** PHD candidate of the National and Kapodistrian University of Athens in collaboration with Institute of Plasma Physics and Lasers (IPPL). Completed in April of 2022. Thesis title: "**Magnetized jets in Laboratory Astrophysics**".

**1990-1992:** University of Crete-Master degree candidate and diploma in "Physics of condensed matter".

**1986-1990:** University of Crete-Physics student and diploma in Physics in September of 1990.

### Professional activity

**1995-2002:** Physics lessons for High school pupils and University students.

**2002-2005:** Owner of Preparation school for High school pupils.

**2005 till today:** Physics lessons for High school pupils and University students.

### Research projects

**01.09.2016-30.09.2016:** *"Participation in plasma simulations produced from optoelectronic devices producing large density and temperature plasma conditions, concluding for the creation and evolution of MHD instabilities"* (T.E.I. of Crete, Centre for Plasma Physics & Lasers - CPPL).

**15.06.2018-31.12.2018:** "Participation in plasma simulations produced by pulsed power plasma devices" (T.E.I. of Crete, Centre for Plasma Physics & Lasers - CPPL/ELI-LASERLAB Europe, HiPER & IPERION-CH.gr).

### Teaching expertise

**1990-1991:** Teaching mathematics and correcting the exercises for two semesters for first year students in Physics department of the University of Crete.

**1995-2023:** Preparation lessons in Physics, Chemistry and Mathematics in small groups or individually for High school pupils and University students.

**2017-2022:** STEAM teacher for primary school children at the Science and Technology part in private education school.

**May 2021 – December 2023:** Weekly column in the local press, entitled "Science's Explanations" (Επιστήμης Εξηγήσεις), popularizing science (**online: [GOODnet.gr/Γνώμες/](http://GOODnet.gr/Γνώμες/)**).

Column in the online magazine BEST, entitled "Display of Science" (Απάνθισμα Επιστήμης) (**online: [ΑΠΑΝΘΙΣΜΑ ΕΠΙΣΤΗΜΗΣ/](http://ΑΠΑΝΘΙΣΜΑ ΕΠΙΣΤΗΜΗΣ/)**).

Article writer at the online astrophysical web site 2'science, popularizing astrophysical science (**online: [2'science/](http://2'science/)**).

**2022-2023:** Academic teaching for two semesters (winter and spring) at the Electronic Engineering Department in Chania (<https://ee.hmu.gr/>).

**2023-2024:** Academic teaching for one semester (spring) at the Electronic Engineering Department in Chania (<https://ee.hmu.gr/>).

### Summer schools

**July 2 to 13 2018:** Summer school CPPL trainer of the plasma Pinch-MHD simulations (PowerLaPs "Innovative Education & Training in High Power Laser Plasmas" Erasmus +) (*Certified*).

**July 1 to 12 2019:** Summer school CPPL trainer of the plasma Pinch-MHD simulations (PowerLaPs "Innovative Education & Training in High Power Laser Plasmas" Erasmus +) (*Certified*).

**September 23 to October 4 2019:** Summer school IPPL trainee of the COST Action CA17126-TUMIEE held by the Hellenic Mediterranean University (Crete, Greece) (*Certified*).

### Languages

Fluency in writing and speaking English (FIRST CERTIFICATE IN ENGLISH UNIVERSITY OF CAMBRIDGE/HIGHER CERTIFICATE IN ENGLISH BY PALSO EXAMINATIONS). Very good use of the scientific language in English.

### Computational programming

Very good use of WINDOWS, INTERNET, WORD, POWER POINT, EXCEL, MATLAB, COREL. Simulation programming of plasma devices in C and C++ language.

## Publications

### Refereed Scientific journals

[1] E. Kaselouris, V. Dimitriou, I. Ftilis, A. Skoulakis, **G. Koundourakis**, E. L. Clark, J. Chatzakis, M. Bakarezos, I. K. Nikolos, N. A. Papadogiannis and M. Tatarakis ,**"The influence of the solid to plasma phase transition on the generation of plasma instabilities"** , *Nature Communications* **8**, 1713 (2017).

[2] E. Kaselouris, V. Dimitriou, I. Ftilis, 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 Phys. Control. Fusion* **60** 014031 (2018).

[3]. 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. Ftilis, A. Grigoriadis, S. Kar, E. Kaselouris, O. Klimo, M Koenig, K. Kosma, **G. Koundourakis**, M. Kucharik, A. Lavery, J. Limpouch, Y. Orphanos, N.A. Papadogiannis, S. Petrakis, D. Riley, M.S. Rivetta, L.T. Pascual, J.J. Santos, A. Skoulakis, I. Tazes, V. Tikhonchuk, J. Trela, C. Tsitou, L. Volpe, S. White, M. Yeung, and Michael Tatarakis, **"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*, (2019), Vol. 7, e23, 5 pages.

[4] 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. Ftilis, A. Grigoriadis, S. Kar, E. Kaselouris, O. Klimo, M Koenig, K. Kosma, **G. Koundourakis**, M. Kucharik, A. Lavery, J. Limpouch, Y. Orphanos, N.A. Papadogiannis, S. Petrakis, D. Riley, M.S. Rivetta, L.T. Pascual, J.J. Santos, A. Skoulakis, I. Tazes, V. Tikhonchuk, J. Trela, C. Tsitou, L. Volpe, S. White, M. Yeung, and Michael Tatarakis, **"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*, (2020), Vol. 8, e5, 7 pages.

[5] **G Koundourakis et al**, **"A numerical study on laboratory plasma dynamics validated by low current x-pinch experiments"**, *Plasma Phys. Control. Fusion* **62** (2020) 125012 (14pp).

[6] E. Kaselouris, I. Ftilis, A. Skoulakis, Y. Orphanos, **G. Koundourakis**, E. L. Clark, J. Chatzakis, M. Bakarezos, N. A. Papadogiannis, V. Dimitriou and M. Tatarakis, **"The importance of the laser pulse-ablator interaction dynamics prior to the ablation plasma phase in inertial confinement fusion studies"**, *Phil. Trans. R.Soc. A* **378**: 20200030.

[7] A. Skoulakis-G. Koundourakis et al, " High performance simulations of a single X-pinch", *Plasma Phys. Control. Fusion* **64** (2022) 025003 (11pp).

## Publications

### Conference Proceedings (Refereed)

[1] G. Koundourakis, A. Skoulakis, I. Ftilis, V. Dimitriou, E. Bakarezos, N.A. Papadogiannis, E.L. Clark, N. Vlahakis and M. Tatarakis, "**Experimental and numerical investigation of the plasma dynamics and jet formation in low current table-top X-pinch plasma devices**", *proceedings of the SCinTE-VOL 3-pg 19-22*, *Science in TEchnology 2015 (SCinTE /Athens/5-7 November 2015)*.

## Publications

### Conference announcements

[1] E. Kaselouris, I. Ftilis, A. Skoulakis, G. Koundourakis, V. Dimitriou, E. Bakarezos, E.L. Clark, N.A. Papadogiannis and M. Tatarakis, "**Plasma instabilities: the influence on plasma instabilities during the solid-plasma phase transition**", *27th Symposium on Plasma Physics and Technology (Prague/Czech/ 20-23 June 2016)*.

[2] Alekos Skoulakis, Giorgos Koundourakis, Evaggelos Kaselouris, Ioannis Ftilis, Efthimios Bakarezos, E.L. Clark, Nektarios Vlahakis, Nektarios A. Papadogiannis, Vasilis Dimitriou and Michael Tatarakis, "**PRELIMINARY COMPUTATIONAL STUDY OF PLASMA DYNAMIC EVOLUTION PRODUCED BY LOW CURRENT TABLE-TOP PINCH PLASMA DEVICES**", *9<sup>th</sup> GRACM International Congress on Computational Mechanics/Chania/ 4-6 June 2018*.

### Poster presentations

[1] G. Koundourakis, A. Skoulakis, E. Kaselouris, I. Ftilis, M. Bakarezos, E.L. Clark, J. Chatzakis, 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**", *Poster 22, ECLIM Rethymnon 2018/ Abstract Book/118 pg*.

## Books

[1] Evaggelos Kaselouris, George Koundourakis and Vasilis Dimitriou, "**Case studies on FEM and MHD**", pg 414-467, Chapter 18 of "**Tools for investigating electronic excitation: experiment and multi-scale modelling**", Edited by: T. Apostolova, J. Kohanoff, N. Medvedev, E. Oliva, and A. Rivera, *COST Action TUMIEE (CA17126)*, *October 2021, ISBN: 978-84-09-36032-1, DOI: 10.20868/UPM.book.69109*.