

## CURRICULUM VITAE

**NAME:** Theodoros Bournelis

**DATE OF BIRTH:** 12/01/93

**NATIONALITY:** Greek

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### Education

**4-yr BSc (Ptycheion) in Physics** University of Crete, Greece  
Entry: September 2011  
Graduation: September 2015; Grade: **7.96** (scale 1-10)

**1-yr Master's Degree in Advanced Physics** University of Crete, Greece  
Entry: September 2015  
Graduation: January 2017

Advanced courses:

- “Classical Electrodynamics”
- “Elementary particles and forces”
- “Gravity and Cosmology”
- “Mechanics of Continuous Media”

MSc Dissertation: “Colliding Shock Waves in Magnetized Fusion Plasma”. I have extended a simplified Magnetohydrodynamics Fortran77 code for shock waves in 1-D to include multi-fluid flow (Maxwell’s equations are also considered), both in Cartesian and in Cylindrical geometries. Simulations of colliding shocks in a shock tube were performed, including alpha interactions. The code was run in Openmp environment.

**Army Duties :** Since September 2017 I serve at the Hellenic Force of Cyprus in order to complete my military duties.

By June 2018 I will have finished this task.

### Previous Research Activity

- Undergraduate thesis entitled "Exact solutions of Einsteins' Equations, the case of spherical symmetric fluid" [06/2015]
- Summer school at FORTH-Hellas with subject “Optical fibers and their applications” [09/2013]

## Computational skills

- Programming Languages:
  - a) **Fortran** (Excellent knowledge)
  - b) **C++** (working knowledge)
- Excellent knowledge of **Linux, Unix, Windows** Operational Systems, both at user and administrator level
- Very good knowledge of various mathematical programs and tools: **Maxima, Mathematica, Matlab, Tecplot, LaTeX**

## Languages

- Greek (mother tongue)
- English (Lower certificate of Michigan University and Edexcel),
- German (B1 Stufe)

## Scholarships/Awards

- 1 Scholarship entitled “Chrysanthos and Anastasia Karydis” awarded by the School of Science and Engineering (high ranking in the University entry exams) [09/2011]
- 1<sup>st</sup> graduate to be accepted as a Master's student from the Department of Physics for the Master's Program called "Advanced Physics" for the period of 2015-2016.

## Teaching Experience

- I was a tutor at the "Advanced Physics Laboratory" undergraduate course as a Master's student during the period 09/2015-02/2016. [08/2015-01/2016]
- I have performed 2 lectures in high school for the university course entitled “Teaching Physics I” due to my undergraduate period. [09/2015]

## Professional Affiliations

- Member of “Union of Greek Physicists” [2012 - ]

## Interests

- Byzantine Music (**Higher Diploma**-qualified instructor)
- Sports and Sports Journalism (I have attended 1-yr courses in Sports Journalism in 2016-2017 in a local Institute for Vocational Education)
- Phonetics