



<https://nikoschatzi.github.io/>



<https://github.com/nikoschatzi>



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Date of Birth: 06/06/1998
Phone: (+30) 6939214558
Location: Geneva, Switzerland

Skills

Engineering

- PCB design
- Digital & analog electronics
- Power electronics
- FPGA & Microcontrollers
- Embedded software design
- Closed loop control (PID, Fuzzy)
- Instrument Control (GPIB)
- Thermal simulations
- 3D printing

Coding

- C, C++, Python, Latex
- SystemVerilog, VHDL

Software

- Altium
- Matlab
- Linux
- ANSYS
- Quartus
- PyCharm

Published Scientific Papers

- "Interval Type-2 Fuzzy Logic Controller Development for Coreless DC Micromotor Speed Control Applications"
ICCCE 2022
- "Implementation of current and ventilation control for enhanced TEC performance"
PACET 2019

Languages

- Greek – Native
- English – C2 level
- German – A2 level

Hobbies



NIKOLAOS CHATZIPAPAS

Electronics Engineer

Profile

Confident, results-oriented and experienced engineer in designing and implementing electronics. Proven track record of managing multi-disciplinary projects and leading teams to success in high-pressure environments, with strong commitment to excellence. Detailed information about my projects can be found on my website.

Education

Master's & Bachelor's, 5-year degree in Electrical Engineering & Computer Science from DEMOCRITUS UNIVERSITY OF THRACE *September 2016 - October 2021*

- Grade: 8.71/10, Excellent, top 4%, 65 courses, 300 ECTS
- Thesis: "Study and implementation of an experimental DC motor control apparatus and investigation of using microcontroller embedded artificial intelligence methods"

Hands-on experience in sensor measurements, using filters such as Kalman, using DAC's and ADC's, mastering oscilloscope, control systems, embedded Artificial Intelligence algorithms, building simulation models of my hardware. Proficient user of Arduino and STM32 boards.

Experience

European Council for Nuclear Research (CERN) *1 year 10 months* *Geneva, Switzerland*
09/2022 - present

- Cryogenics group (TE-CRG-IC). Design of rad-tol electronics for HL-LHC.
- Digital Input Digital Output card design for HL-LHC cryogenic valves control.
- Design of low cost add-on PCB, using only transistors, resistors, diodes and capacitors, improving reliability in WorldFIP communication cards, saving more than 100.000 CHF.
- 6-month student supervision. Preliminary card design based on 4-20 mA loop.
- Electronics radiation campaign in CHARM facilities, using automated Matlab tester.
- 2.1 kV high voltage card protection, using thyristor surge suppressors.
- Python based (front end & back end) applications for inventory automation.
- 3D printed designs, such as rad-tol piezo valve case using ULTEM material.

Aristotle Space & Aeronautics Team (ASAT) *2 years 4 months* *Thessaloniki, Greece*
01/2022 – 06/2022

- Coordinated more than 20 team members.
- NASA's system engineering approach. STPA analysis for risk management.

Coordinator of Solar Energy Management subteam *09/2020 - 01/2022*

Solar Engineer *02/2020 - 08/2020*

- Coordinated 4 engineers. Work on unmanned solar UAV for forest fire detection.
- Flexible solar cells, high density batteries, MPPT charging circuits
- Coordinator of Arduino webinar (>300 participants). Copresented PCB design workshop.

Democritus Industrial Robotics (DIR) *5 months* *Xanthi, Greece*
03/2021 - 07/2021

- Cavity detection, using high-end camera on robotic arm. Robocup 2021 competition.

Distinctions

DIAS Hack a Truck part 2 *04/2022, Rotterdam, Netherlands*

- 2-day physical hacking event about tampering latest developed car environmental protection systems, hosted by TNO, Bosch, Ford, FEV.
- 15 selected hackers worldwide, 4 teams were formed.
- My team was 1 out of 2 that successfully hacked a testbed.
- MITM attacks on CAN-bus and Autosar SecOC on Raspberry Pi testbeds.

DIAS Hack a Truck part 1 *05/2021, Online event*

- 2-day online event. 20 hackers selected worldwide, few undergraduate students.
- I found a vulnerability on EU6 regulations which impressed the experts.