https://github.com/nikoschatzi

https://www.linkedin.com/in/nikolaos-chatzipapas-8a3123164/

nikolaos.chatzipapas@gmail.com

Date of Birth: 06/06/1998

Phone: (+30) 6939214558

Location: Geneva, Switzerland

Driving License: B

Skills

- PCB design
- Digital & analog electronics
- Power electronics
- 3D printing
- Embedded software design
- Microcontrollers (AVR, ARM)
- FPGA programming
- Instrument Control (GPIB)
- Thermal simulations (ANSYS)
- Closed loop control (PID, Fuzzy)
- Matlab (scripts, simulink)
- Linux Operating System
- Oscilloscope
- C, C++, Python, Latex
- SystemVerilog, VHDL

Published Scientific Papers

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

Seminars

- "Advances on Building Energy Management Systems"
  Summer School by Associate Professors Nikolaos Papanikolaou and Filippos Farmakis, lasted 60 hours

Languages

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

Hobbies

NIKOLAOS CHATZIPAPAS

Electrical & Computer Engineer

Profile

Motivated, enthusiastic, disciplined and confident engineer. Accustomed to working in a challenging and fast-paced environment with decisiveness and conviction, particularly when dealing with multiple projects and priorities at the same time. Passionate about embedded systems and breakthrough technologies, I continuously seek new challenges.

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 9 months* *Geneva, Switzerland*

- Electronics Engineer *09/2022 - present*

Designing radiation tolerant electronics for cryogenics. Digital card design for controlling HL-LHC valves. Student supervision for preliminary study of analog card, based on 4-20 mA current loop. High voltage protection solution for existing cards, using thyristor surge suppressors. Design of low cost add-on PCB, using only transistors, resistors and capacitors, improving reliability in existing communication cards, saving more than 100.000 CHF. Design of new communication card for HL-LHC, interfacing with peripheral crate cards and Worldfip protocol. Performed radiation campaign, validating transistors, mosfets, regulators, amplifiers, by implementing automated Matlab tester. 3D printing for radiation protection. Development of python based windows application for inventory automation.

Aristotle Space & Aeronautics Team (ASAT) *2 years 4 months* *Thessaloniki, Greece*

- Systems Engineer *01/2022 – 06/2022*
- Coordinator of Solar Energy Management subteam *09/2020 - 01/2022*
- Solar Engineer *02/2020 - 08/2020*

Leaded the electronics design of solar UAV for forest fire detection. Gained expertise in embedded fuzzy logic, adaptive charging circuits, solar panels, batteries, power management. Coordinator of Arduino webinar with more than 300 participants. Co-organizer of PCB design workshop. Due to high team management positions, I took strategic critical decisions. Coordinated more than 20 team members as System Engineer.

Democritus Industrial Robotics (DIR) *5 months* *Xanthi, Greece*

- Computer Vision Engineer *03/2021 - 07/2021*

Cavity detection (circles, squares, triangles), using high-end camera on robotic arm. This work led to the participation in Robocup 2021 competition.

Distinctions

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

- 2-day physical hacking event about tampering car environmental protection systems in the Netherlands, hosted by TNO, Bosch, Ford, FEV
- 1 out of the 15 chosen participants 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 hacking event hosted by TNO, Bosch, Ford, FEV
- 1 out of the 20 chosen participants worldwide, few undergraduate students selected
- I found a vulnerability on EU6 regulations which impressed the experts