

# Iakovos – Fanourios (Jacob) Kritikos



## SKILLS

- **Languages:**
  - Greek (Native speaker)
  - English (C2 level)
  - German (C1 level)
- **Engineering Skills:**
  - Mechanical Engineering Design
  - Photonics
  - Medical Devices Design
  - Semiconductor design and fabrication
  - Design for Manufacturing
  - High precision Manufacturing and GD&T
- **Prototyping Skills:**
  - Additive Manufacturing
  - CNC Milling
  - High Precision Machining
  - Lathing
  - Laser Cutting
  - Mould Design
  - Soft Lithography
  - Surface modification

## SUMMARY

Innovative Mechanical Design Engineer and deep-tech entrepreneur bridging academic research and commercial product development. Proven track record of navigating agile start-ups and highly regulated environments to guide complex hardware from proof-of-concept to functional MVPs. Currently driving technical execution as the CEO of a specialized engineering firm, while pursuing a Ph.D. in zero-power sensing systems.

## WORK EXPERIENCE

### LYSITRON|ATHENS, GREECE • JANUARY 2026 – TODAY

*Co-Founder, CEO & Mechanical Design Lead*, January 2026 – Today

- Direct business strategy and lead mechanical design operations for a dynamic engineering firm delivering advanced R&D projects across the optics, semiconductor, biotech, and industrial sectors.

### FREELANCE MECHANICAL ENGINEER|ATHENS, GREECE • MAY 2024 – TODAY

*SafeTouch*, Hybrid, Athens, Greece, February 2026 – Today

- Product Development - customer discovery, market validation and go-to-market strategy for self-disinfecting microfilm technology.

*OEworks*, Hybrid, Oakland, California, USA, December 2025 – Today

- Design, Development and Manufacturing of custom optomechanical setups for R&D of semiconductor components for AI applications.

*Monoverse*, Hybrid, Athens, Greece, September 2025 – Today

- Managed the full product lifecycle of a novel dry-land swimming fitness device, taking it from a rough concept (without existing blueprints) to a functional prototype, designing the entire electromechanical system to replicate the biomechanics of swimming.

- Modelled the device in MATLAB to validate forces and motion, ensuring it effectively targets the full muscle chain (upper and lower body).

- Managed the procurement process, sourcing components and coordinating directly with vendors to build the prototype in accordance with specifications.

*PhosPrint*, On-site, Athens, Greece, May 2024 - Today

- Redesign of cell bioprinting device (medical device type III) in accordance with ISO 60601 to successfully pass mechanical, EMC and LVD testing (and obtain CE marking) for clinical trials of urinal bladder transplant. First-in-humans trials planned in Q1 2026.

- Creation of MPiS, LHRs, Product Manufacturing Process, FMEAs and Risk Management files for clinical trials of in vivo urinal bladder bioprinting.

- Design and development of a fully automated organoid bioprinting device (GMP compliant) for liver-on-scaffold, with integrated microfluidic supply system

*LMP - NTUA*, On-site, Athens, Greece, May 2024 – January 2026

- Leading a multidisciplinary team of 5 engineers and scientists to upscale the integration of 2D materials in 8-inch wafer scale with submicron accuracy, creating a custom tip&tilt mechanism, implementing vacuum control and vibration elimination systems, and integrating automations for a TRL-6 system.



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- **Software:**

- SOLIDWORKS (5/5)
- MATLAB (5/5)
- ANSYS structural (4/5)
- ANSYS fluent (4/5)
- LTspice (4/5)
- R (3/5)
- Python (3/5)
- C (2/5)
- Microsoft Office (4/5)
- MindManager (4/5)
- Kanbanize (4/5)
- Asana (4/5)

- **Soft Skills:**

- Project Management
- Analytical thinking and problem solving
- Teamwork and Teambuilding
- Leadership of cross-functional team
- Deadlines Management
- Presentation skills
- Communication Skills
- Adaptability
- Proposal writing

- **References:**

- Parthiban Rajan,  
In-line manager at Sarcura GmbH.  
[parthiban.rajan@hotmail.com](mailto:parthiban.rajan@hotmail.com)
- Daniela Buchmayr,  
CEO at Sarcura GmbH.  
[daniela.buchmay@sarcura.com](mailto:daniela.buchmay@sarcura.com)
- Nikos Chronis,  
MSc Thesis professor.  
[chronis@chemeng.ntua.gr](mailto:chronis@chemeng.ntua.gr)

- Design and development of pick&place system with a resolution of hundreds of nanometers to facilitate integration of OEICs in semiconductor devices.

*Sarcura*, Remote, Klosterneuburg, Austria, May 2024 – April 2025

- Model-based systems engineering for system integration, and introduction of Quality Control and Process Analytical Technologies for cells and devices.
- Creation of P&I diagrams, design of interfaces and modular design of cartridge.
- Downselection and management of external vendors for developing and upscaling of cartridge prototype, in GMP conditions.

**SARCURA, KLOSTERNEUBURG | LOWER AUSTRIA • AUGUST 2022 – APRIL 2024**

*Mechanical Design - Project Engineer*, December 2022 – April 2024

- Interim leader of microfluidics team, responsible for the design of microfluidics' layers in a microchip, while taking part in the design of all the other layers of semiconductor (electrical routing, integrated silicon photonics, passivation and isolation layers for Joule heaters) in collaboration with IMEC's expert team.
- Led Design of Experiment and data analysis of on-chip fluidics (in 3 different semiconductor devices) within a cross-functional team of 5 engineers.
- Defined tasks, milestones, project schedules, allocated resources, while delivering public presentations and technical reports to provide updates.
- Communication with other external and internal teams, acting as the primary point of contact with the corresponding project owners.

*Mechanical Design Engineer*, August 2022 – December 2022

- Design, simulation, and prototyping of microfluidic devices. Topology optimization of microstructures produced via additive manufacturing.
- First point of contact for designing and manufacturing custom made parts (with a focus on optical setups) within the company using different methods.

**BIOSYS LABORATORY NTUA, ATHENS | GREECE • JUNE 2021 – JULY 2022**

*Mechanical Engineer/ Research Assistant*

- Research and Development (design, rapid prototyping, testing) on medical devices following ISO 13485, especially for saliva collection.
- Worked both independently and collaboratively, while training pre-graduate students, in fast-paced laboratory environment, coming in first contact with EU MDR standards.

**OTHER WORK EXPERIENCE**

**OFHH, ATHENS | GREECE • JANUARY 2024 – TODAY**

*Team Manager & Assistant Coach*

- Team manager of my boyhood club, being responsible for acquisition and contract negotiation of players and serving as assistant coach on game days.
- Basketball player since 2012, from team academies till professional level, being the captain of the team in 2014 and 2017.

**PERATSI STONE HOUSES, NAXOS | GREECE • MAY 2019 – TODAY**

*Business Manager*

- High level management and planning of all internal and external activities.
- Operator (until July 2022) of a business consisted of 3 houses in Naxos, Greece. Managed to become an Airbnb Superhost in a span of 2 years.



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## EDUCATION

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### **PHD IN ENGINEERING • MARCH 2026-TODAY • NTUA**

Design and Development of Zero-Power Event-Driven Sensing Systems via Hybrid Integration of Nanoporous Materials and Piezoelectric Devices

### **PMP CERTIFICATION • SEPTEMBER 2023-MARCH 2024 • PMI**

Online Courses from Simplilearn, September 2023-October 2023

Certification obtained in April 2025

### **MSC MECHANICAL ENGINEERING • SEPTEMBER 2017-JUNE 2022 • NTUA**

B.Sc. in Mechanical Engineering, 2017-2020.

M.Sc. in Mechanical Design Engineering, 2020-2022. (Top 5% of Graduates)

### **MIDDLE AND HIGH SCHOOL • SEPTEMBER 2011-JUNE 2017 • AVGOULEA-LINARDATOU SCHOOL**

Received a full 3-year scholarship (for all the years of high school).

The only student to receive scholarship for 7 consecutive years (middle school, high school, and university).

## ACCOMPLISHMENTS

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- 4<sup>th</sup> place in Greek Chemistry Olympiad (2015)
- 3<sup>rd</sup> prize in Greek Mathematical Olympiad (2014,2015,2017),2<sup>nd</sup> in 2016
- European Youth Parliament member in 2016, after participating in Greek EYP competition (ranked 8<sup>th</sup> in Greece). Participated also in MUN in 2016 and in 2017 in the Political Committee



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