

CHRISTOS NTOULIAS

Product Design Engineer

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Technical Skills

- Computer Aided Design (CAD)
- Prototyping & Product Development
- Laser Processing & Manufacturing Techniques
- Electronics & Control Systems
- Programming & Automation
- FEM Analysis
- Life Cycle Analysis (LCA)

Management Skills

- Team/Project Management
- Problem Solving
- Mentorship, Leadership
- Communication
- End-to-End Product Development

Profile

Mechanical Engineer with over 5 years of experience in high precision industrial design, laser applications, and advanced automated systems. Currently managing the ULMNP laboratory at the Institute of Electronics Structure and Laser, leading a team of 5 researchers and engineers across interdisciplinary projects. Proven track record in successfully coordinating EU-funded initiatives, collaborating with industry leaders such as Bosch, Renault, and Notion. Co-founder of a product development company, transforming client ideas into functional prototypes and market-ready products, with a focus on sustainability and the whole product lifecycle analysis.

Work Experience

Institute of Electronics Structure and Laser IESL-FORTH, Heraklion, Crete (September 2020 – Present)

Lead Mechanical Engineer (2023 – Present)

- Promoted to Lead Mechanical Engineer, overseeing design and development of high-precision mechanical systems for laser applications.
- Led assembly and upgrades of critical laboratory equipment (laser setups, 3D printers, spray coaters, microscopes, extrusion setups), ensuring optimal performance.
- Expanded 3D printing capabilities by introducing laser sintering and bioprinting, boosting prototyping efficiency.
- Mentored 7 MSc and 2 PhD students in mechanical design, 3D printing, and bioprinting, supporting R&D progress.
- Developed automated equipment using Arduino, Python, and LabVIEW for custom laser and mechanical applications.

Laboratory Manager (2022 – Present)

- Managed laser source maintenance, recalibration and oversaw core facilities (cooling systems, dehumidifiers, water filtration), while coordinating external equipment inspections.
- Implemented a weekly maintenance strategy, assigning team members to handle consumables and lab cleanliness.
- Oversaw maintenance of key lab equipment (laser systems, 3D printers, spray coaters, laser characterization tools, extrusion setups)
- Led ISO 17025 certification, transforming the lab into a metrology-compliant facility, enhancing quality control and expanding lab capabilities.
- Trained 20+ researchers on equipment use and safety protocols, optimizing lab performance and reducing downtime.
- Secured funding for research projects, managing resources to meet deadlines and project goals.

Mechanical Design Engineer (2020 – 2022)

- Designed complex mechanical systems for laser-based applications, ensuring high precision and functionality in research and industrial environments.
- Utilized 3D printing and laser cutting across 7 different machines for rapid prototyping and tooling, accelerating component iteration.
- Developed and tested automated systems using Arduino and LabVIEW, optimizing performance for laser setups and extrusion processes.
- Installed and upgraded lab equipment, maintaining technical standards.
- Managed website updates, overseeing member profiles, publications, and posts to ensure timely dissemination of lab activities.

Languages

Greek | Native
English | Professional (B2)
German | Basic (A2)
French | Basic (A2)

Software Proficiency

3D CAD & Design

- Expert: SolidWorks, AutoCAD, Catia
- Proficient: Fusion360
- Familiar: Autodesk Inventor, Creo

Simulation & Analysis

- Expert: Additive Slicers (Cura, Repetier-Host)
- Proficient: Patran-Nastran, Gabi Software
- Familiar: Comsol, Ansys

Laser Control Software

- Proficient: RD Works, LightBurn

Programming & Automation

- Proficient: Arduino, LabVIEW
- Familiar: Python

Graphic Design

- Proficient: Affinity Designer, Inkscape
- Familiar: Photoshop

ACHIEVEMENTS

- ✓ Secured European funding [BIOntier | Circular Bio-based Europe Joint Undertaking \(CBE JU\)](#)
- ✓ [TINKER](#), Led Eu Project
- ✓ Promoted to Lab Manager
- ✓ Leading ISO 17025 certification process
- ✓ Co-Founder in PragmaTecho Engineering

Co-Founder and Lead Engineer (September 2022- Present) PragmaTecho Engineering, Product Development Company

- Established a product development company specializing in design, prototyping, consulting and manufacturing, providing end-to-end solutions.
- Developed prototypes, assembly manuals, drafts for CE marking high precision systems for startups improving product development cycle time.
- Built a network of over 10 partners specializing in CNC, sheet metal machining, advanced painting techniques and software development.
- Utilized advanced 3D Design and in-house 3D printers to advance rapid prototyping stages.
- Managed financial operations, including budgeting, securing funding, and planning.
- Led all stages of product development, including research market, conceptualization, design development, prototyping, testing and manufacturing.

Internship in Adamant Composites Ltd (July 2017- August 2017)

Mechanical Engineer Internship

- Engaged in 3D design using Solidworks and 3D printing of complex geometries for mold use.
- Involved in the production line of composite materials using autoclave and hand lay-up methods.
- Conducted quality control of products.
- Developed new and safe packaging protocols.

Education

Diploma in Mechanical Engineering & Aeronautics (October 2013- April 2019) (Integrated Master), University of Patras, Greece

- Division of Applied Mechanics and Materials Engineering
Related Skills: 3D Design, 3D Printing, FEM analysis, Biomedical Engineering
- **Publication** of my diploma thesis results: <https://doi.org/10.3390/polym13050682>

Public Outreach & Community Engagement

- **Technical Coordinator, [NanoBio Conference](#), [2023]**
Managed the setup and troubleshooting of connectivity issues in our two main conference rooms, ensuring seamless transitions for speakers and overseeing the online streaming.
- **Lead Coordinator, 2-Day Technology Workshop, IESL Science Days [2022]**
Spearheaded the ideation and planning of the workshop showcase. Set up a laser module with galvanometric system to demonstrate advanced laser technology, producing custom keychains for the public and promoting lab's technological capabilities.
- **Volunteer, [Bizrupt](#) [2022-Present]**
Assisted in organizing and facilitating large-scale events focused on entrepreneurship, networking, and career development, such as Get Hired, Open Coffee, and Fuckup Nights, fostering connections between professionals, startups and industry.