

ANDREAS LEMONIS

CONTACT

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HARDWARE

Embedded
Electronics



Analog and
Digital circuit
Design



Data Acquisition
Devices



SOFTWARE

LabVIEW
National
Instruments



Python



C\C++



PROFILE

Experienced electronics engineer with strong software and hardware background working in the research field for the past 5 years with main role to provide fast and efficient solutions to many hardware and software challenges that laboratories face every day.

WORK EXPERIENCE

Electronics Engineer May 2017– Present.
Founder SciLabs

Working as a freelancer to provide custom-made, push-button software and hardware solutions according to the customer needs and specifications. We design electronic components and software in C/C++, LabVIEW and Python to automate tasks and increase the productivity of laboratories.

Electronics Engineer November 2013 – Present
Foundation of Research and Technology Hellas (F.O.R.T.H)
Institute of electronic structure and laser

Responsible in a team of 33 people for all the software and electronics hardware development.
Providing technical solutions in experimental problems in different R&D fields such as physics, biology, chemistry etc.

Responsibilities:

- Developing algorithms for signal analysis and image processing.
- Solving hardware problems of the linear stages used for the experiments.
- Electronic components designing for detection and analysis.
- Responsible for the selection of appropriate electronic equipment for the lab.
- Developing complex automations for experimental purposes.

LANGUAGES

English



Greek



RF Technician Assistant Summer 2010 **OPT Hellas**

A 3-month summer job for an electronics company manufacturing frequency filter products.

Responsibilities and achievements:

- Assistance of the company Engineer in inspection of the production line for mismatch. Sorting and handing the appropriate filters for assembly to the technician.
- Assisted the technician in tuning through oscilloscope RF Bandpass and Low Pass filter circuits.

PUBLICATIONS

1. Publication on Nature: Light Science & Applications for my contribution on designing the electronics and the software development in C and National Instruments LabVIEW for the detection of polarization second harmonic generation using a custom-made microscope on 2D transition metal dichalcogenides

[Ultrahigh-resolution nonlinear optical imaging of the armchair orientation in 2D transition metal dichalcogenides](#)

S Psilodimitrakopoulos, L Mouchliadis, I Paradisanos, A Lemonis, ...
Light: Science & Applications 7 (5), 18005

2. Publication on Nature: Scientific Reports for my contribution on designing the electronics and the software development in C and National Instruments LabVIEW for the synchronization of the laser with the spectrometer and the translation stages.

[Extensive elemental mapping unlocks Mg/Ca ratios as climate proxy in seasonal records of Mediterranean limpets](#)

N Hausmann, AL Prendergast, A Lemonis, J Zech, P Roberts, P Siozos, ...
Scientific reports 9 (1), 3698

3. Publication on Optical Materials for my contribution on designing the software development in C and National Instruments LabView for second harmonic generation detection and analysis.

[Effect of composition and temperature on the second harmonic generation in silver phosphate glasses](#)

I Konidakis, S Psilodimitrakopoulos, K Kosma, A Lemonis, E.Stratakis
Optical Materials 75, 796-801

4. Publication on Journal of Analytical Atomic Spectrometry for my contribution on designing the software and the synchronization of the laser with the spectrometer and the translation stages.

Elemental mapping of Mg/Ca intensity ratios in marine mollusc shells using laser-induced breakdown spectroscopy

N Hausmann, P Siozos, A Lemonis, AC Colonese, HK Robson, D Anglos
Journal of Analytical Atomic Spectrometry 32 (8), 1467-1472

AKNOWLEDGMENTS

1. Acknowledged on this publication on Nature: Scientific Reports for my contribution on developing the automations and the algorithms.

Biomimetic surface structuring using cylindrical vector femtosecond laser beams

E Skoulas, A Manousaki, C Fotakis, E Stratakis
Scientific reports, 2017 - nature.com

2. Acknowledged on this publication for the programming and the synchronization of the components for this study.

Control of periodic surface structures on silicon by combined temporal and polarization shaping of femtosecond laser pulses

F Fraggelakis, E Stratakis, PA Loukakos
Applied Surface Science, 2018 - Elsevier

EDUCATION

2010 – 2013

BEng (Hons) Electrical and Electronic Engineering from Sheffield Hallam University

Final year individual project:
“Animatronic hand “. This involved the mechanical design, as well as the programming of a five-finger anthropomorphic hand with position and pressure feedback.

2009-2010

**Extended Degree in Engineering
from Sheffield Hallam University**

REFERENCES

Dr. Stratakis Emmanuel, Research Director of the Ultrafast Laser Micro and Nano

Processing lab, Institute of Electronic Structure and Laser (IESL), Foundation of Research and Technology Hellas (FORTH)

Professor Stelios Tzortzakis, Head of ultrashort nonlinear laser interactions (UNIS) at FORTH-IESL, P.O. Box 1527,GR-711 10 Heraklion, Greece.
<http://http://unis.iesl.forth.gr/default.htm>

Mr. George Afendras, Engineering Manager of OPT Hellas, 101 Kon. PaleologouStr., Spata 19004, Athens-Greece. <http://www.opthellas.com>

Professor Joanna Jennings, Electrical and Electronic Engineering, Course Leader, Sheffield Hallam University, Sheffield, S1 1WB