Ioannis A. Gkouzionis

Electrical & Computer Engineer (Dipl.-Ing. - MEng.)

Ph.D. Candidate in Clinical Medicine Research
The Hamlyn Centre for Robotic Surgery
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Education

Sep 2019 - Present

Ph.D. in Clinical Medicine Research
Department of Surgery & Cancer
Faculty of Medicine
Imperial College London, London, UK
Thesis Title: "Hyperspectral Circumferential Resection Margin Assessment for Gastrointestinal Cancer Surgery"

Oct 2017 - Aug 2019

M.Sc. in Electronic & Computer Engineering (2 Yrs. Program)
School of Electrical & Computer Engineering
Technical University of Crete, Chania, Greece
Thesis Title: "Smart and Fast Spectral Imaging based on Machine Learning and Spectral Demultiplexing Methods"
Thesis Brief Description: "This thesis deals with the application of various Machine Learning algorithms for the detection and classification of melanocytic skin lesions in hyperspectral imaging when there is an absence of ground truth target map in the data set. The outcome of this dissertation advances the state-of-the-art by proposing novel methodologies for accurate hyperspectral skin image classification."
GPA: Excellent, $\frac{8.67}{10}$

Sep 2012 - Sep 2017

Dipl.-Ing. in Electrical & Computer Engineering (5 Yrs. Program)
School of Electrical & Computer Engineering
Technical University of Crete, Chania, Greece
Thesis Title: "Spectral Cube Reconstruction from Multiplexed Spatial and Spectral Data"
Thesis Brief Description: "This thesis deals with a new method in acquiring and reconstructing the spectral cube in hyperspectral imaging. The method employs an electro-optical device that acquires and stores the spectral cube in a spatio-spectral multiplexed fusion. Two methods for the reconstruction of the spectral cube were implemented and analyzed in this thesis. Our approach is suitable for demanding spectral imaging applications, such as microscopic images and non-destructive analysis."
GPA: Excellent, $\frac{8.50}{10}$

Sep 2009 - Jun 2012

High School Diploma
1st High School of Evosmos, Thessaloniki, Greece
GPA: Excellent, $\frac{18.5}{20}$

Research Interests

- Biophotonic Imaging, Spectral Imaging, Biomedical Electronics
- Biomedical Signal & Image Processing & Analysis, Molecular Imaging, Computational Biology
- Bioinformatics, Machine & Deep Learning, Healthcare Data Analytics

Work Experience

Jan 2020 - Present	**Teaching Assistant** Faculty of Medicine, Imperial College London London, UK
Mar 2019 - May 2019	**Research Intern, FarrowLab - NERF (Neuro-Electronics Research Flanders)** IMEC (Interuniversity Micro-Electronics Center) Leuven, Belgium
Jul 2016 - Aug 2016	**IT Intern, Municipality of Chania - Crete** Dept. of Information & Technology Chania, Greece

Academic Experience

Oct 2017 - Aug 2019	**Postgraduate Researcher, Optoelectronics & Imaging Diagnostics Research Group** Electronics Laboratory, School of ECE, Technical University of Crete Chania, Greece
Jan 2018 - Jun 2018	**Laboratory Teaching Assistant** Electronics I, Electronics Laboratory, School of ECE, Technical University of Crete Chania, Greece

Technical Skills

Programming Languages	C/C++, Java, Python, MATLAB, PostgreSQL, VHDL
Development Tools	Microsoft Visual Studio, Qt Creator, Eclipse IDE, Apache Hadoop, Apache Flink, PyCharm IDE, Anaconda Distribution, Unity3D Game Engine, Mathworks MATLAB, Octave, Xilinx ISE Design Suite, Psychophysics Toolbox, pgAdmin, Magic VLSI Layout Tool, Arduino IDE, SPICE
Development Platforms	Digilent Basys 2, Arduino Family, SIEMENS S7-1200
Operating Systems	Microsoft Windows OS, Mac OS, Linux OS
Miscellaneous Skills	LaTeX, Microsoft Office, OpenOffice, LibreOffice

Fellowships, Awards & Distinctions

Dec 2019	**Best Project Award** Hamlyn Winter School on Surgical Imaging and Vision 2019
Sep 2019	**CRUK Imperial Centre Four Year PhD Studentship Award** Cancer Research United Kingdom
Dec 2017	**Scholarship of Excellence Award** Pancretan Endowment Fund
Nov 2017	**Honorable Mention - "Top of Graduating Class" Award** Technical University of Crete
Jun 2017	**National Science Foundation (NSF) Fellowship to attend the 16th International Summer School on BioX: Biocomplexity, Biodesign, Bioinnovation, Biomanufacturing and Bioentrepreneurship** National Science Foundation (NSF)
Nov 2016	**Excellence Award (Top of Class) for the academic year 2015 - 2016** Technical University of Crete
Sept 2012	**Award of Excellence and Performance in Education from Hellenic Petroleum S.A.** Award for the grades achieved at the Greek University admission exams

Seminars & Conferences Attendance

2 - 6 Dec 2019	**Hamlyn Winter School on Surgical Imaging and Vision 2019** London, UK
21 Mar 2019	**From Data Analysis to Machine Learning and Deep Learning with MATLAB** Leuven, Belgium
9 - 15 Jun 2017	**16th International Summer School on BioX: Biocomplexity, Biodesign, Bioinnovation, Biomanufacturing and Bioentrepreneurship** Chania, Greece
4 - 6 Oct 2016	**2016 IEEE International Conference on Imaging Systems & Techniques** Chania, Greece
22 - 24 Apr 2016	**9^{th} National Conference of Electrical & Computer Engineering Students** Chania, Greece
11 - 13 Apr 2014	**7^{th} National Conference of Electrical & Computer Engineering Students** Thessaloniki, Greece
10 - 13 Nov 2013	**13^{th} IEEE International Conference on Bioinformatics & BioEngineering** Chania, Greece

Languages Spoken

Greek	Native Speaker
English	C2 level

- International English Language Testing System (IELTS) - Score 7.5
- Certificate of Proficiency in English, University of Michigan

Selected Coursework

- **Graduate Courses**
  - *Special Topics in Image Processing, Grade:* $\frac{9.5}{10}$
  - *Machine Learning, Grade:* $\frac{8.5}{10}$
  - *Special Topics in Database Systems, Grade:* $\frac{8.5}{10}$
- **Undergraduate Courses Cross-listed as Graduate Courses**
  - *Optoelectronics, Grade:* $\frac{10}{10}$
  - *Mathematical Biology, Grade:* $\frac{8.5}{10}$
- **Undergraduate Courses**
  - *Biomedical Electronics, Grade:* $\frac{10}{10}$
  - *Design of Analog CMOS Integrated Circuits, Grade:* $\frac{10}{10}$
  - *Computer Graphics, Grade:* $\frac{9.5}{10}$
  - *Algorithms & Complexity, Grade:* $\frac{9.5}{10}$
  - *Digital Signal Processing, Grade:* $\frac{9}{10}$
  - *Digital Image Processing, Grade:* $\frac{8.5}{10}$
  - *Embedded System Design, Grade:* $\frac{8.5}{10}$

Academic Memberships

- **IEEE Student Member**
- **IEEE Engineering in Medicine & Biology Society Member**
- **OSA Student Member, The Optical Society**
- **SPIE Student Member, International Society for Optics and Photonics**

References

Available upon request.