

# Nikos Tsiknakis

RESEARCH SOFTWARE ENGINEER · MENG ECE

CBML ICS FORTH, Heraklion, Greece

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## Education

### University of Patras

Patras, Greece

M.ENG IN ELECTRICAL AND COMPUTER ENGINEERING

Sep. 2014 - Jun. 2019

- Graduated 3rd in my class with a grade of 8.3/10
- Thesis: "Stereo Vision of Dual View Meteosat Images" under the supervision of Prof. Athanassios Skodras

## Experience

### Computational BioMedicine Laboratory, ICS FORTH

Heraklion, Greece

SOFTWARE ENGINEER

Sep 2019 - Now

- H2020 funded project InSilc in which my main responsibilities relate to the design and implementation of algorithmic approaches for the registration of IVUS images before and after stent procedure.
- H2020 funded project SeeFar on the development and evaluation of deep learning models for the detection and the progression of retina diseases.
- Research on COVID-19 detection based on deep learning analysis methods of Xray and CT images.

### Computational BioMedicine Laboratory, ICS FORTH

Heraklion, Greece

INTERN

Jul 2018 - Aug 2018

- Methodological approaches for the execution of systematic literature surveys.
- Review of stereo vision algorithms and initial implementations of selected such algorithms.
- Review of Machine/Deep Learning methods and experimentation with the Tensorflow/Keras frameworks.

## Skills

**DevOps** Docker

**Back-end** Django, Node.js, MySQL, MongoDB REST API

**Front-end** Jekyll, HTML5, jQuery, SASS

**Programming** Python, JAVA, C

**ML Frameworks** Tensorflow, Keras

**Tools** LaTeX, Linux, Git

**Languages** Greek, English, German

## Seminars & Workshops

Aug 2018 **Drone School**, Deep learning and Computer vision for drone imaging and cinematography

Icarus, CSD AUTH

Feb 2018 **MedDays 2018**, Received a scholarship to attend "Mediterranean Days @ Campus SophiaTech"

Sophia Antipolis

Oct 2017 **Aeroworks**, Autumn School on Aerial Robotics

University of Patras

Jul 2016 **ISP 2016**, 1st Interdisciplinary Summer School on Privacy

Nijmegen

Apr 2016 **ECESCON 9**, 9th ECE Students Conference

TUC, Chania

## Honors & Awards

### UNIVERSITY

Oct 2020 **Gold Award @ Healthcare Business Awards 2020**, Our COVID-19 X-Ray journal article [2] won the gold award as the best research paper in the Healthcare Business Awards 2020

CBML ICS FORTH

Feb 2015 **Image Editor and Viewer**, Best first year's python project, Introduction to Programming Course

University of Patras

## Certificates

Oct 2019 **Deep Learning Specialization**, 2X3DAMJNRWQ4

Coursera

## Major University Projects

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Feb 2018 **SPCup 2018**, IEEE Signal Processing Society Cup 2018

2014-19 **IEEE Xtreme**, Participated in several IEEE Xtreme competitions and IEEE activities

IEEE

University of Patras

## Conference Publications

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- [1] C. Spanakis, E. Mathioudakis, N. Kampanis, **N. Tsiknakis**, and K. Marias, “Renyi divergence and non-deterministic subsampling in rigid image registration,” in *IEEE International Conference on Imaging Systems and Techniques (IST)*, Abu Dhabi, United Arab Emirates, Dec. 2019. DOI: <https://doi.org/10.1109/IST48021.2019.9010237>.

## Journal Publications

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- [1] E. Trivizakis, **N. Tsiknakis**, E. E. Vassalou, G. Z. Papadakis, D. A. Spandidos, D. Sarigiannis, A. Tsatsakis, N. Papanikolaou, A. H. Karantanas, and K. Marias, “Advancing covid-19 differentiation with a robust preprocessing and integration of multi-institutional open-repository computer tomography datasets for deep learning analysis,” *Experimental and Therapeutic Medicine*, vol. 20, no. 5, 2020. DOI: <https://doi.org/10.3892/etm.2020.9210>.
- [2] **N. Tsiknakis**, E. Trivizakis, E. E. Vassalou, G. Z. Papadakis, D. A. Spandidos, A. Tsatsakis, J. Sánchez-García, R. López-González, N. Papanikolaou, A. H. Karantanas, and K. Marias, “Interpretable artificial intelligence framework for covid-19 screening on chest x-rays,” *Experimental and Therapeutic Medicine*, May 2020. DOI: <https://doi.org/10.3892/etm.2020.8797>.