

Kostis Katrioplas

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Interests

Programming, maths, geometry, algorithms, machine learning, artificial intelligence, web, distributed systems, open source hardware

Work experience

Software engineer, GeometryFactory.

January 2018 – June 2018. Sophia-Antipolis, France.

- Work on polygon mesh processing using combinatorics for hole filling
- Implementation of machine learning based algorithms to compute the optimal bounding box
- Develop functionalities towards mesh repairing & efficient convex hull calculation

Mentor: Sébastien Lorient.

Google summer of code student, The CGAL project.

May 2017 – August 2017.

- Implementation of optimization algorithms to perform mesh and shape smoothing ([blog/smoothing-gsocproject](http://blog.smoothing-gsocproject))

Mentors: Jane Tournois and Pierre Alliez.

Web developer – part time, Mirror Mirror plus, Thessaloniki, Greece.

October 2015 – February 2017.

- Setup magento, prestashop applications (mirrormirrorplus.gr)
- Usual tasks: Server maintenance, site migrations, security and optimization

Software engineering intern, Zurich MedTech AG.

March 2015 – September 2015. Zurich, Switzerland.

- Implementation of novel algorithms for pre-processing of FEM meshes
- Development of Python scripts to facilitate complex image data visualization

Supervisors: Esra Neufeld and Bryn Lloyd.

Teacher, private lessons. Thessaloniki, Greece.

2013 – 2014

- Maths & physics lessons to high school students, electromagnetism exercises to university students

Education

Master's Degree in Computational Physics, Department of Physics, Aristotle University of Thessaloniki.

October 2013 – February 2017, GPA — 9.56/10

Thesis: *Finite element image reconstruction in microwave ablation treatment* ([text](#)).

Supervisor: Prof. Theodoros Samaras.

Diploma (Ptychion) in Physics, Department of Physics, Aristotle University of Thessaloniki.

September 2007 – June 2013, GPA — 7.68/10

Thesis: *Numerical calculation of the induced currents during TMS on human head model using the impedance method*.

Supervisor: Prof. Theodoros Samaras.

Skills

- Programming: C++, Python, learning Go
- Libraries: VTK, Django, Eigen
- Design: Gimp, Inkscape
- Enviroments: git, Linux, vim, \LaTeX

Languages

- English, Italian, Spanish, some French, Greek (native)

Published work

Katrioplas K., Samaras T., Monitoring of Microwave Ablation treatment with Electrical Impedance Tomography, in Proceedings of COST EMF-Med 2018, Croatia. To appear in IEEE Xplore.