Kostis Katrioplas

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dikatrio.xyz
github.com/kkatrio

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 Loriot.

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)

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 1st World Conference on Biomedical Applications of Electromagnetic Fields (EMF-Med), 2018, Croatia. (IEEE Xplore)