Antonio Stanziola

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Currently

Research Fellow in Deep Learning for Transcranial Ultrasound Neurostimulation.

Research interests

Ultrasound image and signal processing, deep learning, numerical simulation, differentiable programming languages for machine learning and physical simulation, scientific machine learning, acoustics, medical image analysis, inverse problems and uncertainty quantification.

Occupation

University College London, London (UK). 2019 - now
Research Fellow

Imperial College Executive Education Programme, London (UK). 2019 - 2022
Teaching, teaching assistant, responsible for content, style and automation of Jupyter Notebooks

Imperial College London, London (UK). **Università degli Studi di Padova**, Padova (Italy). 2019
Post-doc placement in machine learning for contrast enhanced ultrasound and super-resolution.

Imperial College London, London (UK). 2018-2019
Post-doc position on imaging algorithms for improving contrast enhanced ultra-fast cardiac ultrasound.

Imperial College London, London (UK). 2014-2016
Graduate Teaching Assistant.

Scuola Superiore Sant'Anna (Centro Piaggio), Pisa (Italy). 2011-2012
Electromechanical design of a bio-inspired robot. Hydrodynamic and magneto-mechanic simulations.

Awards

EPSRC UKRI Grant, founded for £584,440 2022
Co-investigator in the winning EPSRC grant EP/W029324/1 for developing and extending the k-Wave ultrasound simulator

Bando n. 13/2019, Università degli studi di Padova (Italy) 2019
Winner of a 1 year research scholarship.

Winner of the Plane Wave Imaging challenge, Rotterdam (Italy) 2016
Abstract "Temporal and spatial processing of high frame-rate contrast enhanced ultrasound data"

Best Teaching Assistant of the Year, Bioengineering Department, ICL (UK) 2015
Elected by student vote as best teaching assistant of the year for the Bioengineering Department.

Education

Imperial College London, London (UK). 2014-2018
Ph.D in Biomedical Engineering, thesis on Ultrasound Vascular Imaging.

Chalmers University of Technology, Gothenbourg (Sweden). 2012-2014
Ms.C in Biomedical Engineering, major in image and signal processing

Università degli Studi di Pisa, Pisa (Italy). 2008-2012
Bs.C in Biomedical Engineering, major in biomechanics. Final score: 106/110

Skills

Programming Languages

MATLAB, Octave, Python advanced
Julia, CUDA, C++ basic
LaTeX, HTML, Markdown, (S)CSS others (advanced)

Computer science

git, makefile, bash scripting, Continuous Integration tools, Paraview, Slicer3D, FSL, FLIRT, Ansys, Solid Works tools
Linux (debian, arch), MacOS, Windows OS
DICOM, HDF5, Nifti, Verasonics Vantage scanner (usage and scripting) others

Personal

Certifications

PADI Advanced diving license
Car and full-motorbike driving license

Hobbies and passions

Piano, aviation, macroeconomy, epistemology, cooking, 3D modeling.