Marco PELLEGRINO

Mother Tongue: Italian | English: Excellent
LinkedIn| www.linkedin.com/in/mp0110   @| pellegrino.marco@icloud.com m|+44 7961 769580

WORK EXPERIENCE

Format Engineers
June 2017 – Present, Bath
formatengineers.com
Senior Research Engineer

- Modelling and analysis of Free-Form Structure for the following projects: Burning Man 2018, Steam Punk 2019, MAP2, Concrete Shell (WIP), The Whale Tail
- Geometry Rationalization: k-means clustering, panel tessellation, mesh relaxation, developable surface, ...
- Solving Optimization problem related to structure behavior. Genetic algorithm, Multi-objective Optimisation, Pareto Front and Gradient Descendent
- Attending research conferences for networking and advertising the company
- Identifying emerging techniques promoting cutting-edge technologies to keep the business competitive in the market
- Training and mentoring colleagues at the use of techniques that transform the job more enjoyable and profitable
- Build strong relation with clients

Alpaca4d
March 2020 – Present, Remote
alpaca4d.github.io
Founder

- Writing a Library wrapper of OpenSees (tcl language) to be run with python
- Deployment with the use of Portable Python
- Writing Documentation
- Drawing icons and create Palette
- Mentoring a graduate student during COVID-19 pandemic
- Advertising on social media and get feedback from users

AEI Progetti
December – May 2017, Florence

Graduate Structural Engineer

- Concrete Design of Slabs, Cores and Beams of a UEFA Stadium in Tirana
- Steel Design of Columns, Base Plates and roof of a UEFA Stadium in Tirana
- Implementation of a custom workflows to analyze connections parametrically. The process helped to save time for delivering the project and with higher margin.

TEACHING

Architectural Association
April 2019 - Present

Tutoring Computational Design for architectural students during Term 3.
The lessons have been hosted online for a class of 30 students.

Politecnico di Turin
Part-Time Tutor

Mentoring students for their Master Thesis dissertation.
Aggregation and Space-Filling Polyhedron.

EDUCATION	**University of Pisa** *2012/2016*

University of Pisa
2012/2016

Master Degree, STEM

University of Pisa
2008/2012

Bachelor Degree, STEM

DeepLearning.AI
June-September 2021

Deep Learning Specialization

IBM
March-April 2019

Python for Data Science and AI

SKILLS COMPETENCIES

Geometry, Mathematics, Optimisation, **Research**, **Coding**
Teamwork, Time Efficient, Organized, **Ability to work independently, Problem Solving**
Flexible, Motivated, **Strong Initiative**, Rigorous, Critical Observation

IDE Programming Design FEA

Jupyter Notebook, Colab, Sublime Text, Visual Studio Code
Python, **JavaScript**, C#, JS, TCL, HTML, Protobuf
Rhinoceros, Grasshopper, Blender
Sap2000, Gsa, Karamba, OpenSees

INTERESTS

Blogging, Video Production
3d Printing, Drone
Differential Geometry , Coding, Machine Learning, AI, AR
Art

PUBLICATIONS

- Pellegrino, Chicocka, Migalska (2017). *Monarca, the implementation of Multi Objective Particle Swarm Optimization algorithm in a design optimization tool.* IASS
- Pellegrino, Klasz (2018). *K2E for Form-Finding & Assembling*, AAG
- Pellegrino, Klasz, Melville (2018). *The revelance of self-formation in teaching structural design*, EUCEET
- Pellegrino, Andreussi (2020) – *Computational Design e Ingegneria Parametrica nel mondo delle costruzioni*, Lo Strutturista Press No.0
- Pellegrino, Andreussi (2020) – *SteamPunk. Ricerca, Fabbricazione e innovazione*, Lo Strutturista Press No.02
- Pellegrino, Andreussi (2020) - *Il tempio del Burning Man 201*8, Lo Strutturista Press No.3
- Pellegrino, Andreussi (2020) - *Work Smarter, Not Harder!*, Lo Strutturista Press No.4