GIUSEPPE CAPPELLI

Geophysicist, Fiber Optic Sensing

CONTACT

caps.gius@gmail.com

giuseppe.cappelli@idil.fr

(+30) 379 179 2926

(+33) 07 44 56 77 56

LANGUAGES

- Italian: Native
- English: CEFR C1 Level
- French: Fluent

TECHNICAL SKILLS

- Data Processing & Analysis
- Numerical Simulation of seismic wavefields using Finite Difference methods
- Inverse Matrix Methods
- Laboratory Experiment Design and Execution
- Software: MATLAB, Generic Mapping Tool (GMT)

PROGRAMMING SKILLS

- Python (Expert)
- C
- Fortran
- MATLAB
- Bash

I am a physicist specialized in geophysics, signal processing, and numerical simulations. My current research focuses on the use of Distributed Fiber Optic Sensing (DFOS) for geophysical applications, to fill the observational gap of underwater geophysical processes. Passionate about innovative monitoring techniques, I seek to contribute to the advancement of fiber-optic sensing technologies for research.

EDUCATION

Ph.D. in Physics (Ongoing)
Université de Bretagne Occidentale (UBO), Brest, France / IDIL Fibres Optiques, Lannion, France

Thesis: Analysis of laser reflectometry (BOTDR and DAS) data on submarine fiber-optic cables and recommendations for the design and construction of a new generation of hybrid submarine telecom cables.

Master's Degree in Physics | 2019-2021
Università degli Studi di Napoli Federico II, Naples, Italy | 2021

Thesis: Comparison of different techniques for earthquake and tsunami travel time computation.
Final grade: 110/110 cum laude

Bachelor's Degree in Physics | 2016-2019
Università degli Studi di Napoli Federico II, Naples, Italy | 2016-2019

Thesis: Ground deformation models for the Phlegraean Fields.
Final grade: 110/110

WORK EXPERIENCE

Intern | IFREMER (French Research Institute for Exploitation of the Sea) | 2020
- Developed travel time computations for seismic waves and tsunamis on unstructured grids.
- Implemented and validated numerical models for geophysical simulations in marine environments.

Tutor | Università degli Studi di Napoli Federico II | 2020
- Conducted tutoring sessions for undergraduate students in the Physics 1 course (mechanics and thermodynamics).
- Assisted students in problem-solving, clarifying theoretical concepts, and preparing for examinations.