

Francesco Asaro

EARTH OBSERVATION ENGINEER

✉ francesco.asaro@mail.polimi.it | 📺 asaro92

“Audentis fortuna iuvat”



Working experience

Politecnico di Milano - DEIB

PROJECT EMPLOYEE

Milan

Feb 2018 - current

- Development of a MATLAB toolbox for river hydromorphological mapping from Sentinel-1 SAR images

Politecnico di Milano - DEIB

TEACHING ASSISTANT

Milan

Feb 2018 - current

- Responsible of MATLAB practical classes within the course “Signals for Communications”

Education

Politecnico di Milano

M.S. IN ENVIRONMENTAL AND GEOMATIC ENGINEERING

Milan, Italy

Oct. 2015 - Dec. 2017

- thesis title: *“Identifying Riverscape Processes and Forms from Short Time Sentinel-1 Data Stack”*
- thesis advisor: Prof. Claudio Prati
- graduation mark: full mark with honours

“Parthenope” University of Naples

B.S. IN GEOMATICS

Naples, Italy

Oct. 2012 - Oct. 2015

- meteo-oceanographical track
- thesis title: *“Seabed classification from Sidescan sonar sonogram analysis”*
- thesis advisor: Prof. Francesco Giordano
- graduation mark: full marks with honours

“Vitruvio Pollione” Classical Lyceum

HIGH SCHOOL DEGREE IN CLASSICAL STUDIES

Naples, Italy

2006 - 2011

- with scientific extension

Extracurricular activities

European Space Agency Advanced Land Training Course

SELECTED PARTICIPANT

Gödöllő

Sept. 2017

- selected by the organizing committee for a six days summer school with insights and practicals on advanced radar, optical and thermal remote sensing

Sailing coach

OPTIMIST CLASS

2013 - current

- in charge of coaching a youth competitive sailing team, made of fourteen young athletes spanning from the age of nine to fourteen years old

Sailing athlete

OPTIMIST AND LASER SAILING CLASS

2003 - 2012

- twice Laser national team member for youth world championships | *years 2008 and 2009*
- top-ten sailor in Olympic Laser Italian ranking | *year 2012*

Languages

Italian

NATIVE PROFICIENCY

English

FULL PROFESSIONAL PROFICIENCY

Computer skills

Programming, scripting and markup languages

MATLAB | PROFICIENT IN

- signal processing, data analysis and fitting
- image processing
- environmental modelling

R | FAMILIAR WITH

- statistical analysis

L^AT_EX | PROFICIENT IN

- scientific writing

C++, JAVA, PYTHON | FAMILIAR WITH

- basic OO programming
- GDAL, NumPy, SciPy and Matplotlib libraries

FORTRAN95, IDL | FAMILIAR WITH

- basic programming

JAVASCRIPT | FAMILIAR WITH

- the language in the framework of web-GIS design
- Leaflet and OpenLayers libraries

HTML5 | FAMILIAR WITH

- basic website design

UNIX/LINUX | FAMILIAR WITH

- shell programming

Software

GIS | QGIS, ARCGIS

- raster and vector geoprocessing
- attributes manipulation and queries
- scripting

REMOTE SENSING | ENVI, SNAP

- OPTICAL: atmospheric and terrain correction, image classification, change detection
- RADAR: interferometry, polarimetry, backscatter and coherence analysis, change detection

PHOTOGRAMMETRIC | ERDAS IMAGINE, PHOTOSCAN, PHOTOMODELER

- orthophoto production from aerial and UAS survey
- terrestrial and close-range photogrammetry

SAT. POSITIONING | GOGPS

- post processing and Kalman filtering

HYDRAULIC | HEC-RAS

- 1-D and quasi 2-D simulation

ENERGY | OSEMOSYS, ENERGYPLAN

- energy system simulation

OFFICE PACKAGE

Scholarships & Honors

- 2017 **High academic performance student**, merit-based scholarship
2016 **High academic performance student**, merit-based scholarship
2016 **Erasmus scholarship**, exchange scholarship

PoliMi

PoliMi

EU

Conference contributions

- 2018 **Land Use Analysis Using a Compact Parametrization Of Multi-Temporal SAR Data**, F. Asaro, C.M. Prati, B. Belletti, S. Bizzi, P. Carboennau
2018 **Water Channel Detection from Sentinel-1 SAR Images for Large Scale River Monitoring**, F. Asaro, C.M. Prati, B. Belletti, S. Bizzi, P. Carboennau
2018 **Use of Cross-Pol Multi-Temporal SAR Data for Image Segmentation**, C.M. Prati, F. Rocca, F. Asaro, B. Belletti, S. Bizzi
2018 **Medium Sized Rivers Wet Channel Probabilistic Mapping from Short Time Sentinel-1 Data Stack**, F. Asaro, C.M. Prati, B. Belletti, S. Bizzi, P. Carboennau

*IEEE IGARSS
(submitted)*

*I.S. Rivers
(accepted)*

*IEEE ICEE
(accepted)*

*ESA MWBS
(accepted)*