

Raffaele GRASSO

PhD, MEng, EMBA

Freelance Consultant - Scientific Advisor



PROFILE

More than 20 years of experience in the maritime defence sector, committed to adding value to data, from signal conditioning to decision support, through predictive modelling, fusion of information and optimization of data acquisition and flow. Expertise on statistical modeling, machine learning and multi-domain and multi-platform sensors, including satellite-based, land-based and underwater ones. Ability of working in R&D and innovation projects, wherever extracting knowledge from data is of paramount importance. Founder of the professional studio **Meridian-data & geospatial intelligence**.

CONTACT DETAILS

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PERSONAL INFORMATION

Citizenship: **Italian**

Languages: **English (C2), Italian** (native speaker)

PUBLICATIONS

🆔 orcid.org/0009-0003-6023-2073

COMPUTER SKILLS

- R, Matlab,
- Main machine learning and statistical modelling libraries

COMPETENCES

Core: signal and image processing, time series analysis, statistical modelling, machine learning, autonomous underwater vehicles, static/dynamic sensor network optimization, satellite remote sensing, multi-source data fusion, decision support systems.

Organisational: communication and international/multi-disciplinary team collaboration, project management, scientific advisory, preparation of scientific project proposals and field experiment design and execution.

EXPERIENCE

SCIENTIST at NATO STO-Centre for Maritime Research and Experimentation (NATO STO-CMRE), (Italy). **2018.01–2023.12**

◊ Principal investigator, project leader in NATO and EU research projects on maritime surveillance and critical infrastructure protection.

CONSULTANT at NATO STO-CMRE (Italy). **2017.02–2017.12**

◊ Scientific advisor in NATO projects on maritime traffic modelling and prediction based on network graphs and vessel transponder data.

CONSULTANT at Marine & Remote Sensing Solutions SAM (MARSS Group), (Monaco). **2016.03–2016.06**

◊ Scientific advisor in EU projects on multi-objective optimization of vessel routing with respect to environmental risk metrics.

SCIENTIST at NATO STO-CMRE (Italy). **2006.11–2016.02**

◊ Principal investigator, project leader in NATO and EU research projects on decision support systems, multi-source data fusion and dynamic sensor network optimization.

CONSULTANT at NATO STO-CMRE (Italy). **2002.02–2006.11**

◊ Scientific advisor in NATO projects on decision support systems for maritime operations based on environmental risk metrics, classification of underwater sonar images.

POST DOC at Department of Information Engineering, University of Pisa (Italy). **2000.01–2002.02**

◊ Statistical analysis and modelling of temporal series of satellite multi-parameter and multi-sensor data.

EDUCATION

EMBA. Executive Master in Business Administration. LUISS Business School, Italy. **2008–2009**

◊ Final project work on *capital markets and mergers & acquisitions in the water utility sector*.

◊ Evaluation of company value by discounted cash flow methods.

PHD. Methods and Technology for Environmental Monitoring. University of Florence/Pisa, Italy. **1999–2000**

◊ Thesis title: *Estimation of the Concentration of Seawater Optically Active Constituents from Multi-Spectral Satellite Sensor Data*.

◊ Radiative transfer in atmosphere and seawater, neural networks.

MENG. Telecommunication Engineering. University of Pisa, Italy.

◊ Thesis title: *Estimation of the Sea Surface Directional Power Spectrum from Synthetic Aperture Radar Images*.

◊ Electromagnetic modelling of sea surface, inverse problems, optimisation.