

Gian Marco Scarpa



Technologist at Institute of marine Science - National Research Council of Italy. My current research is focused on remote sensing of coastal waters with a focus on calibration/validation activities for the retrieval of water quality parameters in optically complex environments, using multi and hyperspectral satellite data. My main interests include the use of remote sensing techniques providing ocean color satellite-derived products integrated with in situ data to support the understanding of coastal processes and the connectivity from inland to coastal waters. I work on collecting and processing of bio-geo-optical and above-water radiometry measurements for the retrieval of apparent and inherent optical properties along water column.



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Nationality: Italian



Languages: Italiano / English C1

Academic Background/Employment

2023 – Present Technologist (fixed-term employment contract) at CNR-ISMAR Venezia

- technological development activities for ITINERIS project
- operation and maintenance of oceanographic and optical instrumentation

2019-2023 Postdoctoral research fellow at CNR-ISMAR Venezia

- Imaging Science and Remote Sensing
- coastal morphology
- GIS specialist
- Drone mapping and 3D modelling

2016-2017 PhD student University of Queensland

School of civil engineering

-Brisbane River Estuary, Australia. Assessment and management of environmental impacts related to vessels traffic.

2015-2019 PhD Student in Environmental Science

Ca' Foscari University

Thesis: Coastal systems and human impacts

Final mark: 110 cum laude

2012-2014 Master's degree in environmental science

Ca' Foscari University

Thesis: Characteristic of vessel draw down, wakes and associated sediment resuspension in a confined shipping channel

Final mark: 110 cum laude

SKILLS

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| - Cartography and Graphic Design | - Optical oceanography | -Coastal Erosion |
| - Spatial and Data analysis | - Remote sensing and imagery analysis | -Quantum GIS |
| - Statistical Analysis | - Drone Mapping and 3D modelling | -Python |



Current Projects/Grants:

- **NECTON**: New Copernicus capability for trophic ocean networks. Grant Agreement n. 101081273. HORIZON-CL4-2022-SPACE-01-41.
- **ITINERIS** Italian INTEgrated Environmental Research Infrastructures System, area esfri environment. PNRR IR0000032.
- **PANDA-WATER**: PRISMA Products AND Applications for inland and coastal WATER. Grant n. 2022-15-U.O. Italian Space Agency.
- **ESA SOON FO**: Satellite Observations for inland and cOastal water quality during COVID lock-down Follow On. ESA Contract 4000128147/19/I-DT. ESA.
- **ESA RACE SOON** (Rapid Action Coronavirus Earth observation) (Satellite Observations for inland and coastal water quality during COVID lock-down). European Space Agency. ESA Contract 4000128147/19/I-DT, ESA.
- **CERTO** (Copernicus Evolution: Research for harmonised Transitional water Observation). EU-H2020-SPACE, Grant Agreement nr. 870349. H2020-SPACE-2018-2020 LC-SPACE-04-EO-2019.
- **PRISCAV** (PRISMA Calibration Validation project) Evaluation of the PRISMA Hyperspectral Radiance Data. Italian Space Agency. Grant n. 2018-6-Q.0 Italian Space Agency.
- **CoastObs**, Commercial service platform for user-relevant coastal water monitoring services based on Earth Observation. Horizon 2020 (H2020). Grant Agreement n. 776348. H2020-EO-2017, EO-1-2017.
- **CosteLAB**, the Italian thematic platform for coastal and marine downstream applications of institutional and research users in the context of Copernicus data exploitation. Italian Space Agency

Publications

- Braga, F., Fabbretto, A., Vanhellemont, Q., Bresciani, M., Giardino, C., Scarpa, G. M., ... & Brando, V. E. (2022). **Assessment of PRISMA water reflectance using autonomous hyperspectral radiometry**. *ISPRS Journal of Photogrammetry and Remote Sensing*, 192, 99-114.
- Favaretto, C., Manfè, G., Volpato, M., & Scarpa, G. M. (2022). **Effect of Mo. SE Closures on Wind Waves in the Venetian Lagoon: In Situ and Numerical Analyses**. *Water*, 14(16), 2579.
- Scarpa, G. M., Braga, F., Manfè, G., Lorenzetti, G., & Zaggia, L. (2022). **Towards an Integrated Observational System to Investigate Sediment Transport in the Tidal Inlets of the Lagoon of Venice**. *Remote Sensing*, 14(14), 3371.
- Braga, F., Ciani, D., Colella, S., Organelli, E., Pitarch, J., Brando, V. E., ... & Falcini, F. (2022). **COVID19 lockdown effects on a coastal marine environment: Disentangling perception versus reality**. *Science of The Total Environment*, 153002.
- Braga, F., Scarpa, G. M., Brando, V. E., Manfè, G., & Zaggia, L. (2020). **COVID-19 lockdown measures reveal human impact on water transparency in the Venice Lagoon**. *Science of The Total Environment*, 736, 139612.
- Bernardi Aubry, F., Acri, F., Scarpa, G. M., & Braga, F. (2020). **Phytoplankton–Macrophyte Interaction in the Lagoon of Venice (Northern Adriatic Sea, Italy)**. *Water*, 12(10), 2810.
- Scarpa, G. M., Zaggia, L., Manfè, G., Lorenzetti, G., Parnell, K., Soomere, T., ... & Molinaroli, E. (2019). **The effects of ship wakes in the Venice Lagoon and implications for the sustainability of shipping in coastal waters**. *Scientific reports*, 9(1), 1-14.
- Zaggia, L., Lorenzetti, G., Manfè, G., Scarpa, G. M., Molinaroli, E., Parnell, K. E., ... & Soomere, T. (2017). **Fast shoreline erosion induced by ship wakes in a coastal lagoon: Field evidence and remote sensing analysis**. *PloS one*, 12(10), e0187210.
- Parnell, K. E., Zaggia, L., Soomere, T., Lorenzetti, G., & Scarpa, G. M. (2016). **Depression waves generated by large ships in the Venice Lagoon**. *Journal of Coastal Research*, (75 (10075)), 907-911.
- Parnell, K. E., Soomere, T., Zaggia, L., Rodin, A., Lorenzetti, G., Rapaglia, J., & Scarpa, G. M. (2015). **Ship-induced solitary Riemann waves of depression in Venice Lagoon**. *Physics Letters A*, 379(6), 555-559.