

## Marco Faimali

1° Researcher and Director of CNR-IAS

From march 2015 to 2018 Head of the Genoa Unit of ISMAR-CNR.

PhD in Marine Environmental Sciences, Genoa University (2003)

Degree in Natural Sciences, Genoa University (1992).

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## Interests

Marco Faimali has done research work from 1995 in marine ecology and in environmental impact of antifouling technologies at Institute of Metal Marine Corrosion, CNR, Genoa then became Institute of Marine Science, Genoa's branch. He worked for more than 20 years in the field of marine technology devoting himself mainly to the study of the interaction between materials / technologies and the marine environment (biofouling, biofilm, biocorrosion, antifouling, environmental impact, marine ecotoxicology).

From march 2015 Head of the Genoa Unit of ISMAR-CNR taking care of the scientific and technical organization and management personnel in training and contract. Nowadays his activity are focused on two principal research lines:

- Biofouling and antifouling - development of new systems, with a low environmental impact, to protect materials from corrosion and marine organisms settlement (biocorrosion and biodeterioration).
- Techniques to analyze environmental impacts - development of monitoring and analysis systems able to point out the effects of anthropic activities on the marine environment.

To date he has published over 100 JRC scientific articles, more than 30 articles in national journals, 6 chapters of books and / or international and national books and has produced 65 oral presentations and over 84 posters at international and national conferences.

A detail of scientific publications is available at:

[https://www.researchgate.net/profile/Marco\\_Faimali](https://www.researchgate.net/profile/Marco_Faimali)

<https://scholar.google.it/citations?user=5S9c8HsAAAAJ&hl=it>

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### **Education and Selected Training Experiences:**

2003, Jun 20<sup>th</sup>. PhD in Marine Environmental Sciences, Genoa University. Project title: “*Balanus amphitrite* larval stages as alternative biological model in behavioural ecotoxicological bioassays”.

1992, Nov 23<sup>rd</sup>. MSc in Natural Sciences, Genoa University.

2006, May 7<sup>th</sup>-11<sup>th</sup>. Short Course: “Statistical assessment of dose response curves with free software”, SETAC Europe 16<sup>th</sup> Annual Meeting, The Hague (NL).

2002, Jul 7<sup>th</sup>-13<sup>th</sup>. Summer School on Biocorrosion (BRITE-EURAM III), Portsmouth University (UK).

2000, Sep 3<sup>rd</sup>-14<sup>th</sup>. International Course of Experimental Ecology “Design and Analysis of Ecological Experiments”, Lecce (I).

1994, Jan 13<sup>th</sup>-Jul 14<sup>th</sup>. Master Degree “Management of Aquatic Resources”, Tor Vergata University, Rome (I).

1994, Sep 17<sup>th</sup>-25<sup>th</sup>. Degree of Scientific Diving Researcher, International School for Scientific Diving (ISSD), Elba Island (I).

**Key qualifications:** Interdisciplinary approach to study the interaction between material/technology and marine ecosystem (biofouling, biofilm, biocorrosion, antifouling, environmental impact, marine ecotoxicology).

Ecology: Macrofauna surveys to assess species abundance/diversity in intertidal ecosystems. Substrate-organism interactions in larval settlement. Breeding of marine invertebrates.

Ecotoxicology: Standardisation of bioassays and biomarkers with marine organisms to characterise chemical and environmental matrixes.

Marine Technology: Antifouling technologies. Material biodeterioration (Biofouling, Biofilm and Biocorrosion). Water chemical treatments.. Development of low-impact antifouling technologies.

### **Professional experience:**

2018-2019 Director of IAS-CNR.

2018-2019 Head of the Genoa Unit of IAS-CNR.

2015-now. Head of the Genoa Unit of ISMAR-CNR.

2004-2015. Researcher at CNR-ISMAR, Genoa.

2001-2004. Research fellowships at CNR-ISMAR, “Marine ecology and ecotoxicological tests”.

1995-2001. Research fellowships at Institute of Metal Marine Corrosion (ICMM), CNR, Genoa, “Environmental impact of antifouling technologies”.

### **Scientific activities and responsibilities (past and present)**

I’m currently Director of IAS-CNR, consisting of 98 people and several post-doc and graduate researchers and PhD, and several master and bachelor students. I participated in 37 national/international projects, being project leader of 16. A list of selected relevant projects and collaborations with private companies follows:

2012-now:

WP leader of EU project CLAIM (Cleaning Litter by developing and Applying Innovative Methods in european seas) - H2020-BG-2017-1, IA Innovation action.

Task leader of EU project DUPLEXWASTE (Lean Duplex Stainless Steel for Urban and Industrial Waste Water) - EU H2020, Research Fund for Coal & Steel, RFCS-AM Accompanying measures, RFCS-PDP Pilot and demonstration project, RFCS-RPJ Research project.

Task leader of EU project EPHEMARE (Ecotoxicological effects of microplastics in marine ecosystems) JPI Oceans Pilot Call on ecological effects of microplastics.

Team leader of the task of biofouling prevention in the EU FP7 project JERICO (Towards a Joint European Research Infrastructure network for Coastal Observatories)

Team leader of the task of biofouling prevention in the EU FP7 project NeXOS (Next generation, Cost-effective, Compact, Multifunctional Web Enabled Ocean Sensor Systems Empowering Marine, Maritime and Fisheries Management)

Team leader of the task biocorrosion prevention in the EU project CCNS (Corrosion Control of Navy Ship) EDA (European Defense Agency)

WP leader of national project RITMARE, Flagship Project is one of the National Research Programmes on maritime and marine research funded by the Italian Ministry of University and Research.

Task leader of the project RAISE, Integrate Research on Antarctic Silverfish Ecology in the Ross sea in the framework of the Italian PNRA (Antarctic National Research Programme)

Team leader of several PNRA projects: POLICY (POLar fish Cytogenetic diversity) PNRA16\_00281; DISMAS (Informazioni biologiche ed ecologiche sull'Antarctic toothfish, *DISsostichus MAwsoni*, nel Mare di RosS), IMAGES (Radiazione adattativa dei pesci antartici Mappatura in situ di tratti evolutivamente rilevanti nel genoma dei Notothenioidei.).

2007. Project Leader in the Research Project with Ligurian regional EPA: "Studies to identify test models for toxicology". In charge of the European Community PO-CRO FSE Project "Development of a biofouling monitoring protocol for antifouling treatment optimization in industrial plants, and characterization of efficacy and eco-friendly performances of new experimental biocides".

2004-2007. Project Leader of the operative unit (o.u.) ISMAR-Genoa in the project EA-BIOFILMS - FP6-2003-NEST- n° 508866: "Electrochemical control of biofilm-forming micro-organisms: screening, identification and design of new knowledge-based technologies".

2006. Team leader of the o.u. ISMAR-Genoa in the project 93-T406-Rel-G009: "Validation of ecotoxicological bioassay for marine sediments", Veneto Regional Administration.

2006. Team Leader of the operative unit of ISMAR-Genoa in the project: "Environmental Impact of Antifouling Technologies for pleasure craft", Scientific and Technological Park of Liguria.

2004-now: Collaboration with NALCO Italy for biological monitoring and antifouling water treatment optimization at the ERG / Priolo Gargallo (Siracusa, Italy) and POLIMERI EUROPA / Brindisi (Italy) industrial plants.

2004-2005. Project Leader of the o.u. ISMAR-Genoa in the project "Taxa: standardization of specific toxicological tests with marine organisms for oil dispersant characterization", Italian Ministry of the Environment.

2003-2005. Project Leader of the project NATO CLG 979832: “Biomonitoring of Environmental Contamination by TBT in Mediterranean Coasts”.

2003-2004. Participation in the project: “Interactions between silica and marine biosystems: biochemical and ecological responses”, Italian Ministry of Research.

2002-2004. Participation in the project SENS\_PESTI QLK4-CT-2002-02264: “Tissue Engineering of Living Biosensors to evaluate risk for health by pesticides affecting the cholinergic neurotransmitter system” In collaboration with the Department of Biology, Genoa University.

2001-2004. Participation in the scientific consulting service ICMM – Ondeo Nalco Italy, for Tunisi “Carthagen Power Company (CPC)” Power Plant biological monitoring.

2002-2003. Participation in the project MEMOBIOMAR: “Ecophysiological, Ecotoxicological and Marine Biomonitoring Relevant Molecular and Cellular Methodologies”, Italian Ministry of Research. In collaboration with the Department of Biology, Genoa University.

2001-2002. Participation in COST action 520: “Biofouling prevention by active biocompounds”.

### **Communication tasks**

Since 2003 he has been very active in scientific divulgation initiatives, taking part to the organization of multimedia interactive laboratories (e.g. ODAS ITALIA 1 at Genoa Aquarium [http://www.urp.cnr.it/Boa\\_Odas/index.html](http://www.urp.cnr.it/Boa_Odas/index.html)), curating a permanent exhibition on fouling ([www.genoaportcenter.it](http://www.genoaportcenter.it)) and several educational laboratories on marine litter. He is co-author of an educational book (“micro&MACRO mare: dalle alghe alle balene” , Erga Editions) and he has been in the organization committee of three editions of a National Congress of Ecotoxicology (<http://www.isprambiente.gov.it/it/events/>). Moreover he has been in the last 10 years tutor of more than 30 degree and PhD thesis.

Currently member of the European Marine Board Communication Panel (EMBCP), a pan-European platform for marine science communicators to promote European Marine Board activities, to synergize outreach activities and to advocate ocean literacy ([www.marineboard.eu/operational-panels/communications-panel/2-uncategorised/90-mbcp-membership](http://www.marineboard.eu/operational-panels/communications-panel/2-uncategorised/90-mbcp-membership)).