

**FIORELLA PRADA**  
**RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY**  
**TENURE-TRACK ASSISTANT PROFESSOR**

Date of Birth: 07 July 1984

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Research Page: [www.fiorellaprada.com](http://www.fiorellaprada.com)

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<https://scholar.google.com/citations?user=rFn2eJYAAAAAJ&hl=it>

Languages:

Mother tongue: Spanish, Italian

Other Languages: English: Fluent reading, writing and speaking.

Portuguese: Fluent reading and speaking.

French: scholastic reading, writing and speaking.



**EDUCATION AND TRAINING**

Degree	Institution Conferring	Advisor(s)	Field	Dates
B.S.	University of Parma (Italy)	Francesco Nonnis Marzano	Natural Sciences	08 May 2003 – 12 July 2007
M.S.	University of Parma (Italy)	Francesco Nonnis Marzano, Stefano Goffredo	Ecology	23 Aug 2007 – 27 Apr 2010
Ph.D.	University of Bologna (Italy)	Stefano Goffredo	Biodiversity & Evolution	01 Jan 2011 – 08 May 2014

**PROFESSIONAL APPOINTMENTS**

Position	Institution; Advisor(s)	Funding Source	Topic	Dates
Postdoctoral Fellow	National Research Council - Institute for the Study of Anthropic Impact and Sustainability in the Marine Environment (Italy); Fabio Badalamenti	Ministry of Education, University and Research - Research Projects of National Interest: PRIN 2010-2011	Ecology, biology and morphometry of scleractinian coral <i>Astroides calycularis</i>	27 May 2014 – 26 Oct 2015
Postdoctoral Fellow	University of Bologna - Dept. of Biological, Geological and Environmental Sciences (BiGeA) (Italy); Stefano Goffredo	European Research Council (FP7 – IDEAS)	Ocean warming and acidification effects on growth and physiology of Mediterranean corals	01 Jan 2016 – 31 Dec 2016
Postdoctoral Fellow	University of Bologna - BiGeA (Italy); Stefano Goffredo	European Research Council (FP7 – IDEAS)	pH up-regulation in calcification physiology and skeletal features of corals living along natural pCO <sub>2</sub> gradients	01 Jun 2017 – 31 May 2019
Adjunct Professor	University of Bologna - School of Psychology and Education (Italy)	University of Bologna - School of Psychology and Education	Elements of Ecology – Master Degree Programme in Primary teacher education	24 Sept 2018 – 17 Sept 2021
Postdoctoral Fellow	University of Bologna - BiGeA (Italy); Marco Candela, Stefano Goffredo	H2020, Societal Challenges (Food Security, Sustainable Agriculture and Forestry, Marine, Maritime and Inland	Effects of cumulative human impact on Mediterranean corals as bio-indicators of marine ecosystem health	01 Jun 2019 – 31 Oct 2020

		Water Research and the Bioeconomy)		
Postdoctoral Fellow	University of Bologna - BiGeA (Italy); Giuseppe Falini, Stefano Goffredo	University of Bologna - BiGeA	Analysis of the photosynthetic efficiency and autotrophy:heterotrophy ratio of zooxanthellate corals along a natural acidification gradient	01 Jan 2021 – 31 Oct 2021
Postdoctoral Fellow	Rutgers University – Dept. of Marine and Coastal Sciences (DMCS) (USA), Paul Falkowski	Rutgers University - DMCS	Nutrient cycling and biomineralization in deep sea corals	01 Nov 2021 – 30 June 2022
Postdoctoral Associate	Rutgers University – Dept. of Marine and Coastal Sciences (DMCS) (USA), Paul Falkowski	National Aeronautics and Space Administration (NASA) Astrobiology Institute grant	Marine biomineralization and marine carbonate chemistry in deep time	01 July 2022 – 31 August 2023
Tenure-Track Assistant Professor	Rutgers University – DMCS	Rutgers University - DMCS	Biology/ecology of coral reefs and their trajectory on a changing ocean planet	01 September 2023 – present

### RESEARCH INTERESTS AND EXPERTISE

**Research interests** - Climate change effects on demography, reproduction, growth, morphology, skeletal mechanical properties, crystallography, mineralogy, biomineralization, d13C, d15N, and d18O stable isotope signatures in temperate and subtropical corals.

**Expertise** - Sample and data collection: Underwater field sampling and transplant experiments, aquarium experiments. Data analysis and visualization: RStudio, SPSS, Adobe Photoshop, Adobe Illustrator. Multi-scale morphology: Macro-scale biometric analyses, Computerized tomography and 3D reconstruction. Crystallographic and mechanical skeletal properties: X-ray diffractometry, Nanoindentation, Porosimetry, Nuclear magnetic resonance. Growth and population dynamics: Histology, sclerochronology by computerized tomography, age-based modeling of growth and demography. Biomineralization: Extraction and purification of skeletal proteins, Characterization and annotation of skeletal protein sequences (BLASTp, BLAST2GO), BCA Protein Assays, SDS-PAGE, Western-Blot.

### PEER REVIEWED PUBLICATIONS

#co-first; \*corresponding author

- [39] **Prada F**, Rosenthal Y, van de Schootbrugge B, Falkowski PG\* Will reef-building corals survive the Anthropocene? (*in preparation*)
- [38] Iluz D\*, **Prada F**, Abu-Gosh S, Mancuso A, Caroselli E, Tittarelli M, Goffredo S,\* Falini G, Pinchasov-Grinblat Y, Dubinsky Z Ocean acidification detrimentally affects mineralization and photosynthetic efficiency of the brown alga *Padina pavonica* at a CO<sub>2</sub> vent. *Bulletin of Marine Science* (*under review*)
- [37] Sani T#, **Prada F**#, Radi G, Caroselli E, Falini G, Dubinsky Z, Goffredo S\* (2024) Ocean warming and acidification detrimentally affect coral tissue regeneration at a Mediterranean CO<sub>2</sub> vent. *Science of the Total Environment*, 906: 167789. doi: 10.1016/j.scitotenv.2023.167789
- [36] **Prada F**#, Franzellitti S#, Caroselli E\*, Cohen I, Marini M, Campanelli A, Sana L, Mancuso A, Marchini C, Puglisi A, Candela M, Mass T, Tassi F, LaJeunesse T\*, Dubinsky Z, Falini G, Goffredo S\* (2023) Acclimatization of a coral-dinoflagellate mutualism at a CO<sub>2</sub> vent. *Communications Biology*, 6: 66. doi: 10.1038/s42003-022-04327-3
- [35] Mancuso A, Yam R, **Prada F**, Stagioni M, Goffredo S\* Shemesh A\* (2023) Oxygen and carbon isotope variations in *Chamelea gallina* shells: environmental influences and vital effects. *Geobiology*, 21: 119–132. doi: 10.1111/gbi.12526
- [34] Palladino G\*, Caroselli E\*, Tavella T, D’Amico F, **Prada F**, Mancuso A, Franzellitti S, Rampelli S, Candela M, Goffredo S, Biagi E (2022) Metagenomic shifts in mucus, tissue and skeleton of the coral *Balanophyllia europaea* living along a natural CO<sub>2</sub> gradient. *ISME Communications*, 2: 65. doi: 10.1038/s43705-022-00152-1

- [33] Palazzo Q, Stagioni M, Raaijmakers S, Belleman RG, **Prada F**, Hammel JU, Fermani S, Kaandorp J, Goffredo S, Falini G (2022) Multiscale analysis on otolith structural features reveals differences in ontogenesis and sex in *Merluccius merluccius* in the western Adriatic Sea. *Royal Society Open Science*, 9: 211943. doi: 10.1098/rsos.211943
- [32] Machado Toffolo M, Simoncini GA, Marchini C, Meschini M, Caroselli E, Franzellitti S, **Prada F**, Goffredo S (2022) Long term effects of an informal education program on tourist environmental perception. *Frontiers in Marine Science*, 9:830085. doi: 10.3389/fmars.2022.830085
- [31] **Prada F**, Brizi L, Franzellitti S, Mengoli S, Fermani S, Polishchuk I, Baraldi N, Ricci F, Palazzo Q, Caroselli E, Pokroy B, Giorgini L, Fantazzini P\*, Falini G\*, Goffredo S\*, Fabricius KE (2021) Coral micro- and macro-morphological skeletal properties in response to life-long acclimatization at CO<sub>2</sub> vents in Papua New Guinea. *Scientific Reports*, 11:19927. doi: 10.1038/s41598-021-98976-9
- [30] Marchini C, Gizzi F, Pondrelli T, Moreddu L, Marisaldi L, Montori F, Lazzari V, Airi V, Caroselli E, **Prada F**, Falini G, Dubinsky Z, Goffredo S (2021) Decreasing pH impairs sexual reproduction in a Mediterranean coral transplanted at a CO<sub>2</sub> vent. *Limnology & Oceanography*, 9999: 1–11. doi: 10.1002/lno.11937
- [29] Palazzo Q<sup>#</sup>, **Prada F**<sup>#</sup>, Steffens T, Fermani S, Samorì C, Bernardi G, Terrón-Sigler A, Sparla F\*, Falini G\*, Goffredo S\* (2021) The skeleton of *Balanophyllia* coral species suggests adaptive traits linked to the onset of mixotrophy. *Science of the Total Environment*, 148778. doi: 10.1016/j.scitotenv.2021.148778
- [28] Meschini M, Machado Toffolo M, Marchini C, Caroselli E, **Prada F**, Mancuso A, Franzellitti S, Locci L, Davoli M, Trittoni M, Nanetti E, Tittarelli M, Bentivogli R, Branchini S, Neri P, Goffredo S (2021) Reliability of data collected by volunteers: a nine-year citizen science study in the Red Sea. *Frontiers in Ecology and Evolution*, 9: 694258. doi: 10.3389/fevo.2021.694258
- [27] Meschini M, Machado Toffolo M, Caroselli E, Franzellitti S, Marchini C, **Prada F**, Boattini A, Brambilla V, Martinez G, Prati F, Simoncini G, Visentin M, Airi V, Branchini S, Goffredo S (2021) Educational briefings in touristic facilities promote tourist sustainable behavior and customer loyalty. *Biological Conservation*, 259: 109122. doi: 10.1016/j.biocon.2021.109122
- [26] Cheli A, Mancuso A, Azzarone M, Fermani S, Kaandorp J, Marin F, Montroni D, Polishchuk I, **Prada F**, Stagioni M, Valdré G, Pokroy B, Falini G\*, Goffredo S\*, Scarponi D\* (2021) Climate variation during the Holocene influenced the skeletal properties of *Chamelea gallina* shells in the North Adriatic Sea (Italy). *PLOS ONE* 16: e0247590. doi: 10.1371/journal.pone.0247590
- [25] Palladino G, Rampelli S, Scicchitano D, Musella M, Quero GM, **Prada F**, Mancuso A, Seyfarth AM, Turrioni S, Candela M, Biagi E\* (2021) Impact of marine aquaculture on the microbiome associated with nearby holobionts: the case of *Patella caerulea* living in proximity of sea bream aquaculture cages. *Microorganisms* 9: 455. doi: 10.3390/microorganisms9020455
- [24] Meschini M, Prati F, Simoncini GA, Airi V, Caroselli E, **Prada F**, Marchini C, Machado Toffolo M, Branchini S, Brambilla V, Covi C, Goffredo S (2021) Environmental Awareness Gained During a Citizen Science Project in Touristic Resorts Is Maintained After 3 Years Since Participation. *Frontiers in Marine Science*, 8: 584644. doi: 10.3389/fmars.2021.584644
- [23] Caroselli E, Frapiccini E, Franzellitti S, Palazzo Q, **Prada F**, Betti M, Goffredo S, Marini M (2020) Accumulation of PAHs in the tissues and algal symbionts of a common Mediterranean coral: skeletal storage relates to population age structure. *Science of the Total Environment* 743: 140781. doi: 10.1016/j.scitotenv.2020.140781
- [22] Franzellitti S\*, **Prada F**, Viarengo A, Fabbri E (2020) Evaluating bivalve cytoprotective responses and their regulatory pathways in a climate change scenario. *Science of the Total Environment* 137733. doi: 10.1016/j.scitotenv.2020.137733
- [21] Savinelli B, Fernández TV, Galasso NM, D’Anna G, Pipitone C, **Prada F**, Zenone A, Badalamenti F, Musco L (2020) Microplastics impair the feeding performance of a Mediterranean habitat-forming coral. *Marine Environmental Research*, 155: 104887. doi: 10.1016/j.marenvres.2020.104887
- [20] Wall M<sup>#</sup>, **Prada F**<sup>#</sup>, Fietzke J, Caroselli E, Dubinsky Z, Fantazzini P, Brizi L, Weiner S, Mass T, Franzellitti S, Montagna P, Falini G, Goffredo S\* (2019) Linking internal carbonate chemistry regulation and calcification in corals growing at a Mediterranean CO<sub>2</sub> vent. *Frontiers in Marine Science* 6: 699. doi: 10.3389/fmars.2019.00699
- [19] **Prada F**, Musco L\*, Alagna A, Agnetta D, Beccari E, D’Anna G, Giacalone VM, Pipitone C, Vega Fernández T, Goffredo S, Badalamenti F (2019) Anthropogenic impact is negatively related to coral health in Sicily (Mediterranean Sea). *Scientific Reports* 9: 13469. doi:10.1038/s41598-019-49713-w

- [18] **Prada F**, Yam R, Levy O, Caroselli E, Falini G, Dubinsky Z, Goffredo S\*, Shemesh A\* (2019) Kinetic and metabolic isotope effects in zooxanthellate and non-zooxanthellate Mediterranean corals along a wide latitudinal gradient. *Frontiers in Marine Science*, 6: 522. doi: 10.3389/fmars.2019.00522
- [17] Mancuso A, Stagioni M, **Prada F**, Scarponi D, Piccinetti C, Goffredo S (2019) Environmental influence on calcification of the bivalve *Chamelea gallina* along a latitudinal gradient in the Adriatic Sea. *Scientific Reports*, 9: 11198. doi: 10.1038/s41598-019-47538-1
- [16] Caroselli E, Gizzi F, **Prada F**, Marchini C, Airi V, Kaandorp J, Falini G, Dubinsky Z, Goffredo S (2019) Low and variable pH decreases recruitment efficiency in populations of a temperate coral naturally present at a CO<sub>2</sub> vent. *Limnology & Oceanography*, 64: 1059-1069. doi:10.1002/lno.11097
- [15] Franzellitti S\*, Airi V, Calbucci D, Caroselli E, **Prada F**, Voolstra C, Mass, Falini G., Fabbri E, Goffredo S (2018) Transcriptional response of the heat shock gene hsp70 aligns with differences in stress susceptibility of shallow-water corals from the Mediterranean Sea. *Marine Environmental Research*, 140:444-454. doi: 10.1016/j.marenvres.2018.07.006
- [14] Ingrosso G, Abbiati M, Badalamenti F. ... **Prada F**, Ponti M, Rindi F, Russo GF, Sandulli R, Villamor A, Zane L, Boero F (2018) Mediterranean bioconstructions along the Italian coast. *Advances in Marine Biology*, 79:61-136. doi: 10.1016/bs.amb.2018.05.001
- [13] Iluz D, Fermani S, Ramot M, Reggi M, Caroselli E, **Prada F**, Dubinsky Z, Goffredo S, Falini G (2017) Calcifying response and recovery potential of the brown alga *Padina pavonica* under ocean acidification. *ACS Earth and Space Chemistry*, 1:316-323. doi: 10.1021/acsearthspacechem.7b00051
- [12] Gizzi F, de Mas L, Airi V, Caroselli E, **Prada F**, Falini G, Dubinsky Z, Goffredo S (2017) Reproduction of an azooxanthellate coral is unaffected by ocean acidification. *Scientific Reports*, 7: 13049. doi:10.1038/s41598-017-13393-1
- [11] Samorì C, Caroselli E, **Prada F**, Reggi M, Fermani S, Dubinsky Z, Goffredo S, Falini G\* (2017) Ecological relevance of skeletal fatty acid concentration and composition in Mediterranean scleractinian corals. *Scientific Reports*, 7:1929. doi: 10.1038/s41598-017-02034-2
- [10] Maor-Landaw K, Ben-Asher HW, Karako-Lampert S, Salmon-Divon M, **Prada F**, Caroselli E, Goffredo S\*, Falini G, Dubinsky Z, Levy O\* (2017) Mediterranean versus Red sea corals facing climate change, a transcriptome analysis. *Scientific Reports*, 7:42405. doi: 10.1038/srep42405
- [09] **Prada F**, Caroselli E, Mengoli S, Brizi L, Fantazzini P, Capaccioni B, Pasquini L, Fabricius KE., Dubinsky Z, Falini G, Goffredo S\* (2017) Ocean warming and acidification synergistically increase coral mortality. *Scientific Reports*, 7:40842. doi: 10.1038/srep40842
- [08] Reggi M, Samori C, Fermani S, Gizzi F, **Prada F**, Dubinsky Z, Goffredo S\*, Falini G\* (2017) Influence of intra-skeletal coral lipids on calcium carbonate precipitation. *CrystEngComm*, 18:8829-8833. doi: 10.1039/C6CE01939K
- [07] Musco L\*, **Prada F\***, D'Anna G, Galasso NM, Pipitone C, Fernández TV, Badalamenti F (2017). Turning casualty into opportunity: fragmenting dislodged colonies is effective for restoring reefs of a Mediterranean endemic coral. *Ecological Engineering*, 98: 206-212. doi: 10.1016/j.ecoleng.2016.10.075
- [06] Fantazzini P\*, Mengoli S, Pasquini L, Bortolotti V, Brizi L, Mariani M, Di Giosia M, Fermani S, Capaccioni B, Caroselli E, **Prada F**, Zaccanti F, Levy O, Dubinsky Z, Kaandorp JA, Konglerd P, Hammel JU, Dauphin Y, Cuif J-P, Weaver JC, Fabricius KE, Wagermaier W, Fratzl P, Falini G\*, Goffredo S\* (2015) Gains and losses of coral skeletal porosity changes with ocean acidification acclimation. *Nature Communications*, 6:7785. doi: 10.1038/ncomms8785
- [05] Pasquini L\*, Molinari A, Fantazzini P, Reggi M, Goffredo S, Caroselli E, **Prada F**, Levi O, Dubinsky Z, Falini G\* (2015) Isotropic microscale mechanical properties of coral skeletons. *Journal of the Royal Society Interface*, 12: :20150168-20150168. doi 10.1098/rsif.2015.0168
- [04] Goffredo S, Mancuso A, Caroselli E, **Prada F**, Dubinsky Z, Falini G, Levy O, Fantazzini P, Pasquini L (2015) Skeletal mechanical properties of Mediterranean corals along a wide latitudinal gradient. *Coral Reefs*, 34: 121-132. doi 10.1007/s00338-014-1222-6
- [03] Goffredo S\*, **Prada F**, Caroselli E, Capaccioni B, Zaccanti F, Pasquini L, Fantazzini P, Fermani S, Reggi M, Levy O, Katharina F, Dubinsky Z, Falini G\* (2014) Biomineralization control related to population density under ocean acidification. *Nature Climate Change*, 4:593-597. doi:10.1021/cg5003572
- [02] Fantazzini P\*, Mengoli S, Evangelisti S, Pasquini L, Mariani M, Brizi L, Goffredo S, Caroselli E, **Prada F**, Falini G, Levy O, Dubinsky Z (2013) Time-Domain NMR study of Mediterranean scleractinian corals

reveals skeletal-porosity sensitivity to environmental changes. *Environmental Science & Technology*, 47:12679-12686. doi: 10.1021/es402521b

- [01] Caroselli E, **Prada F**, Pasquini L, Nonnis Marzano F, Zaccanti F, Falini G, Levy O, Dubinsky Z, Goffredo S\* (2011) Environmental implications of skeletal micro-density and porosity variation in two scleractinian corals. *Zoology*, 114:255-264. doi: 10.1016/j.zool.2011.04.003

## **SYMPOSIA AND CONFERENCES**

**Attendance.** Forams 2023 - International Symposium on Foraminifera, June 26 – June 30, 2023 - Perugia, Italy.

**Chair.** Session “How can innovative techniques to investigate calcification and its mechanism shed light into the past, present and future of coral reef organisms? / How do new insights into biomineralization help us understand the reef calcification response to global climate change?”. Chairs: Alexander Venn, Sylvie Tambutté, Anton Eisenhauer, Virginie Chamard, Ed Hathorne, **Fiorella Prada**, Stefano Goffredo, Tali Mass, Jeana Drake. 14<sup>th</sup> and 15<sup>th</sup> International Coral Reef Symposium (Online), 18-23 July 2021, 3-8 July 2022.

### *In extenso congress proceedings*

**Prada F**, Caroselli E, Zaccanti F, Capaccioni B, Falini G, Levy O, Dubinsky Z, Goffredo S (2013) Ocean acidification effects on benthic Mediterranean organisms along a natural CO<sub>2</sub> gradient. Joint International Scientific Diving Symposium, American Academy of Underwater Sciences and European Scientific Diving Panel, Curaçao, 24-27 October 2013. American Academy of Underwater Sciences, p. 231-233

### **Abstracts**

Di Fazio V, Falini G, Raffaele G, Ghiroldi C, Goffredo S, Mancuso A, Marchini C, Montagna P, **Prada F**, Taviani M (2023) Skeletal properties of the coral *Desmophyllum dianthus* are related to the aragonite saturation state along a depth gradient in the Mediterranean Sea. 14<sup>th</sup> Symposium of the International Fossil Coral and Reef Society (IFCRS), Poland, 10-16 September 2023 (Poster)

Bahn V, Chafee T, Tikoo SM, Jung J-I, Channa A, **Prada F**, Sherell R, Falkowski P (2022) Can Corals Record High Resolution Changes in Earth’s Magnetosphere? AGU Fall Meeting, 12-16 December (Oral)

Franzellitti S, Airi V, Poli D, Calbucci D, Caroselli E, **Prada F**, Voolstra CR, Mass T, Falini G, Fabbri E, Goffredo S (2018) Transcriptional responses of the heat shock gene hsp70 to thermal stress in shallow- water corals: the influence of physiological plasticity and life history traits. 31<sup>st</sup> Congress of the New European Society for Comparative Physiology and Biochemistry, Porto (Portugal), 9-12 September (Oral).

**Prada F**, Franzellitti S, Caroselli E, Mass T, Voolstra C, Falini G, Fabbri E, Goffredo S (2021). Transcriptional response of the hsp70 gene to thermal stress in Mediterranean corals: influence of physiological plasticity and life history traits. 14<sup>th</sup> International Coral Reef Symposium (Online), 18-23 July 2021 (Poster).

Palazzo Q, **Prada F**, Bernardi G, Terrón Sigler A, Sparla F, Falini G, Goffredo S (2021) Coral skeletal properties and composition of three phylogenetically related species of the genus *Balanophyllia*. 14<sup>th</sup> International Coral Reef Symposium (Online), 18-23 July 2021 (Poster).

Meschini M, Prati F, Simoncini GA, Airi V, Caroselli E, **Prada F**, Marchini C, Machado Toffolo M, Branchini S, Brambilla V, Covi C, Goffredo S (2021) Analysis of long-term effects of Citizen Science projects: can environmental education mitigate mass tourism impacts on ecosystems? 14<sup>th</sup> International Coral Reef Symposium (Online), 18-23 July 2021 (Poster).

Sani T, **Prada F**, Caroselli E, Dubinsky Z, Falini G, Goffredo S (2021) Low pH and high temperature inhibit coral lesion recovery at a CO<sub>2</sub> vent. 14<sup>th</sup> International Coral Reef Symposium (Online), 18-23 July 2021. (Talk).

Cheli A, Mancuso A, **Prada F**, Baseotto A, Falini F, Goffredo S, Scarponi D (2021) Climate change influence on calcification of the bivalve *Chamelea gallina* in the Adriatic Sea: exploring a temporal gradient from the Holocene to modern days. EGU General Assembly 2021 (Online), 19-30 April. (Talk).

Wall M, **Prada F**, Fietzke J, Caroselli E, Dubinsky Z, Brizi L, Fantazzini P, Franzellitti S, Mass T, Montagna P, Falini G, Goffredo S (2020) Linking internal carbonate chemistry regulation and calcification in corals growing at a Mediterranean CO<sub>2</sub> vent. Conservation Paleobiology Symposium, Bologna (Italy), 3-4 February. (Talk)

**Prada F**, Wall M, Fietzke J, Caroselli E, Dubinsky Z, Fantazzini P, Brizi L, Weiner S, Mass T, Franzellitti S, Montagna P, Falini G, Goffredo S (2019) Unpuzzling pH up-regulation and calcification in corals growing at CO<sub>2</sub> Mediterranean vents. 13<sup>th</sup> International Symposium on Fossil Cnidaria and Porifera, Modena (Italy), 3-6

September. (Talk).

- Savinelli B, Galasso NM, D'Anna G, Di Stefano G, Pipitone C, **Prada F**, Vega Fernández T, Zenone A, Badalamenti F, Musco L (2019) Wasting time handling waste: microplastics impair the feeding performance of a Mediterranean coral. 50<sup>th</sup> Conference for the Italian Society for Marine Biology (SIBM), Livorno (Italy), 19-14 June. (Poster).
- Falini G, Fermani S, Caroselli E, **Prada F**, Airi V, Goffredo S (2017) Corals: calcification process and response to ocean acidification. BiGeA Recounts – Climatic Changes and Sea: Risks and Implications, Ravenna (Italy), 21 December. (Talk).
- Prada F**, Caroselli E, Mengoli S, Fantazzini P, Capaccioni B, Pasquini L, Levy O, Weaver JC, Fabricius KE, Dubinsky Z, Falini G, Goffredo S (2016) Ocean warming and acidification synergistically increase coral mortality. 13<sup>th</sup> International Coral Reef Symposium, Honolulu, Hawai'i (USA), 19-24 June. (Talk)
- Caroselli E, **Prada F**, Capaccioni B, Levy O, Falini G, Dubinsky Z, Kaandorp J, Goffredo S (2016) Growth and demography of the Mediterranean endemic solitary coral *Balanophyllia europaea* living along a natural pCO<sub>2</sub> gradient. 13<sup>th</sup> International Coral Reef Symposium, Honolulu, Hawai'i (USA), 19-24 June. (Talk)
- Gizzi F, de Mas L, Airi V, Caroselli E, **Prada F**, Capaccioni B, Levy O, Falini G, Dubinsky Z, Goffredo S (2016) Short-term exposure at CO<sub>2</sub> vent affect spermatogenesis in a temperate non-zooxanthellate coral. 13<sup>th</sup> International Coral Reef Symposium, Honolulu, Hawai'i (USA), 19-24 June. (Talk)
- Musco L, Pipitone C, Agnetta D, Alagna A, D'Anna G, Di Stefano G, Giacalone VM, Gristina M, **Prada F**, Vega Fernández T, Badalamenti F (2016) Distribution of the orange stony coral *Astroides calycularis* along the Italian coasts. 47<sup>th</sup> Conference for the Italian Society for Marine Biology (SIBM), Turin (Italy), 13-17 June. (Poster)
- Prada F**, Caroselli E, Capaccioni B, Zaccanti F, Fantazzini P, Falini G, Dubinsky Z, Goffredo S (2016) The underwater crater of Panarea: a natural laboratory for ocean acidification studies on benthic calcifiers. "BiGeA Day – The researchers tell about BiGeA" – 1<sup>st</sup> Edition: annual conference of the Department of Biological, Geological and Environmental Sciences (BiGeA), University of Bologna (UNIBO). Bologna, 1 June. (Talk)
- Fantazzini P, **Prada F**, Caroselli E, Capaccioni B, Mengoli S, Pasquini L, Levy O, Weaver JC, Fabricius KE, Dubinsky Z, Falini G, Goffredo S (2015) Differential synergistic adverse effect of increased sea temperature and acidity on corals. International Scientific Conference "Our Common Future Under Climate Change", Paris (France), 7-10 July. (Talk)
- Caroselli E, **Prada F**, Capaccioni B, Levy O, Falini G, Dubinsky Z, Kaandorp J, Goffredo S (2015) Growth and population dynamics of the Mediterranean endemic solitary coral *Balanophyllia europaea* living along a natural pCO<sub>2</sub> gradient. 2015 ASLO Aquatic Sciences Meeting, Granada (Spain), 22-27 February. (Talk)
- Gizzi F, de Mas L, Marisaldi L, Lazzari V, Airi V, Caroselli E, **Prada F**, Falini G, Dubinsky Z, Goffredo S (2015) Effects of ocean acidification on the reproductive output of three Mediterranean corals transplanted at an underwater crater characterized by CO<sub>2</sub> emissions. 2015 ASLO Aquatic Sciences Meeting, Granada (Spain), 22-27 February. (Talk)
- Prada F**, Caroselli E, Capaccioni B, Levy O, Fabricius KE, Weaver JC, Falini G, Dubinsky Z, Goffredo S (2015) Different sensitivity of Mediterranean scleractinian corals to seasonal changes in temperature along a natural CO<sub>2</sub> gradient. 2015 ASLO Aquatic Sciences Meeting, Granada (Spain), 22-27 February. (Talk)
- Prada F**, Caroselli E, Capaccioni B, Levy O, Fabricius KE, Weaver JC, Falini G, Dubinsky Z, Goffredo S (2014) Different sensitivity of Mediterranean scleractinian corals to seasonal changes in temperature along a natural CO<sub>2</sub> gradient. Diving for Science 2014: American Academy of Underwater Sciences 33<sup>rd</sup> Scientific Symposium, Sitka (Alaska), 9-13 September. (Poster).
- Prada F**, Caroselli E, Capaccioni B, Falini G, Levi O, Dubinsky Z, Zaccanti F, Goffredo S (2013) Different sensitivities among Mediterranean scleractinian corals to enhanced ocean acidification. ICCB 2013: The international conference on coelenterate biology, Eilat (Israel) 1-5 December 2013. (Talk)
- Goffredo S, **Prada F**, Caroselli E, Capaccioni B, Reggi M, Fermani S, Fantazzini P, Pasquini L, Levi O, Dubinsky Z, Falini (2013) Biomineralization and population density of benthic marine calcifiers along a natural carbon dioxide gradient. ICCB 2013: The international conference on coelenterate biology, Eilat (Israel) 1-5 December 2013. (Talk)

- Prada F**, Caroselli E, Capaccioni B, Falini G, Levy O, Zaccanti F, Dubinsky Z, Goffredo S (2013) Ocean acidification effects on benthic Mediterranean organisms along a natural CO<sub>2</sub> gradient. 10th Annual Conference of the Israeli Association for Aquatic Sciences, Mikhmoret (Israel), 13-14 March. (Talk)
- Goffredo S, **Prada F**, Caroselli E, Capaccioni B, Falini G, Levy O, Dubinsky Z, Zaccanti F (2012) Different Sensitivity among scleractinian corals to enhanced ocean acidification. 12th International Coral Reef Symposium, Cairns (Australia), 9-13 July. (Talk).
- Goffredo S, **Prada F**, Caroselli E, Levy O, Falini G, Dubinsky Z (2011) Effects of sea acidification on Mediterranean corals in a volcanic site with underwater CO<sub>2</sub> emissions. LLXXII National meeting of Italian Zoological Union, Bologna (Italy), 5-8 September (Original language: Italian). (Talk).
- Goffredo S, Caroselli E, **Prada F**, Pasquini L, Nonnis Marzano F, Zaccanti F (2010) Identification of tolerant/sensible Mediterranean coral species in face of global change. EURO ISRS symposium 2010: Reefs in a changing environment, Wageningen (Netherlands), 13-17 December. (Talk).

## **TEACHING AND MENTORING**

### ***Courses taught***

2018-2021: Elements of Ecology – Master Degree Programme in Primary teacher education, Department of Science Education, University of Bologna (Italy)

### ***Scheduled to teach***

2023 Fall semester: Freshman Seminar, “Oceanography House” (co-taught with Scott Glenn, Josh Kohut, and Oscar Schofield), Department of Marine and Coastal Sciences, Rutgers University (USA)

2024 Spring semester: The Biology of Living in the Ocean: Boundary Ecosystems and Processes, Department of Marine and Coastal Sciences, Rutgers University (USA)

### ***Graduate students***

- 2020/2021 Oscar Wallnowefer, M.S. in Biodiversity and Evolution, Department of Biological, Geological and Environmental Sciences (BiGeA), University of Bologna (UNIBO)
- 2020/2021 Teresa Sani, M.S. in Biodiversity and Evolution, BiGeA, UNIBO
- 2019/2020 Valentina di Fazio, M.S. in Sciences and Management of Nature, curriculum in Global Change Ecology and Sustainable Development Goals, BiGeA, UNIBO
- 2019/2020 Marzia Piane, Single Cycle Master Degree in Primary Teacher Education, Department of Education Studies "Giovanni Maria Bertin", UNIBO
- 2016/2017 Quinzia Palazzo, M.S. in Molecular and Cellular Biology; Department of Pharmacy and Biotechnology, UNIBO
- 2016/2017 Nicola Baraldi, M.S. in Biodiversity and Evolution, BiGeA, UNIBO

### ***Undergraduate students***

- 2023/2024 M'Kayla Arielle Rosen, Special Problems in Marine Sciences 11:628:497 (2 credits), School of Environmental and Biological Sciences (Major: Marine Science)
- 2022/2023 Filippo Montanari, B.S. in Biological Sciences, BiGeA, UNIBO
- 2019/2020 Christian Ghiroldi, B.S. in Biological Sciences, BiGeA, UNIBO
- 2018/2019 Teresa Sani, B.S. in Natural Sciences, BiGeA, UNIBO
- 2015/2016 Eleonora Beccari, B.S. in Biological Sciences, BiGeA, UNIBO

## **PARTICIPATION TO INTERNATIONAL RESEARCH-TRAINING COURSES**

May 16 – 25, 2022, Microsensor Analysis in the Environmental Sciences, Marine Biological Station Rønbjerg, Denmark. Summary: Introduction to state-of-art microenvironmental analysis and to the application of electrochemical/optical microsensor techniques and bioimaging in the environmental sciences.

#### **INVITED ACADEMIC SCIENTIFIC SEMINARS**

- 4 October 2023 “Adaptive potentials of marine calcifiers in an ever-changing ocean”. Seminar at the Department of Earth and Planetary Sciences, Rutgers University.
- 18 September 2023 “Adaptive potentials of marine calcifiers in an ever-changing ocean”. Seminar at the Department of Marine and Coastal Sciences, Rutgers University.
- 22 August 2023 “Adaptive potentials of marine calcifiers in an ever-changing ocean”. Seminar at the Research Center in Sciences of the Sea and Limnology (CIMAR) of the University of Costa Rica.
- 28 Sept 2020, 14 Oct 2021, 17 Oct 2022 “Marine Chemosynthesis in the deep, dark ocean”. Seminar for course “Ecology”, Bachelor Degree Course in Biological Sciences, Department of Biological, Geological and Environmental Sciences (BiGeA), University of Bologna (UNIBO) (Italy).
- 28 Nov 2018 “Coral population biology”. Seminar during the course “Ecology”, Bachelor Degree Course in Biological Sciences, BiGeA, UNIBO (Italy).
- 10 Oct 2018 “Coral population biology”. Seminar during the course “Ecology”, Bachelor Degree Course in Biological Sciences, BiGeA, UNIBO (Italy).
- May 2014, 2015; Mar 2016; Apr 2017 “Ocean warming and acidification effects on marine benthic calcifiers, in the face of global climate change”. BiGeA, UNIBO (Italy).

#### **HONORS AND AWARDS**

- 2016 – Best poster Award: awarded at the 47<sup>th</sup> Conference for the Italian Society for Marine Biology (SIBM), Turin (Italy), 13-17 June. Poster entitled “Distribution of the orange stony coral *Astroides calycularis* along the Italian coasts” by Musco L, Pipitone C, Agnetta D, Alagna A, D’Anna G, Di Stefano G, Giacalone VM, Gristina M, Prada F, Vega Fernández T, Badalamenti F, awarded as best poster within the Theme “Bioconstructors”.
- 2015 – Scientific research and technological innovation award "Claudio Bonivento", awarded by Lions Club Bologna, Bologna (Italy), 11 May 2015. Honorable mention, PhD thesis entitled: “Effects of temperature and acidity on Mediterranean benthic calcifiers, in the face of Global Climate Change”.
- 2013 – Marco Polo Grant awarded by University of Bologna for scientific training abroad at Bar-Ilan University (Supervisor: Prof. Zvy Dubinsky).
- 2013 – Student award: awarded at the ICCB 2013: The international conference on coelenterate biology, Eilat (Israel) 1-5 December 2013. Awarded as one of the 15 qualifying and selected (non-Israeli) PhD students whose abstracts were accepted for oral or poster presentation at the Conference.

#### **DIVING QUALIFICATION**

- 2019 PADI/DAN Basic Research Operator. Obtained within the framework of the MPA ENGAGE project, funded by Interreg Mediterranean, aiming to help Mediterranean MPAs assess their ecological and socio-economic vulnerability to Climate Change impacts through citizen science-based observations on climate change effects in marine coastal ecosystems.
- 2019 Specialty Diver – Suex Advanced. Professional Association of Diving Instructors (PADI)
- 2017 Specialty Diver - Deep Diver. Professional Association of Diving Instructors (PADI)
- 2017 Rescue Diver. Professional Association of Diving Instructors (PADI)



2010-2021	Qualified (after regular yearly Medical examinations) for scientific diving activity
2008	<u>Advanced Open Water Diver. National Association of Underwater Instructors (NAUI)</u>
2002	<u>Open Water Diver. Professional Association of Diving Instructors (PADI)</u>

### **FIELD EXPERIENCE**

22-25 May 2021	<u>Expedition leader.</u> Panarea Island (Sicily, Italy). Coral, seawater, and environmental parameter sampling for analyses within the project “CoralWarm” (ERC) and “ShellWarm” (National Geographic).
10-14 February 2020	<u>Expedition leader.</u> Panarea Island (Sicily, Italy). Coral, seawater, and environmental parameter sampling for analyses within the project “CoralWarm” (ERC) and “ShellWarm” (National Geographic).
26-29 September 2019	<u>Expedition leader.</u> Panarea Island (Sicily, Italy). Coral, seawater, and environmental parameter sampling for analyses within the project “CoralWarm” (ERC) and “ShellWarm” (National Geographic).
23-25 September 2019	<u>Expedition leader.</u> Licata (Sicily, Italy). Coral, seawater, and environmental parameter sampling for analyses within the project “CIRCLES” (H2020).
21-28 July 2019	<u>Team member and co-organizer.</u> Panarea Island (Sicily, Italy). Coral, seawater, and environmental parameter sampling for analyses within the projects “CoralWarm”, “CIRCLES” and “ShellWarm”.
03 January 2018	<u>Team member and co-organizer.</u> Calafuria (Livorno). Coral sampling for transcriptomics analyses.
16 June – 4 July 2015	<u>Team member.</u> Natural Reserve Lo Zingaro (Sicily, Italy). Coral and larvae sampling for analyses within the project ”Biocostruzioni costiere: Struttura, Funzione e Gestione”.
10 Oct – 15 Oct 2014	<u>Team member.</u> Natural Reserve Lo Zingaro, Castellammare del Golfo, San Vito lo Capo (Sicily, Italy). Coral transplant sampling for analyses within the project ”Biocostruzioni costiere: Struttura, Funzione e Gestione”.
23 May – 7 July 2014	<u>Team member.</u> Marettimo Island, Favignana Island, Natural Reserve Lo Zingaro, Capo Zafferano, Capo Gallo – Isola delle Femmine MPA, Plemmirio MPA (Sicily, Italy). Coral, nudibranch, plankton sampling for analyses within the project ”Biocostruzioni costiere: Struttura, Funzione e Gestione”.
22-30 June 2012	<u>Team member and co-organizer.</u> Panarea Island (Sicily, Italy). Coral transplant and coral, vermetid, algae, water, gas, and environmental parameter sampling for analyses within the project “CoralWarm”.
27 April-5 May 2012	<u>Team member and co-organizer.</u> Panarea Island (Sicily, Italy). Coral transplant and coral, vermetid, algae, water, gas, and environmental parameter sampling for analyses within the project “CoralWarm”.
23 November-4 December 2011	<u>Team member and co-organizer.</u> Panarea Island (Sicily, Italy). Coral transplant and coral, vermetid, algae, water, gas, and environmental parameter sampling for analyses within the project “CoralWarm”.
1-8 June 2011	<u>Team member and co-organizer.</u> Panarea Island (Sicily, Italy). Coral transplant and coral, vermetid, algae, water, gas, and environmental parameter sampling for analyses within the project “CoralWarm”.
1-9 March 2011	<u>Team member and co-organizer.</u> Panarea Island (Sicily, Italy). Coral transplant and coral, water, gas, and environmental parameter sampling for analyses within the project “CoralWarm”.

12-18 November 2010	<u>Team member and co-organizer</u> . Panarea Island (Sicily, Italy). Coral transplant and coral, water, gas, and environmental parameter sampling for analyses within the project “CoralWarm”.
13-17 September 2010	<u>Team member and co-organizer</u> . Panarea Island (Italy). Coral transplant and coral, water, gas, and environmental parameter sampling for analyses within the project “CoralWarm”.
5-8 July 2010	<u>Team member</u> . Scilla (Calabria, Italy). Coral, water, and environmental parameter sampling for analyses within the project “CoralWarm”.
29 June – 1 July 2010	<u>Team member</u> . Palinuro (Campania, Italy). Coral, water, and environmental parameter sampling for analyses within the project “CoralWarm”.

### **PROFESSIONAL SOCIETIES**

2022 – today	American Association for the Advancement of Science (AAAS)
2020 – today	American Academy of Underwater Sciences (AAUS)
2016	International Society for Reef Studies (ISRS)
2014 - today	Association for the Sciences of Limnology and Oceanography (ASLO)

### **SERVICE AND OUTREACH**

*Reviewer:* Scientific Reports, PLoS ONE, Frontiers in Marine Science, Frontiers in Physiology, Marine Pollution Bulletin, Biodiversitas Journal of Biological Diversity, Marine Biodiversity

#### *Review Editor:*

- Frontiers in Marine Science – Global Change and the Future Ocean
- Frontiers in Physiology – Aquatic Physiology

#### *Guest Editor*

- Marine Science and Engineering
- Frontiers in Marine Science – Marine Molecular Biology and Ecology

#### 1) **Public outreach activities:**

- (i) From 2011-2021, I participated every year to the European Researchers’ Night presenting my research to the general public by interacting directly with adults and children through discussions and simple experiments.
- (ii) From 2017-2021, I participated every year to the Science Degrees Project, which aims to promote enrolments to Scientific Degree Courses. High school students would attend the event in which I gave lectures and organized laboratory training activities linked to our research to bring students closer to scientific topics.
- (iii) From 2011-2021, I participated every year to the European Diving Show in Bologna, the most important European exhibition entirely dedicated to the diving world, presenting my research which involved extensive fieldwork and scientific diving.

#### 2) From 2016-2021, I have contributed to **environmental education** and **citizen science projects**:

- (i) “Glocal Education”, an environmental education project aiming to study the effects of environmental education programs on tourists’ awareness, attitude and behavior towards the environment
- (ii) “Sea Sentinels – Divers United for the Environment”, a citizen science-based environmental monitoring project aiming to evaluate Mediterranean key species distribution and abundance by involving volunteers (e.g. recreational divers) in data collection.