



Aurelie Moulins

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WORK EXPERIENCE

 **CIMA RESEARCH FOUNDATION** – SAVONA, ITALY

EDUCATIONAL RESEARCHER – 1 JAN 2014 – CURRENT

Principal Investigator of "Jason-JAugeS pOur la sécurité de la Navigation". Funds: INTERREG Italia-Francia Marittimo 2021-2027 (FESR). Duration: 2025-2027.

Associated Investigator of "SEasteMAR-Sviluppo di sistemi per la Sicurezza E l'Allerta nello Spazio marino Transfrontaliero ed Evoluzione di Modelli per l'Adattamento al Rischio climatico environmental protection MARino". Funds: INTERREG Italia-Francia Marittimo 2021-2027 (FESR). Duration: 2024-2026. <https://interreg-marittimo.eu/web/seastemar>

Investigator of "Description of the habitat of Cuvier's beaked whale for the MFSD". Funds: ISPRA -IT. Duration: 2023-2024.

Principal Investigator of "Sub-task 4.5.5-Modular assessments for sustainable development of blue tourism: Ligurian territorial waters as a case study ". Funds: National Biodiversity Future Center (NBFC) - Activity 4 "Biodiversity mainstreaming in Maritime Spatial Planning". Duration: 2023-2025.

Leader of the partnership & Principal Investigator of "Predictability study of impacts provoked by bottom sludge during the construction of multipurpose platform: displacement of the dyke". Funds: Genoa-Savona Port Authority. Duration: 2021-2023.

Expert to support the INRH (Institut National de Recherche Halieutique, Morocco) for the "Study of the common bottlenose dolphin in Mediterranean Moroccan waters". Funds: ACCOBAMS. Duration: 2020-2021.

Associated Investigator of "SICOMARplus-Transboundary system for safety at sea As part of the risks of navigation and environmental protection MARino". Funds: INTERREG Italia-Francia Marittimo 2014-2020 (FESR). Duration: 2018-2021. <http://interregmaritime.eu/it/web/sicomarplus/progetto>

Leader of the partnership & Principal Investigator of "EcoSTRIM-Eco-Sustainable TouRism Investments to stimulate and promote the competitiveness and innovation of the Marine cross-border cooperation activities". Funds: INTERREG Italia-Francia Marittimo 2014-2020 (FESR). Duration: 2018-2021. <http://interreg-maritime.eu/it/web/ecosttrim/progetto>

Principal Investigator of "Pelagos Noise-Noise impact estimated from marine traffic on sperm whale (P. macrocephalus) and Cuvier's beaked whale (Z. cavirostris). Funds: Pelagos International. Duration: 1 year (2014).

Additional tasks include:

- since 2000, participating to cetacean data collections during sea survey in the Mediterranean Sea (>300 days offshore; surveys >30'000 NM covered) using multi-disciplinary methods and protocols;
- since 2004, coordinating submitted project applications to EU, National or Private calls;
- since 2004, collecting tissue samplings & participating to necropsies during cetacean stranding over the Ligurian Coast in collaboration with the CREDIMA (and before IZSTO), > 30 cetaceans in particular fin whales, sperm whales, Cuvier's beaked whales, Risso's dolphins, pilot whales, bottlenose dolphins and striped dolphins;
- since 2011, constantly supporting Coast Guards in Savona Province to manage cetacean strandings including alive stranded animals. > 50 events.
- since 2016, actively supporting ACCOBAMS and Pelagos Sanctuary and participating to Scientific Meetings;
- since 2017, reporting of the scientific activities to the IWC portal;
- since 2019, coordinator of the delivering the "High Quality Whale-Watching®" Certificate in Italy as the Italian partner assigned by ACCOBAMS and Pelagos Sanctuary

 **UNIVERSITY OF GENOA** – GENOA, ITALY

ACADEMIC COURSES – 1 OCT 2021 – CURRENT

Since 2021 - **Professor under contract** of "Cetacean ecology and monitoring techniques". Msc in Marine Biology and Ecology. University of Genoa, Italy. Course duration: 32h.

In 2004-2006 - **Professor under contract** of "Academic teaching "Ecology". Bsc in Environmental Engineer. University of Genoa, Savona, Italy. Course duration: 30h.

In 2004-2006 - **Professor under contract** of "Academic teaching "Monitoring methods for cetaceans". Msc in Marine Biology and Ecology. University of Genoa. Genoa. Course duration: 30h

 **REGIONE LIGURIA** – SAVONA, ITALY

PROFESSIONAL CERTIFICATIONS – 1 JAN 2020 – JUN 2020

Co-Organizer of the Professional Regional certification and **Lecture** “TuMa Accreditation to become Accompagnatore di Turismo Marino”. Regional training with EU FSE funds.

Moodle online platform. Course duration: 200h.

EDUCATION AND TRAINING

1 SEP 2004 – 30 MAR 2008 Lyon, France

PH. D. IN MARINE BIOLOGY WITH LABEL DOCTOR EUROPEUS UCBL - Claude Bernard University Lyon 1, Lyon (France)

Thesis Towards an integrated approach and management of pelagic biodiversity inside a Marine Protected Area: Case of the cetacean populations in the Pelagos Sanctuary (North-western Mediterranean Sea)

1 SEP 2000 – 30 JUN 2001 Aix-Marseille, France

MASTER DEGREE (SECOND YEAR) DIPLÔME D'ETUDES APPROFONDIES University of Aix-Marseilles II

LANGUAGE SKILLS

Mother tongue(s): **FRENCH**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C1	C1	C1	C1	C1
ITALIAN	C2	C2	C1	C1	C1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

Chapters

[CB2] Azzellino A., Airoidi S., Gaspari S., Lanfredi C., **Moulins A.**, Podestà M., Rosso M. and Tepsich P. 2016. Risso's dolphin, *Grampus griseus*, in the Western Ligurian sea: trends in population size and habitat use. In: Mediterranean Marine Mammal Ecology and Conservation. Publisher: Advances in Marine Biology, Editors: Notarbartolo Di Sciarra G, Podestà M, Curry BE. Pages 205-232. DOI:10.1016/bs.amb.2016.08.003

[CB1] Podestà M., Azzellino A., Canadas A., Frantzis A., **Moulins A.**, Rosso M., Tepsich P. and Lanfredi C. 2016. Cuvier's beaked whale, *Ziphius cavirostris*, distribution and occurrence in the Mediterranean sea: high-use areas and conservation threats. In: Mediterranean Marine Mammal Ecology and Conservation. Publisher: Advances in Marine Biology. Editors: Notarbartolo Di Sciarra G, Podestà M, Curry BE. Pages 103-140. DOI:10.1016/bs.amb.2016.07.007

Peer-review articles

[PR29] Arcangeli A, Azzolin M, Babey L, David L., Garcia-Garin O., **Moulins A** et al 2024. Looking for reliable species distribution models for low-density cetacean species: Compared effectiveness of SDMs for *G. griseus*, *G. melas*, *Z. cavirostris* in the Mediterranean Sea based on long-term fixed-transect data. Aquatic Conservation: Marine and Freshwater Ecosystems. 34(3). DOI:[10.1002/aqc.4115](https://doi.org/10.1002/aqc.4115)

[PR28] Corrias V., **Moulins A.**, Filiciotto F. et Giardina F. 2024. The social behaviour of the common bottlenose dolphin *Tursiops truncatus* (Montagu, 1821) in the coastal waters of Lampedusa Island (Strait of Sicily, Italy). Aquatic Conservation: Marine and Freshwater Ecosystems. 34(1). DOI:[10.1002/aqc.4034](https://doi.org/10.1002/aqc.4034)

[PR27] Gnone, G.; Bellingeri, M.; Airoidi, S.; Gonzalvo, J.; David, L.; Di-Méglio, N.; Cañadas, A.M.; Akkaya, A.; Awbery, T.; Mussi, B.; [...] **Moulins A** et al 2023. Cetaceans in the Mediterranean Sea: Encounter Rate, Dominant Species and Diversity Hotspots. Species, and Diversity. Diversity. 15, 321. DOI:[10.3390/d15030321](https://doi.org/10.3390/d15030321)

[PR26] Tenan S., **Moulins A.**, Tepsich P., Bocconcelli A., Verga A., Ballardini M., Nani B., Papi D., Motta G., Sanz-Aguilar A., Rosso M. 2023. Immigration as the main driver of population dynamics in a cryptic cetacean. Ecology and Evolution. 13(2). DOI:[10.1002/ece3.9806](https://doi.org/10.1002/ece3.9806)

[PR25] G. Gnone; M. Bellingeri; S. Airoidi; J. Gonzalvo; L. David; N. Di-Méglio; A. M. Cañadas; A. Akkaya baş; T. Awbery; B. Mussi; **A. Moulins**; et al. 2023. Cetaceans in the Mediterranean Sea: Encounter Rate, Dominant Species, and Diversity Hotspots. Diversity. DOI: [10.3390/d15030321](https://doi.org/10.3390/d15030321)

[PR24] David, L., Arcangeli, A., Tepsich, P., Di-Méglio, N., Roul, M., Campana, I., [...] **Moulins A** et al 2022. Computing ship strikes and near miss events of fin whales along the main ferry routes in the Pelagos Sanctuary and adjacent west area, in summer. Aquatic Conservation: Marine and Freshwater Ecosystems. 32(1), DOI: [10.1002/aqc.3781](https://doi.org/10.1002/aqc.3781)

[PR23] Onoufriou A.B., Gaggiotti O.E., Aguilar de Soto N., McCarthy M.L., Morin P.A., Rosso M., Dalebout M., Davison N., Baird R.W., Baker C.S., Berrow S., Brownlow A., Burns D., Caurant F., Claridge D., Constantine R., Demaret F., Dreyer S., Duras M., Durban J.W., Frantzis A., Freitas L., Genty G., Galov A., Hansen S.S., Kitchener A.C., Martin V., Mignucci-Giannoni A.A., Montano V., **Moulins A.**, Olavarria C., Poole M.M., Reyes Suárez C., Rogan E., Ryan C., Schiavi A., Tepsich P., Urban R.J., West K., Olsen M.T. and Carroll E.L. 2022. Biogeography in the deep: Hierarchical population genomic structure of two beaked whale species. Global Ecology and Conservation, 40(December 2022):e02308. DOI:10.1016/j.gecco.2022.e02308.

[PR22] Galli M., Tepsich P., Bainsi M., Panti C., Rosso M., Vafeiadou A., Pantelidou M., **Moulins A.**, Fossi M.C. (2022). Microplastic abundance and biodiversity richness overlap: Identification of sensitive areas in the Western Ionian Sea. Marine Pollution Bulletin, 177(2022), 113550 DOI=10.1016/j.marpolbul.2022.113550.

[PR21] Grossi F., Lahaye E., **Moulins A.**, Borroni A., Rosso M. and Tepsich P. Locating ship strike risk hotspots for fin whale (*Balaenoptera physalus*) and sperm whale (*Physeter macrocephalus*) along main shipping lanes in the North-Western Mediterranean Sea, Ocean & Coastal Management (212,2021,105820). <https://doi.org/10.1016/j.ocecoaman.2021.105820>.

[PR20] Ham G.S., Lahaye E., Rosso M., **Moulins A.**, Hines E. and Tepsich P. (2021). Predicting summer fin whale distribution in the Pelagos Sanctuary (north-western Mediterranean Sea) to identify dynamic whale–vessel collision risk areas. Aquatic Conservation: Marine and Freshwater Ecosystems, 31(8), 2257– 2277. <https://doi.org/10.1002/aqc.3614>

[PR19] Bainsi M., Panti C., Fossi M.C., Tepsich P., Jiménez B., Coomber F., Bartolini A., Muñoz-Amanz J., **Moulins A.** and Rosso M., 2021. First assessment of POPs and cytochrome P450 expression in Cuvier's beaked whales (*Ziphius cavirostris*) skin biopsies from the Mediterranean Sea. Sci Rep 10, 21891. <https://doi.org/10.1038/s41598-020-78962-3>

[PR18] Tepsich P., Schettino I., Atzori F., Azzolin M., Campana I., Carosso L., Cominelli S., Crosti R., David L., Di-Méglio N., Frau F., Gregoriotti M., Mazzucato V., Monaco C., **Moulins A.**, Paraboschi M., Pellegrino G., Rosso M., Roul M., Saintignan S. and Arcangeli A. 2020. Trends in summer presence of fin whales in the Western Mediterranean Sea Region: new insights from a long-term monitoring program. PeerJ 8:e10544

[PR17] Tepsich P., Borroni A., Zorgno M., Rosso M. and **Moulins A.**, 2020. Whale Watching in the Pelagos Sanctuary: Status and Quality Assessment. Frontiers in Marine Science 7:596848. DOI=10.3389/fmars.2020.596848

[PR16] Caruso F., Sciacca V., Parisi I., Viola S., de Vincenzi G., Bocconcelli A., Mooney TA., Sayigh L., Li S., Filiciotto F., **Moulins A.**, Tepsich P. and Rosso M., 2019. Acoustic recordings of rough-toothed dolphin (*Steno bredanensis*) offshore Eastern Sicily (Mediterranean Sea). The Journal of the Acoustical Society of America, 146(3):EL286-EL292. DOI: 10.1121/1.5126118.

[PR15] Cañadas A., Aguilar de Soto A., Aissi M., Arcangeli A., Azzolin M., Nagy AB., Bearzi G., Campana I., Chicote C., Cotte C., Crosti R., David L., Di Natale A., Fortuna C., Frantzis A., Garcia P., Gazo M., Gutiérrez-Xarxa R., Holcer D., Laran S., Lauriano G., Lewis T., **Moulins A.**, Mussi B., Notarbartolo di Sciarra G., Panigada S., Pastor X., Politi E., Pulcini M., Raga JA., Rendell L., Rosso M., Tepsich P., Tomas J., Tringali M. and Roger Th., 2017. The challenge of habitat modelling for threatened low density species using heterogeneous data: The case of Cuvier's beaked whales in the Mediterranean. Ecological Indicators 85:128-136. DOI:10.1016/j.ecolind.2017.10.021.

[PR14] Morgado C., Martins A., Rosso M., **Moulins A.** and Tepsich P., 2017. Fin Whale Presence and Distribution in the Pelagos Sanctuary: Temporal and Spatial Variability Along 2 Fixed-Line Transects Monitored in 2009-2013. International Journal of Marine and Environmental Sciences 1(1):1-14. https://www.cosmoscholars.com/images/A_PDFS/IJMES/IJMES-V1N1A1-Tepsich.pdf

[PR13] Coomber F., **Moulins A.**, Tepsich P. and Rosso M., 2016. Sexing free-ranging adult Cuvier's beaked whales (*Ziphius cavirostris*) using natural marking thresholds and pigmentation patterns. Journal of Mammalogy 97(3):879-890. DOI:10.1093/jmammal/gyw033

- [PR12] Coomber F., D'Inca M., Rosso M., Tepsich P., Notarbartolo Di Sciara G. and **Moulins A.**, 2016. Description of the vessel traffic within the north Pelagos Sanctuary: Inputs for Marine Spatial Planning and management implications within an existing international Marine Protected Area. *Marine Policy* 69:102-113. DOI:10.1016/j.marpol.2016.04.013
- [PR11] Cominelli S., **Moulins A.**, Rosso M. and Tepsich P., 2015. Fin whale seasonal trends in the Pelagos Sanctuary, Mediterranean Sea. *Journal of Wildlife Management* 80(3):490-499. DOI:10.1002/jwmg.1027
- [PR10] Campana I., Crosti R., Angeletti D., Carosso L., David L., Di-Méglio N., **Moulins A.**, Rosso M., Tepsich P. and Arcangeli A., 2015. Cetacean response to summer maritime traffic in the Western Mediterranean Sea. *Marine Environmental Research* 109:1-8. DOI:10.1016/j.marenvres.2015.05.009
- [PR09] Aïssi M., Arcangeli A., Crosti R., Daly Yahia M.N., Loussaief B., **Moulins A.**, Pellegrino G., Rosso M., Tringali LM. and Tepsich P., 2015. Cetacean occurrence and spatial distribution in the central Mediterranean sea using ferries as platform of observation. *Russian Journal of Marine Biology* 41(5):343-350. DOI:10.1134/S1063074015050028
- [PR08] Tepsich P., Rosso M., Halpin PN and **Moulins A.**, 2014. Habitat preferences of two deep-diving cetacean species in the northern Ligurian Sea. *Marine Ecology Progress Series* 508:247-260 . DOI:10.3354/meps10851
- [PR07] Gnone G., Bellingeri M., Dhermain F., Dupraz F., Nuti S., Bedocchi D., Rosso M., **Moulins A.**, Würtz M., McCrear R., Azzellino A., Airolidi S., Fortunato N., Laran S., David L., Di Meglio N., Monelli P., Trucchi R., Fossa F. and Würtz M., 2011. Distribution, abundance, and movements of the bottlenose dolphin (*Tursiops truncatus*) in the Pelagos Sanctuary MPA (north-west Mediterranean Sea). *Aquatic Conservation: Marine and Freshwater Ecosystems* 21(4):372-388. doi:10.1002/aqc.1191.
- [PR06] Rosso M., Ballardini B., **Moulins A.** and Würtz M., 2011. Natural markings of Cuvier's beaked whale *Ziphius cavirostris* in the Mediterranean Sea. *African Journal of Marine Science*, 33(1):45–57. doi:10.2989/1814232X.2011.572336
- [PR05] Aïssi M., Celona a., Comparetto G., Mangano R., Würtz M. and **Moulins A.**, 2008. Large-scale distribution of fin whale (*Balaenoptera physalus*) in the Central Mediterranean Sea. *Journal of the Marine Biological Association of the UK* 88(6):1253-1261. DOI:10.1017/S0025315408000891
- [PR04] **Moulins A.**, Ballardini M., Rosso m. and Würtz M., 2008. Partition of the Pelagos Sanctuary (north-western Mediterranean Sea) into hotspots and coldspots for cetacean sightings. *Journal of the Marine Biological Association of the UK* 88(6):1273-1281. DOI:10.1017/S0025315408000763
- [PR03] Rosso M., **Moulins A.** and Würtz M., 2008. Colour patterns and pigmentation variability on striped dolphin *Stenella coeruleoalba* (Meyen, 1833) in North-Western Mediterranean sea. *Journal of the Marine Biological Association of the UK* 88(6):1211-1219. DOI:10.1017/S0025315408001641
- [PR02] **Moulins A.**, Nani B., Rosso M. and Würtz M., 2007. Aspects of distribution of Cuvier's beaked whale (*Ziphius cavirostris*) in relation to topographic features in the Pelagos Sanctuary (north-western Mediterranean sea). *Journal of the Marine Biological Association of the UK* 87(1):177-186. DOI:10.1017/S0025315407055002
- [PR01] **Moulins A.** and Würtz M. 2005. Occurrence of a herd of female sperm whales and their calves (*Physeter catodon*), off Monaco, in the Ligurian Sea. *Journal of the Marine Biological Association of the UK* 85(1):213-214. DOI:10.1017/S0025315405011094h