

	<p>Alessandro Cresci</p> <p>Bjelland 30B, 5392 Storebø, Norway</p> <p>(47) 48 50 62 96</p> <p>alessandro.cresci@hi.no; alessandrocresci90@gmail.com; alessandro.cresci@rsmas.miami.edu</p> <p>https://fishlarvae.org/people/postdocs-and-students/alessandro-cresci/</p> <p>Sex Male Date of birth 20/03/1990 Nationality Italian</p>
<p>CURRENT POSITION</p>	<p>1352 Postdoctoral Scientist with 1110 Researcher competence. (2020) Institute of Marine Research, Norway. Project 15655: Assessing the effects of offshore wind turbine farms on fish early life stages.</p>
<p>EDUCATION</p>	<p>Ph.D. (2015-2019) in <i>Ocean Sciences</i>, University of Miami, Rosenstiel School of Marine and Atmospheric Science</p> <p>M.Sc. (2014) in <i>Biology of Marine Production</i>, Università degli Studi di Napoli Federico II, Italy - final grade: 110/110 cum laude</p> <p>B.Sc. (2012) in <i>Biological Sciences</i>, Università degli Studi di Napoli Federico II, Italy - final grade: 110/110 cum laude</p> <p>High school diploma (2009) in <i>Humanities</i> at Pansini High School, Naples, Italy.</p>
<p>ADVISORY WORK</p>	<ul style="list-style-type: none"> Member of the IMR advisory group on offshore wind (2020-2024) Young Ambassador of the European Marine Board (EMB). (2020-2022) Member of the EMB Working Group (WG) on Underwater Noise. (2020-2021) Member of the ICES Working Group on Offshore Wind Development and Fisheries. (2020)
<p>ADVISORY WORK – PUBLICATIONS</p>	<ul style="list-style-type: none"> Thomsen, F., Mendes, S., Bertucci, F., Breitzke, M., Ciappi, E., Cresci, A. Debusschere, E., Ducatel, C., Folegot, F., Juretzek, C., Lam, F-P., O’Brien, J., dos Santos, M. E. Addressing underwater noise in Europe: Current state of knowledge and future priorities. Kellett, P., van den Brand, R., Alexander, B., Muniz Piniella, A., Rodriguez Perez, A., van Elslander, J., Heymans, J. J. [Eds.] <i>Future Science Brief 7 of the European Marine Board, Ostend, Belgium</i>. ISSN: 2593-5232. ISBN: 9789464206104. DOI: 10.5281/zenodo.5534224. (2021)
<p>FINANCIAL SUPPORT OF RESEARCH</p>	<p>Current funding</p> <p>01/2020 – 12/2023 - <i>Institute of Marine Research</i>, “Assessing the effects of offshore wind turbine facilities on fish early life stages.” (Principal Investigators: Howard Browman, Anne Berit Skiftesvik, Caroline Durif, Alessandro Cresci). NOK 9 500 000</p> <p>2020 - <i>Institute of Marine Research</i>, “Equipment to assess risk of offshore wind turbine facilities.” (Principal Investigators: Howard Browman, Anne Berit Skiftesvik, Caroline Durif, Alessandro Cresci). NOK 1 400 000</p>
<p>WORK EXPERIENCE</p>	<p>Postdoctoral Research scientist</p>

Institute of Marine Research, Norway

- Currently conducting research on the effects of offshore wind turbines on the behavior and dispersal ecology of fish larvae.
- Designing and conducting field and laboratory experiments to expose larval fish to operational noise and electromagnetic radiation produced by offshore wind farms.
- Conducting additional research in ecotoxicology, focusing on the effects of exposure to pollutants (oil, chemo-pharmaceuticals used in aquaculture) on behavior and dispersal of zooplankton.
- Conducting additional research to investigate the migratory strategies of early life stages of commercially important fish using biophysical coupled models.

Graduate Research Fellow*University of Miami, Rosenstiel School of Marine and Atmospheric Science, Miami, FL, USA*

- Designed and executed numerous behavioral and ecologically relevant experiments both in the field and in laboratory settings to assess orientation and navigation abilities of early-life stages of commercially important Norwegian fish.
- Performed complex experiment in electromagnetic laboratory facilities to investigate the use of the Earth's magnetic field in fish migrations (magnetic sense).
- Led and worked collaboratively on several side projects in ecotoxicology focused on the impact of anthropogenic stressors on commercial Norwegian marine species. Specifically, impact of oil on the orientation of haddock larvae (*Melanogrammus aeglefinus*) *in situ* and effects of chemicals used in aquaculture on the behavior of juvenile European lobsters (*Homarus gammarus*).
- Designed and conducted experiments to investigate magnetic orientation behavior in haddock larvae (*M. aeglefinus*).
- Designed and conducted experiments both *in situ* and in a magnetic laboratory to assess the orientation abilities of Atlantic herring larvae (*Clupea harengus*).
- Designed and conducted tests *in situ* to assess the orientation and swimming abilities of Norwegian saithe (*Pollachius virens*).
- Conceived, designed and led a multistep research project on the early stages of the long-migrating and critically endangered European eel (*Anguilla anguilla*).
- Used and implemented biophysical models of larval dispersal with empirical observations of lunar compass-based orientation behavior of European glass eels and assessed its role in eel recruitment to the North Sea.
- Published peer review articles for every research project listed above
- Conducted day and nighttime sampling of tropical coral reef larvae and performed behavioral experiments to assess their behavior on the reef at night.

Graduate and Undergraduate Research Fellow*Federico II University of Naples, Italy*

	<ul style="list-style-type: none"> • Designed and conducted experiments to study how Earth's-strength magnetic fields influence the orientation to water currents in zebrafish (<i>Danio rerio</i>). • Developed a new methodology involving electromagnetic swimming tunnels to study the interaction between magnetic sense and rheotaxis (orientation to water currents) in aquatic animals. • Published the results and the methodology as multiple peer review articles. • Developed a new methodology to conduct benthic biological census surveys using lasers to project the survey area (laser-census), which allowed the surveys to be conducted by only one diver at a time. • Conducted the benthic biological survey of the Nisida volcanic island, Naples Italy (2012)
TEACHING EXPERIENCE	<ul style="list-style-type: none"> • Served as teaching assistant for the class "MSC232 - Introduction to Marine Biology – laboratory" at the <i>University of Miami</i> during the years 2016-2017. Prepared and gave lectures, organized labs and fieldwork for students, helped with their homework assignments during office hours. • Supervised and mentored undergraduate students during data analysis, fieldwork and laboratory techniques.
GOOGLE SCHOLAR CITATION ANALYSIS RESULTS	<p><i>At 16 November 2021</i></p> <p>138 cites; h-index = 7; i10-index = 6</p> <p>Note: All of my publications were published within the last 3.5 years and, therefore, have not had much time to accrue citations.</p>
PAPERS IN PEER-REVIEWED INTERNATIONAL SCIENTIFIC JOURNALS	<ol style="list-style-type: none"> 1. C. M. F. Durif, H. H. Stockhausen, A. B. Skiftesvik, A. Cresci, D. Nyqvist, & H. I. Browman. A unifying hypothesis for the spawning migrations of temperate anguillid eels. <i>Fish and Fisheries</i>, 00, 1– 18 (2021). 2. K. T. Halvorsen, T. Larsen, H. I. Browman, C. Durif, N. Aasen, L. A. Vøllestad, A. Cresci, T. K. Sjørdalen, R. M. Bjelland, & A. B. Skiftesvik. Movement patterns of temperate wrasses (Labridae) within a small marine protected area. <i>Journal of Fish Biology</i>, 1–6 (2021). 3. A. Cresci, A. D. Sandvik, P. N. Sævik, B. Ådlandsvik, M. J. Olascoaga, P. Miron, C. M. F. Durif, A. B. Skiftesvik, H.I. Browman, F. B. Vikebø. The lunar compass of European glass eels (<i>Anguilla anguilla</i>) increases the probability that they recruit to North Sea coasts. <i>Fisheries Oceanography</i> (2020). 4. A. Cresci, C.B. Paris, H.I. Browman, A. B. Skiftesvik, S. Shema, R. Bjelland, C. M. F. Durif, M. Foretich, C. Di Persia, V. Lucchese, F. B. Vikebø, E. Sørus. Effects of exposure to low concentrations of oil on expression of cytochrome P4501a and routine swimming speed of Atlantic haddock (<i>Melanogrammus aeglefinus</i>) larvae in situ. <i>Environmental Science & Technology</i> (2020). Altmetric = 5; cited by = NA. 5. A. Cresci, A comprehensive hypothesis on the migration of European glass eels (<i>Anguilla anguilla</i>). <i>Biological Reviews</i>. (2020). Altmetric = 5; cited by = NA. 6. A. Cresci, B.J.M. Allan, S. Shema, A.B. Skiftesvik & H.I. Browman. Orientation behavior and swimming speed of Atlantic herring larvae (<i>Clupea harengus</i>) in situ and in laboratory

	<p>exposures to rotated artificial magnetic fields. <i>Journal of Experimental Marine Biology and Ecology</i>, 526: 151358. (2020). PlumX metric = 17; cited by = NA.</p> <ol style="list-style-type: none"> 7. A. Cresci, C. M. Durif, C. B. Paris, C. R. Thompson, S. Shema, A. B. Skiftesvik, & H. I. Browman. The relationship between the moon cycle and the orientation of glass eels (<i>Anguilla anguilla</i>) at sea. <i>Royal Society Open Science</i>, 6(10). (2019). Altmetric = 53; cited by = 5. 8. A. Cresci, C. M. Durif, C. B. Paris, S. D. Shema, A. B. Skiftesvik, H.I. Browman. Glass eels (<i>Anguilla anguilla</i>) imprint the magnetic direction of tidal currents from their juvenile estuaries. <i>Nature Communications Biology</i>, 2, 366. (2019). Altmetric = 70; cited by = 5. 9. A. Cresci, C. B. Paris, M. A. Foretich, C. M. Durif, S. Shema, C. J. E. O'Brien, F. B. Vikebø, Anne-Berit Skiftesvik, and H. I. Browman. Atlantic haddock (<i>Melanogrammus aeglefinus</i>) larvae have a magnetic compass that guides their orientation. <i>iScience</i>, 19, 1173-1178 (2019). PlumX metric = 62; cited by = 3. 10. A. Cresci, R. De Rosa, C. Agnisola. Assessing the Influence of Personality on Sensitivity to Magnetic Fields in Zebrafish. <i>Journal of Visualized Experiments</i>, (145). (2019). Cited by = 2. 11. A. Cresci, S. Frassiniet, M. Scanu, R. De Rosa, N. F. Putman, C. Agnisola. Zebrafish "personality" influences the sensitivity to magnetic fields. <i>Acta Ethologica</i>, 21, (195). (2018). Altmetric = 1; cited by = 4. 12. A. Cresci, O. B. Samuelsen, C. M. F. Durif, R. M. Bjelland, A. B. Skiftesvik, H. I. Browman and A. Agnalt. Exposure to teflubenzuron negatively impacts exploratory behavior, learning and activity of juvenile European lobster (<i>Homarus gammarus</i>). <i>Ecotoxicology and Environmental Safety</i>. 160, (216-221). (2018). PlumX metric = 73; cited by = 7. 13. A. Cresci, C. B. Paris, C. M. F. Durif, S. Shema, R. M. Bjelland, A. B. Skiftesvik, H. I. Browman, Glass eels (<i>Anguilla anguilla</i>) have a magnetic compass linked to the tidal cycle. <i>Science Advance</i>. 3, (2017). Altmetric = 154; cited by = 27. 14. A. Cresci, R. De Rosa, N.F. Putman, C. Agnisola. Earth-strength magnetic field affects the rheotactic threshold of zebrafish swimming in shoals. <i>Comparative Biochemistry and Physiology Part A: Molecular & Integrative Physiology</i>, 204, (169-176). (2017). PlumX metric = 51; cited by = 13.
<p>OUTREACH AND COVERAGE BY THE MASS MEDIA</p>	<ul style="list-style-type: none"> • New York Times - Glass Eels: See-Through, Slippery and Guided by Magnetism and Tides - https://www.nytimes.com/2017/06/09/science/glass-eels-magnetism-navigation.html • Hakai Magazine – Baby Haddock Show a Sense of Direction – https://www.hakaimagazine.com/news/baby-haddock-show-a-sense-of-direction/ • CBC – Podcast - Quirks & Quarks - Infant eels use the moon and an internal compass to finish their transocean migration - https://www.cbc.ca/radio/quirks/nov-2-2019-roadway-pollution-fungus-promotes-pancreatic-cancer-the-bang-in-the-big-bang-and-more-1.5342916/infant-eels-use-the-moon-and-an-internal-compass-to-finish-their-transocean-migration-1.5342926 • The Scientist – Image of the Day: Eel Compass - https://www.the-scientist.com/image-of-the-day/image-of-the-day--eel-compass-66565 • DailyMail - European glass eels have a MAGNETIC internal compass which helps them navigate their way across the Atlantic Ocean - https://www.dailymail.co.uk/sciencetech/article-7588857/European-glass-eels-MAGNETIC-memory-helps-remember-theyve-been.html

	<ul style="list-style-type: none"> • MONGABAY - Moon and Earth's magnetic field guide European eels on their epic migration - https://news.mongabay.com/2019/12/moon-and-earths-magnetic-field-guide-european-eels-on-their-epic-migration/ • NSF - https://www.nsf.gov/discoveries/disc_summ.jsp?cntn_id=299488&org=NSF&from=news • ScienceDaily - New study uncovers 'magnetic' memory of European glass eels - https://www.sciencedaily.com/releases/2019/10/191017162216.htm • Forsking.no - Hysa has a built-in compass - https://forskning.no/fisk-havet-havforskningsinstituttet/hysa-har-innebygd-kompass/1567658 • Forsking.no - Lice repellent prevents baby lobsters from hiding - https://forskning.no/havforskning-partner-havforskningsinstituttet/lusemiddel-hindra-baby-humrar-i-a-skiule-seg/1246120 • ScienceNorway - Haddock have an internal compass - https://partner.sciencenorway.no/fish-behaviour-institute-marine-research/haddock-have-an-internal-compass/1583727 • Norges Sildesalgslag - Sildelarver svømmer mot sola - https://www.sildelaget.no/no/media/nyhetsarkiv/siste-nytt/sildelarver-svoemmer-mot-sola/ • Fiskeribladet - New research shows that herring navigate by light - https://fiskeribladet.no/nyheter/?artikkel=72646 • Westfälische Nachrichten - Glasaale schwimmen nach innerem Kompass und Gezeitenrhythmus - https://www.wn.de/Welt/Wissenschaft/2852459-Tierwanderung-Glasaale-schwimmen-nach-innerem-Kompass-und-Gezeitenrhythmus • Science Orf.at - Innerer Kompass leitet junge Aale - https://science.orf.at/v2/stories/2848229/
<p style="text-align: center;">HONOURS AND AWARDS</p>	<ul style="list-style-type: none"> • <i>Walton Smith award</i> for best Ph.D. dissertation - RSMAS, University of Miami – (2020) • <i>Capt. Harry D. Vernon Jr. Scholarship</i> for studies on pelagic fish migrations - The Presidential Challenge Charitable Foundation – (2019) • <i>Best student seminar</i> – Ocean Sciences department, RSMAS, University of Miami – (2019) • <i>Best presentation skills</i> – Ocean Sciences department, RSMAS, University of Miami – (2018) • <i>Millero price for best student's peer-reviewed publication</i> - RSMAS, University of Miami – (2018) • <i>Best student seminar</i> – Ocean Sciences department, RSMAS, University of Miami – (2017)
<p style="text-align: center;">THESES AND INTERNSHIPS</p>	<ul style="list-style-type: none"> • Ph.D. Thesis – Magnetic and Celestial Orientation of Migrating European Glass Eels (<i>Anguilla anguilla</i>) • M. Sc. Thesis - The Orientation of Zebrafish (<i>Danio rerio</i>): roles of Rheotaxis and Magnetotaxis. (2014). • M. Sc. Internship - Maintenance of the aquarium at the Department of Biology, "Federico II University" (2014).

	<ul style="list-style-type: none"> • B. Sc. Thesis – Development of the Laser Underwater Visual Count (UVC) technique and application in the study of the benthic macrofauna of Porto Paone bay, Nisida island. (2012). • B. Sc. Internship - Marine Protected Area, Marine Reserve of Gaiola – 6 months at CSI Gaiola Onlus (2011).
ADDITIONAL EDUCATION	Green-Biotech: management of companies with sustainable impact.
CONFERENCES AND SEMINARS	<p>CONFERENCES</p> <ul style="list-style-type: none"> • ICES annual meeting 2021. Online conference (2021). • Speaker at ICES annual meeting 2017, Fort Lauderdale (2017). • Speaker at 39th Annual Larval Fish Conference, Vienna (2015). • Speaker at ICEMB, Naples (2014), National Congress on Interaction between electromagnetic fields and biological systems. • Poster author at ICBF 2014, International Congress on Biology of Fish, Edinburgh (2014). • Staff member at International Symposium on Wood Structure in Plant Biology and Ecology. 17-20 April, Naples Italy (2013). <p>SEMINARS</p> <ul style="list-style-type: none"> • MASTS Academy of Science Students' retreat (2021) – “Exploring How Fish Larvae Find Their Way at Sea” • Student seminar Ocean Sciences, RSMAS (2019)– “Magnetic imprinting in European glass eels” • Student seminar Ocean Sciences, RSMAS (2018)– “Lunar-based orientation in European glass eels” • Student seminar Ocean Sciences, RSMAS (2017)– “Magnetic compass in European glass eels” • Seminar at Federico II University of Naples (2012)- Ecology and variability of biomes related to different climate condition: the tropical rainforest, the arctic tundra and the spiny thicket through the exploration in the field (Madagascar, Alaska and Thailand) (2013).
WORKSHOPS	<ul style="list-style-type: none"> • Organized a workshop at the ICYMARE conference 2021 on the Role of Effective Communication in Science as a European Marine Board Young Ambassador. (2021)
COMPUTER SKILLS	<ul style="list-style-type: none"> • Proficient with Microsoft Word, Power Point, Excel • Computer Languages/Tools: R, MATLAB, LaTeX, Python-(beginner) • Graphic softwares: Photoshop, Inkscape
ADDITIONAL PERSONAL SKILLS	<ul style="list-style-type: none"> • Scuba diving licenses - PADI Advanced, PSS deep sea diver (50m), PSS rescue diver, PADI Enriched air diver. • Certified International boat drive (ICC boat licence), Norway

	<ul style="list-style-type: none"> • Certified boat driver in Norway • Certified boat driver in the state of Florida, USA • Certified freediver PFI • B.L.S license Body Life Support license 												
LANGUAGES	<p>Mother tongue: ITALIAN</p> <p>Other languages: ENGLISH</p> <table border="1" data-bbox="456 573 1430 716"> <thead> <tr> <th colspan="2">UNDERSTANDING</th> <th colspan="2">SPEAKING</th> </tr> <tr> <th>Listening</th> <th>Reading</th> <th>Spoken interaction</th> <th>Spoken production</th> </tr> </thead> <tbody> <tr> <td>C2</td> <td>C2</td> <td>C2</td> <td>C2</td> </tr> </tbody> </table> <p>Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user</p> <p>NORWEGIAN A2-B1</p> <p>Common European Framework of Reference for Languages</p>	UNDERSTANDING		SPEAKING		Listening	Reading	Spoken interaction	Spoken production	C2	C2	C2	C2
UNDERSTANDING		SPEAKING											
Listening	Reading	Spoken interaction	Spoken production										
C2	C2	C2	C2										