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## EDUCATION AND TRAINING

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|-----------------|---|
| 2019 to Present | <p>PhD candidate at the Centre for Earth Observation Science at the University of Manitoba and Fisheries and Oceans Canada (DFO), Winnipeg (Canada)</p> <p>Project title: Studying climate change and anthropogenic impacts on Arctic marine mammals using bioacoustics</p> <ul style="list-style-type: none"><li>▪ Won a scholarship by the Institut nordique du Québec to join the course “Initiation à la recherche et aux enjeux nordique” (2024)</li><li>▪ Successfully defended the PhD candidacy exam (2022)</li><li>▪ Working as a contractor for the Arctic region Marine Environmental Quality program of DFO as a passive acoustic data analyst</li><li>▪ Wrote 2 scientific reports for the Marine Environmental Quality program of DFO on vessel underwater noise and marine mammal reactions in Hudson Bay and 1 community report for scientific outreach in Nunavut (2020 to 2024)</li><li>▪ Was field leader and coordinator of a group of 4 during yearly 1-month summer fieldwork in the Churchill River (MB) to investigate vessel noise influence on belugas using passive acoustic monitoring and oceanographic moorings (2020 to 2022)</li><li>▪ Won a position to join the biogeochemical exchange processes at the sea-ice interfaces school in Nunavut (2022)</li><li>▪ Was field leader and coordinator of a group of 5 during a field campaign in the Churchill River to study the link between beluga movements and oceanographic and environmental parameters using passive acoustic triangulation (2019)</li><li>▪ Co-organized and conducted winter fieldwork in the Canadian Subarctic using drone surveys for remote sensing snow-covered sea ice ridge characterization and detection (2019)</li><li>▪ Was field leader and project coordinator of a group of 3 during 1-month lab work at the Sea-ice Environmental Research Facility, Winnipeg. Designed and conducted an experiment in a mesocosm for snow-covered sea ice ridge characterization and detection using snow sampling and remote sensing techniques (scatterometer, thermal imaging camera and LIDAR) (2019)</li><li>▪ Discovery of Sound in the Sea (DOSITS) Certificate of Professional Development (2020 to 2023)</li><li>▪ Won a position to join a sea-ice ecology field course in Greenland which included ice coring and bio-physical lab analysis (2019)</li></ul> |
| 2014 to 2018    | <p>Master's degree in Physics and Astrophysical Sciences at the University of Florence (Italy)</p> <p>Thesis title: Sea ice underside 3D topography and draft measurements with an upward-looking multibeam sonar mounted on a remotely operated vehicle</p> <ul style="list-style-type: none"><li>▪ 10 months of Erasmus+ “Thesis and traineeship” program in the Sea Ice Physics group of the Alfred-Wegener-Institut for polar and marine research (AWI) Bremerhaven (Germany)</li><li>▪ 1-month Arctic fieldwork to test my implemented method for sea ice thickness measurements using a multibeam sonar and an electromagnetic induction probe (GEM-2)</li><li>▪ 7 months of Erasmus+ “Study abroad” program at the Physics department of the University of Bergen (Norway)</li><li>▪ Graduated with the highest grade 110/110</li></ul>  |
| 2010 to 2013    | <p>Bachelor's degree in Physics and Advanced Technologies at the University of Siena (Italy)</p> <p>Thesis title: Applicazione dell'effetto LIAD all'intrappolamento di atomi di Rubidio e Francio</p> <ul style="list-style-type: none"><li>▪ Conducted thesis traineeship and lab work at the National Institute for Nuclear Physics of Legnaro (Italy) in an international group</li><li>▪ Graduated with the highest distinction 110 e lode/110</li></ul>   |

Scholarships,  
Honours and  
Awards

- Institut nordique du Québec Travel grant (2023)
- B.A. Baryla Geography Graduate Student Award (2023 and 2020)
- Faculty of Graduate Studies Research Completion Scholarship (2022)
- University of Hawaii at Manoa Travel grant (2022)
- International Arctic Science Committee and Society for Marine Mammalogy travel support to conferences (2022)
- ArcticNet scholarship for summer school (2022)
- John W. Davies Memorial Award - Society of Naval Architects and Marine Engineers, Arctic Section (2021)
- APECS Adrian Dahood-Fritz Memorial Fund scholarship (2021)
- Northern Research Fund Award for fieldwork (2021 and 2022)
- MT180 University of Manitoba Final Competition – Canadian National Finals (in French) (2021)
- 3MT competition University of Manitoba Finals (in English) (2021)
- Second place in the Arctic Change poster competition (2020)
- Winner of the Canada Science Publishing “Visualizing Science” image contest (2020)
- Winner of the front-page image of the Arctic Science Journal’s Arctic Wildlife (2020)
- Henley Graduate Scholarship in Natural Resources Development and Stewardship in Manitoba (2020 and 2021)
- University of Manitoba Graduate Fellowship (2018-2022)
- University of Manitoba International Graduate Student and Entrance Scholarships (2018)
- Tuscan Regional Award for Women in Science (2012)
- Italian Student National Award for Productivity (2011)

Publications

**Peer-reviewed articles**

- Coppolaro, V.L.M., Ausen, E.L., Loseto, L., Marcoux, M. (in progress) Using vessel underwater noise and marine mammal vocalizations towards the creation of a marine protected area
- Coppolaro, V.L.M., Marcoux, M., Ferguson, S., Petersen, S., Ausen, E.L. (in progress) First record of bowhead whales in the Churchill River estuary, Manitoba, Canada – a sign of range expansion?
- Coppolaro, V.L.M., Gupta, K., Loseto, L., Mundy, C.J., Marcoux, M. (under review) Seasonal and diurnal marine mammal presence in the proposed marine protected area of Southampton Island, Hudson Bay, Nunavut as revealed by passive acoustic monitoring
- Katlein, C., Schiller, M., Bünger, J.H., Coppolaro, V.L.M., Wenslandt, D., Nicolaus, M. (2017) A new remotely operated sensor platform for interdisciplinary observations under sea ice, *Frontiers in Marine Science* 4,281. DOI: 10.3389/fmars.2017.00281
- Coppolaro, V.L.M., Papi, N., Khanbekyan, A., Marinelli, C., Mariotti, E., Marmugi, L., Moi, L., Corradi, L., Dainelli, A., Arikawa, H., Ishikawa, T., Sakemi, Y., Calabrese, R., Mazzocca, G., Tomassetti, L., Ricci, L. (2014) Light desorption from Y neutralizer for Rb and Fr magneto-optical trap loading, *The Journal of Chemical Physics* 141, 134201. DOI: 10.1063/1.4896609

**Technical reports**

- Coppolaro, V.L.M. (2021) Marine mammal and vessel traffic acoustic survey off Coral Harbour, Nunavut, Canada. DFO internal Reports and Publications
- Coppolaro, V.L.M. (2021) Key findings of the marine mammal and vessel traffic survey around Coats Island – A community report
- Coppolaro, V.L.M. (2020) Evans Strait acoustic survey and monitoring plan strategies. DFO internal Reports and Publications
- Katlein, C., Nicolaus, M., Sommerfeld, A., Coppolaro, V.L.M., Tieman, L., Zanatta, M., Schulz, H., Lange, B. (2018) Sea ice physics in Macke, A. and Flores, H. (ed.) *The Expeditions PS106/1 and 2 of the Research Vessel POLARSTERN to the Arctic Ocean in 2017*, Bremerhaven, Alfred Wegener Institute for Polar and Marine Research, pp. 73-87. DOI: 10.2312/BzPM\_0719\_2018
- Calabrese, R., Coppolaro, V.L.M., Corradi, L., Dainelli, A., Ishikawa, T., Marinelli, C., Mazzocca, G., Minguzzi, P., Moi, L., Papi, N., Khanbekyan, A., Mariotti, E., Tomassetti, L., Marmugi, L. (2013) MOT loading by Pulsed Photodesorption from Y foils, *Legnaro National Laboratories Annual Report 2012*, 49. DOI: 10.13140/RG.2.2.17149.33765

**Manuals**

- Coppolaro, V.L.M. (2017) CARIS Hips brief manual for sea ice draft measurements with DT101, Alfred Wegener Institute for Polar

and Marine Research EPIC internal database

#### Conference oral and poster presentations

- International Mammalogical Congress (2023) Coppolaro, V.L.M., Marcoux, M. "Passive acoustic monitoring of marine mammals and vessel traffic off Southampton Island, Nunavut", Anchorage, USA
- Society of Marine Mammalogy (SMM) (2022) Coppolaro, V.L.M., Marcoux, M. "Acoustic survey of marine mammals and anthropogenic underwater noise off the Southern coast of Southampton Island, Hudson Bay", online
- Detection, Classification, Localization, and Density Estimation of marine mammals using passive acoustics workshop (2022) Coppolaro, V.L.M., Barber, D.G., Marcoux, M. "Acoustic survey of marine mammals and anthropogenic underwater noise in Hudson Bay", Hawaii, USA
- Arctic Change (2020) Coppolaro, V.L.M., Barber, D.G., Marcoux, M. "Marine mammal and vessel traffic acoustic survey off Southampton Island, Hudson Bay", online
- ArcticNet (2019) Coppolaro, V.L.M., Barber, D.G., Marcoux, M. "Western Hudson Bay beluga whale (*Delphinapterus leucas*) triangulation and behaviour study with passive acoustic monitoring in the Churchill River estuary", Halifax, Canada
- IGS Sea Ice Symposium (2019) Coppolaro, V.L.M., Barber, D.G., Isleifson, D., Stroeve, J., Fuller, M.C., Harasyn, M. "Using a mesocosm for snow-covered sea ice ridge characterization and detection using remote sensing: implications for ringed seal breeding habitat", Winnipeg, Canada
- ArcticNet (2018) Coppolaro, V.L.M., Katlein, C. "Sea ice draft measurements comparison between ground electromagnetic surveys and multibeam sonar", Ottawa, Canada
- 1-minute ArcticNet Elevator pitch competition (2018) Coppolaro, V.L.M. "Sea ice draft measurements comparison between ground electromagnetic surveys and multibeam sonar", Ottawa, Canada
- UK Arctic Conference (2017) Coppolaro, V.L.M., Katlein, C. "Sea ice draft measurements using an upward-looking multibeam sonar mounted on a remotely operated vehicle", Oban, UK
- Arctic Frontiers (2017) Katlein, C., Hopmann, M., Nicolaus, M., Coppolaro, V.L.M., Bünger, J.H. "First results from a new interdisciplinary robotic vehicle for under-ice research", Tromsø, Norway

#### Fieldwork and lab experience

- Biogeochemical exchange processes at the sea-ice interfaces field school in Cambridge Bay, Nunavut, Canada (2022)
- Fieldwork leader of passive acoustic campaigns in the Arctic to study vessel noise influence on belugas (2022, 2021, 2020, 2019)
- 10-day winter fieldwork in the Arctic on snow and sea ice ridge characterization and detection using drones (2019)
- 3-week winter fieldwork in Nuuk, Greenland on sea-ice ecology, coring for physical and biological sampling and lab work (2019)
- 1-month field leader and project coordinator of lab work on snow samples at the Sea-ice Environmental Research Facility (2019)
- 1-month fieldwork in sea ice physics in the Arctic on board the RV Polarstern icebreaker, working on the sea ice off Svalbard to measure snow and sea ice thickness with a multibeam sonar, electro-magnetic induction sounding devices (GEM-2, EM-bird) and a MagnaProbe (2017)
- 1-week fieldwork at sea on board the RV Polarstern during the Ocean-bottom multibeam echosounding training expedition from the Canary Islands to Bremerhaven, Germany (2017)
- 1-semester laboratory work on optics and matter physics at the University of Florence (2015)
- Data collection and analysis at the National Institute for Nuclear Physics of Legnaro, Italy (2013)

#### Media and outreach

- Outreach video on underwater noise and impacts on marine mammals in the Canadian Arctic – part of the Arctic region Marine Environmental Quality program of Fisheries and Oceans Canada (2024)
- Seminars and lectures for students as a guest at the University of Siena and in primary and secondary schools (2019-2023)
- Presentations to the general public on vessel noise and marine mammals during various cultural events and for CPAWS (2022)
- Canadian Broadcasting Corporation (CBC) documentary in the series Arctic Vets - Season 2 (2021)
- Various interviews with UM today and Radio-Canada in English and French (2021)
- MT180 University of Manitoba Finals - Canadian National Finals, virtual event in French (2021)
- 3MT University of Manitoba Finals, virtual event in English (2021)
- Oceans North video interview for outreach film on beluga conservation in the Churchill River estuary; Winnipeg, Canada (2020)
- Winnipeg Press interview about passive acoustic monitoring of belugas in the Churchill River; Churchill, Canada (2020)

- Polar Bear International interview aboard the “Beluga boat” on beluga acoustic monitoring; Churchill, Canada (2020)
- Fort Whyte Alive educational centre - Arctic Science Day: outreaching education initiative for high school students; Winnipeg, Canada (2020 and 2018)
- Physics Department Open Day (2014) Coppolaro, V. “Ultimi sviluppi della MOT per atomi di Francio”, Siena, Italy
- “Polar science”: outreaching education at elementary schools; Siena, Italy (2019 and 2020)
- "Science for everyone" event speaker workshop aimed at secondary school students; Siena, Italy (2013)

## PERSONAL SKILLS

Mother tongue Italian

### Foreign languages

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C2	C2
	TOEFL iBT + Preliminary English Test (PET)				
French	B2	B2	B2	B2	B1
Spanish	A2	A2	A1	A1	A1
German	A1	A1	A1	A1	A1
	Erasmus+ OLS				
Norwegian (Bokmål)	A1	A1	A1	A1	A1
	NOR-U1				

A1, A2: Basic user - B1, B2: Independent user - C1, C2: Proficient user level ([Common European Framework of Reference for Languages](#))

Communication skills Good communication skills acquired by presenting research topics to groups of people from different background and of various age, both in English, Italian, and French. Can communicate science using alternative methods, such as illustrations.

Organisational and managerial skills Experience in working in a team and in a collaborative way, both as a leader and as part of a group. Can efficiently organize personal work and respect timelines. Able to organize work schedules for several people. Used to working in international groups, travelling, and living abroad, including spending long periods in remote locations. Value projects with a multidisciplinary focus that include data collection, fieldwork, and hands-on components.

Experience in the logistics of conducting remote fieldwork, including shipping of material, permit applications, organizing work schedule for a team, instrumentation maintenance and problem solving in isolated locations and cold environments.

Digital skills CARIS Hips Hydrographic and Sonar Data Production System \* Raven Acoustic Analysis Software \* MATLAB \* R \* LaTeX \* Java \* OriginPro \* Linux terminal \* basics of ArcGIS

Licences and certifications

- Driver's licences: AM, A1, B – able to drive snowmobiles, dirt bikes, ATVs, pickup trucks with boat trailers and manual vehicles
- Standard First Aid certification (Greenland Red Cross and Canadian Red Cross)
- Italian National Firearm and Hunting licence (Porto d'armi uso caccia) and German Arctic firearm and bear guarding license
- M3 Drone Training Zone Inc. Advanced RPAS Operations Ground School Course certificate

Additional information Member of APECS Italy and APECS Canada (2019 to present) \* Member of the Wildlife Society - Manitoba Chapter (2021, 2020) \* Secretary of the Winnipeg Beluga Working Group (2020, 2019) \* Experience in hiking, camping, fishing, kayaking and rock climbing \* Expert in horse riding and handling \* Good at manual work \* Good cooking skills \* Love photography