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Education

Université du Québec à Rimouski (UQAR-ISMER) <i>Ph.D. - Oceanography</i> Citation of Excellence	Rimouski, Canada 2009-2014
Université de Versailles-St-Quentin-en-Yvelines <i>M.Sc. - Climatology</i>	Saclay, France 2007-2008
École Nationale Supérieure de Techniques Avancées (ENSTA-Paristech) <i>M.Sc. - Environmental Engineering</i> Combined degree with École Polytechnique de Montréal	Paris, France 2006-2008
École Polytechnique de Montréal <i>B.Eng. - Engineering Physics</i> Citation of Excellence & International Profile	Montréal, Canada 2004-2008

Work

Research Positions.....

Fisheries and Oceans Canada, Northwest Atl. Fish. Centre (NAFC) <i>Research Scientist</i> Ocean climate research in support of fisheries management Report ocean climate for the Atlantic Zone Monitoring Program (AZMP)	St. John's, Canada 2017-
Mediterranean Institute of Oceanography (MIO) <i>Post-Doctoral research position (European project NeXOS)</i> Development of a new glider optical sensor (<i>MiniFluo-UV</i>) Dissolved organic matter dynamics in NW Mediterranean Sea	Marseille, France 2016-2017
Royal Netherlands Institute for Sea Research (NIOZ) <i>Post-Doctoral Fellow (FRQNT funded, 2 years)</i> Mixing and biogeochemical exchanges caused by internal waves	Texel, Netherlands 2014-2015
Fisheries and Oceans Canada, Maurice Lamontagne Institute <i>Physical scientist (3-month contract)</i> Thermal fronts in Canadian Coastal Waters	Mont-Joli, Canada 2013

Teaching.....

Cégep de Rimouski <i>Teacher (college level)</i> 2 courses, 50 students	Rimouski, Canada 2011-2012
Université du Québec à Rimouski <i>Lecturer (University)</i> 1 course, 2 students	Rimouski, Canada 2010
Université du Québec à Rimouski <i>Teaching Assistant (University)</i> 1 course, 15 students + free revision periods	Rimouski, Canada 2010
École Polyvalente des Iles <i>High-school Teacher (3-month)</i> Mathematics teacher, 1 class of 20 students	Iles de la Madeleine, Canada 2009

Academic and Governmental Services

Academic Roles.....

Memorial University of Newfoundland (MUN), St. John's, Canada Adjunct Professor	Since 2020
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Editorial Roles.....

PLOS Climate Academic Editor	Since 2021
Frontiers in Marine Science - Physical Oceanography Associate Editor	2018-2021

National and International Working Groups, Committees and Programs..

DFO-NL working group on monitoring Marine Protected Areas and Refuges Member / author	Since 2022
DFO's Ocean Science Observation and Monitoring (OSOM) Committee NL Region representative on National committee	Since 2021
DFO's Aquatic Climate Change Adaptation Program (ACCASP) NL Region representative on the Ocean Acidification Working Group	Since 2020
DFO's National Working Group on Ocean Gliders Chair of National Committee	Since 2019
ICES Working Group on Oceanic Hydrography (WGOH) Member / Lead author	Since 2018
NAFO's Standing Committee on Fisheries Environment (STACFEN) Member / Lead author	Since 2018
DFO's Atlantic Zone Monitoring Program (AZMP)	Since 2018

Training HQP

PhD committee member , Jérôme Lemelin, ISMER-UQAR (Rimouski) <i>Sill processes in a fjord</i> (preliminary title)	Since 2022
Postdoc advisor , Olivia Gibb, DFO-NAFC (St. John's) <i>Ocean acidification and biogeochemical changes in the Atlantic Zone</i> (18-month)	2018-2020
Postdoc advisor , Ali Moridnejad, DFO-NAFC (St. John's) <i>Recent ocean conditions changes on Newfoundland and Labrador shelves</i> (3-month)	2018
Internship supervisor , Rémi Chassagne (Undergraduate) <i>Internal tides generation by topographically-trapped waves</i> (3-month)	2015
Internship co-supervisor , Camil Hamel (Undergraduate), ISMER-UQAR (Rimouski) <i>Turbulent nitrate fluxes in the Amundsen Gulf, part II</i> (4-month)	2011
Internship co-supervisor , Camil Hamel (Undergraduate), ISMER-UQAR (Rimouski) <i>Turbulent nitrate fluxes in the Amundsen Gulf, part I</i> (4-month)	2010

Examiner Roles

MSc external examiner , Nicolai von Oppeln-Bronikowski, MUN (St. John's) <i>Glider-Based O₂ and CO₂ Observations in the Labrador Sea</i>	2019
MSc external examiner , Jean-Luc Shaw, ISMER-UQAR (Rimouski) <i>Hydrodynamique de la Baie de Sept-Iles</i>	2019

Funded Research

Horizon Europe Framework Programme (Europe) <i>Explaining and Predicting the Ocean Conveyer (EPOC)</i> Collaborator (DFO is Associated Partner)	€8M 2022
Agence Nationale de la Recherche AAPG Generic Call (France) <i>Climatic role of oceanic subpolar-subtropical exchanges off Newfoundland</i> Collaborator on Desbruyères et al.	€298K 2022
DFO's Competitive Science Research Funding (Canada) <i>A bio-physical model of the timing of the spring phytoplankton bloom on the NL shelf</i> Collaborator on Soontiens, Penney et al.	\$305K 2022
DFO's Competitive Science Research Funding (Canada) <i>Assessing climate change: A high-resolution climate simulation for Canada's three oceans</i> Collaborator on Lu, Brickman, et al.	\$406K 2022
DFO's Competitive Science Research Funding (Canada) <i>Linking environment, diet, growth, and predation to larval survival and recruitment of capelin</i> Collaborator on Murphy et al.	\$359K 2021

DFO's Competitive Science Research Funding (Canada)	\$450K
<i>Characteristics of commercially harvested oandadid shrimp habitat in a highly dynamic Arctic</i>	2021
Collaborator on Walkusz et al.	
INSU 2020 - <i>Océan-Atmosphère</i> Section (France)	€15.5K
<i>Facilities for Updating Mediteranean Submesoscale Ecosystem Coupling Knowledge</i>	2021
Collaborator on Barillon et al.	
NASA/CNES SWOT SDT 2020-2023 (France)	€106.4K
<i>BIOSWOT adopt-a-crossover</i>	2020
Collaborator on D'Ovidio et al.	
DFO glider proposal (Canada)	~\$30K (<i>in-kind</i>)
<i>Variability of the circulation on the Newfoundland shelf</i>	2019
Lead PI	
DFO ACCASP proposal (Canada)	\$143K
<i>Recent changes in the biogeochemistry of Northwest Atlantic water masses</i>	2018-2020
Lead PI	
Ocean Frontier Institute Seed Fund Proposal (Canada)	\$14.3K
<i>Monitor Placentia Bay for hydrocarbons using underwater gliders</i>	2018-2019
Collaborator on Lewis et al.	
INSU 2018 - <i>Océan-Atmosphère</i> Section (France)	~\$11.5K)
<i>Lagrangian observations of deep ocean circulation in the NW Atlantic</i>	2018-2019
Collaborator on Desbruyeres et al.	
SOCIB glider proposal (Spain)	~\$3.5K (<i>in-kind</i>)
<i>Ship time and facility use during Pre-SWOT campaign</i>	2018
co-PI with A. Doglioli	
DFO glider proposal (Canada)	~\$10K (<i>in-kind</i>)
<i>Variability of the Inner Labrador Current on the Newfoundland and Labrador shelf</i>	2018
Lead PI	
DFO ACCASP proposal (Canada)	\$27K
<i>Northwest Atlantic water masses biochemical modifications in a changing climate</i>	2018
Lead PI	
FRQNT Postdoctoral Fellowship (Canada)	\$63.3K
<i>Internal waves and vertical exchanges in the ocean</i>	2014-2015
Main applicant	
FRQNT Doctoral Research Scholarship (Canada)	\$60K
<i>Turbulent mixing in the lower St. Lawrence Estuary</i>	2009-2012
Main applicant	

Peer-Reviewed Publications

2022: Barrillon, S., R. Fuchs, A. A. Petrenko, C. Comby, A. Bosse, C. Yohia, J.-L. Fuda, N. Bhairy, F. Cyr, A. M. Doglioli, G. Grégori, R. Tzortzis, F. d'Ovidio, and M. Thyssen, Phytoplankton reaction to an intense storm in the northwestern Mediterranean Sea. *EGUsphere [preprint]*. [10.5194/egusphere-2022-478](https://doi.org/10.5194/egusphere-2022-478).

2022: Duda Matthew P., F. Cyr, G. J. Robertson, N. Michelutti, C. Meyer-Jacob, A. Hedd, W. A. Montevecchi, L. E. Kimpe, J. M. Blais, and J. P. Smol, Climate oscillations drive millennial-scale changes in seabird colony size. *Global Change Biology*. [10.1111/gcb.16171](https://doi.org/10.1111/gcb.16171)[10.5194/bg-18-6455-2021](https://doi.org/10.5194/bg-18-6455-2021).

2021: Tzortzis, R., A. M. Doglioli, S. Barillon, A. A. Petrenko, F. d'Ovidio, L. Izard, M. Thyssen, A. Pascual, B. Barceló-Llull, F. Cyr, M. Tedetti, N. Bhairy, P. Garreau, F. Dumas and G. Grégori, Impact of moderately energetic fine-scale dynamics on the phytoplankton community structure in the western Mediterranean Sea. *Biogeosciences*, 18, 6455–6477. [10.5194/bg-18-6455-2021](https://doi.org/10.5194/bg-18-6455-2021).

2021: Barceló-Llull, B., A. Pascual, A. Sánchez-Román, E. Cutolo, F. d'Ovidio, G. Fifani, E. Ser-Giacomi, S. Ruiz, E. Mason, F. Cyr, A. M. Doglioli, B. Mourre, J. T. Allen, E. Alou-Font, B. Casas, L. Díaz-Barroso, F. Dumas, L. Gómez-Navarro and C. Muñoz, Fine-Scale Ocean Currents Derived From in situ Observations in Anticipation of the Upcoming SWOT Altimetric Mission. *Frontiers in Marine Science*, 8(679844). [10.3389/fmars.2021.679844](https://doi.org/10.3389/fmars.2021.679844).

2021: Murphy, M. H., A. T. Adamack and F. Cyr, Identifying possible drivers of the abrupt and persistent delay in capelin spawning timing following the 1991 stock collapse in Newfoundland, Canada. *ICES Journal of Marine Science*. [10.1093/icesjms/fsab144](https://doi.org/10.1093/icesjms/fsab144).

2021: Gatti, P., J. A. D. Fisher, F. Cyr, P. S. Galbraith, D. Robert and A. Le Bris, A review and tests of validation and sensitivity of geolocation models for marine fish tracking. *Fish and Fisheries*, 22(5), p.1041-1066. [10.1111/faf.12568](https://doi.org/10.1111/faf.12568).

2021: Cyr, F. and P. S. Galbraith, A climate index for the Newfoundland and Labrador shelf. *Earth System Science Data*, 13, 1807–1828 [10.5194/essd-13-1807-2021](https://doi.org/10.5194/essd-13-1807-2021).

2021: International Altimetry Team, Altimetry for the future: Building on 25 years of progress. *Advances in Space Research*. [10.1016/j.asr.2021.01.022](https://doi.org/10.1016/j.asr.2021.01.022).

2020: Jutras, M., C. O. Dufour, A. Mucci, F. Cyr and D. Gilbert, Temporal Changes in the Causes of the Observed Oxygen Decline in the St. Lawrence Estuary. *Journal of Geophysical Research*, 125. [10.1029/2020JC016577](https://doi.org/10.1029/2020JC016577).

2019: d'Ovidio, F., A. Pascual, J. Wang, A. Doglioli, J. Zhao, S. Moreau, G. Gregory, S. Swaart, S. Speich, F. Cyr, B. Legresy, Y. Chao, L. Fu, & R. A. Morrow, Frontiers in fine scale in-situ studies: opportunities during the SWOT fast sampling phase, *Frontiers in Marine Science*, [10.3389/fmars.2019.00168](https://doi.org/10.3389/fmars.2019.00168).

2019: Cyr, F., M. Tedetti, F. Besson, N. Bhairy & M. Goutx, A new glider-compatible fluorometer for the detection of polycyclic aromatic hydrocarbons in the marine environment, *Frontiers in Marine Science*, [10.3389/fmars.2019.00110](https://doi.org/10.3389/fmars.2019.00110).

2017: Cyr, F., M. Tedetti, F. Besson, L. Beguery, A. M. Doglioli, A. A. Petrenko and M. Goutx, A new glider-compatible optical sensor for dissolved organic matter measurements: test case from the NW Mediterranean Sea, *Frontiers in Marine Science*, 4(89) [10.3389/fmars.2017.00089](https://doi.org/10.3389/fmars.2017.00089).

2016: Dufour, K., F. Maps, S. Plourde, P. Joly and F. Cyr, Impacts of intraguild predation on Arctic copepod communities, *Frontiers in Marine Science*, 3(185) [10.3389/fmars.2016.00185](https://doi.org/10.3389/fmars.2016.00185).

- 2016:** van Haren, H., A. A. Cimadoribus, F. Cyr and L. Gostiaux, Insights from a 3-D temperature sensors mooring on stratified ocean turbulence, *Geophysical Research Letters*, 43(9), 4483-4489, [10.1002/2016GL068032](https://doi.org/10.1002/2016GL068032).
- 2016:** Cyr, F., H. van Haren, F. Mienis, G. Duineveld and D. Bourgault, On the influence of cold-water coral mound size on flow hydrodynamics, and vice-versa, *Geophysical Research Letters*, 43(2), 775-783, [doi:10.1002/2015GL067038](https://doi.org/10.1002/2015GL067038).
- 2016:** Cyr, F. and H. van Haren, Observations of small-scale secondary instabilities during the shoaling of internal bores on a deep-ocean slope, *Journal of Physical Oceanography*, 46(1), 219-231, [doi:10.1175/JPO-D-15-0059.1](https://doi.org/10.1175/JPO-D-15-0059.1).
- 2015:** Bourgault, D. and F. Cyr, Hypoxia in the St. Lawrence Estuary: How a Coding Error Led to Believe that “Physics Controls Spatial Patterns”, *PLOS ONE*, 10(9):e0138858, [doi:10.1371/journal.pone.0138858](https://doi.org/10.1371/journal.pone.0138858).
- 2015:** Cyr, F., D. Bourgault, P. S. Galbraith and M. Gosselin, Turbulent nitrate fluxes in a large-scale estuary, *Journal of Geophysical Research-Oceans*, 120, 2308-2330, [doi:10.1002/2014JC010272](https://doi.org/10.1002/2014JC010272).
- 2015:** Cyr, F., D. Bourgault and P. S. Galbraith, Behavior and mixing of a cold intermediate layer above a sloping boundary, *Ocean Dynamics*, 65(3), p.357-374, [doi:10.1007/s10236-014-0799-1](https://doi.org/10.1007/s10236-014-0799-1).
- 2015:** Cyr, F. and P. Larouche, Thermal front atlas of Canadian coastal waters, *Atmosphere-Ocean*, 53(2) [doi:10.1080/07055900.2014.986710](https://doi.org/10.1080/07055900.2014.986710).
- 2014:** Bourgault, D., F. Cyr, D. Dumont and A. Carter, Numerical simulations of the spread of floating passive tracer released at the Old Harry prospect, *Environmental Research Letters*, 9, 054001.
- 2012:** Bourgault, D., F. Cyr, P. S. Galbraith and E. Pelletier, Relative importance of pelagic and sediment respiration in causing hypoxia in a deep estuary, *Journal of Geophysical Research*, 117, C08033.
- 2011:** Cyr, F., D. Bourgault, and P. S. Galbraith, Interior versus boundary mixing of a cold intermediate layer, *Journal of Geophysical Research*, 116, C12029.
- 2011:** Bourgault D., C. Hamel, F. Cyr, J.-É. Tremblay, P. Galbraith, D. Dumont and Y. Gratton, Turbulent nitrate fluxes in the Amundsen Gulf during ice-covered conditions, *Geophysical Research Letters*, 38, L15602.

Book Chapter

[In Press]: Lopez Gomez, M. A. and F. Cyr. How the COVID-19 pandemic gave a stimulus to local seafood consumption, in E. J. Andrews and K. Knott (Eds.) *Thinking BIG about Small-Scale Fisheries in Canada. TBTI Global*.

Governmental Research Publications

2022: Cyr, F., S. Snook, C. Bishop, P.S. Galbraith, N. Chen and G. Han. Physical Oceanographic Conditions on the Newfoundland and Labrador Shelf during 2021. DFO Can. Sci. Advis. Sec. Res. Doc. [2022/040](https://doi.org/10.1139/2022/040). iv + 48 p.

2022: Bélanger, D. and F. Cyr. Environmental indices for NAFO subareas 0 to 4 in support of the Standing Committee on Fisheries Science (STACFIS). NAFO SCR Doc. [22/021](#).

2022: Cyr, F., P.S. Galbraith, C. Layton, D. Hebert, N. Chen and G. Han. Environmental and Physical Oceanographic Conditions on the Eastern Canadian shelves (NAFO Sub-areas 2, 3 and 4) during 2021. NAFO SCR Doc. [22/020](#).

2021: Cyr, F. and D. Bélanger. Environmental indices for NAFO subareas 0 to 4 in support of the Standing Committee on Fisheries Science (STACFIS). NAFO SCR Doc. [21/023](#).

2021: Cyr, F., P.S. Galbraith, C. Layton, D. Hebert, N. Chen and G. Han. Environmental and Physical Oceanographic Conditions on the Eastern Canadian shelves (NAFO Sub-areas 2, 3 and 4) during 2020. NAFO SCR Doc. [21/009](#).

2021: Baker, K., D. Mullaney, E. Pedersen, W. Coffey, F. Cyr and D. Belanger. An Assessment of Newfoundland and Labrador Snow Crab (*Chionoecetes opilio*) in 2018. DFO Can. Sci. Advis. Sec. Res. Doc. [2021/028](#). viii + 180 p.

2021: Cyr, F., S. Snook, C. Bishop, P.S. Galbraith, B. Pye, N. Chen and G. Han. Physical Oceanographic Conditions on the Newfoundland and Labrador Shelf during 2019. DFO Can. Sci. Advis. Sec. Res. Doc. [2021/017](#). iv + 52 p.

2020: Working Group on Oceanic Hydrography. [ICES Report on Ocean Climate 2019](#).

2020: Cyr, F., P.S. Galbraith, C. Layton and D. Hebert. Environmental and Physical Oceanographic Conditions on the Eastern Canadian shelves (NAFO Sub-areas 2, 3 and 4) during 2019. NAFO SCR Doc. [20/020](#).

2020: Cyr, F., E. Colbourne, P.S. Galbraith, O. Gibb, S. Snook, C. Bishop, N. Chen, G. Han and D. Sencill. Physical Oceanographic Conditions on the Newfoundland and Labrador Shelf during 2018. DFO Can. Sci. Advis. Sec. Res. Doc. [2020/018](#). iv + 48 p.

2019: Working Group on Oceanic Hydrography. [ICES Report on Ocean Climate 2018](#).

2019: Cyr, F., E. Colbourne, J. Holden, S. Snook, G. Han, N. Chen, W. Bailey, J. Higdon, S. Lewis, B. Pye and D. Sencill. Physical Oceanographic Conditions on the Newfoundland and Labrador Shelf during 2017. DFO Can. Sci. Advis. Sec. Res. Doc. [2019/051](#). iv + 58 p.

2019: Cyr, F., E. Colbourne, D. Hebert, R. Pettipas, P. S. Galbraith, G. Han and S. Snook. Environmental and Physical Oceanographic Conditions during 2018 on the Eastern Canadian shelves (NAFO Sub-areas 2, 3 and 4), NAFO SCR Doc. [19/011](#).

2018: Colbourne, E., J. Holden, S. Snook, S. Lewis, F. Cyr, D. Sencill, W. Bailey and J. Higdon. Physical Oceanographic Environment on the Newfoundland and Labrador Shelf in NAFO Subareas 2 and 3 during 2017 NAFO SCR Doc. [18/009](#).

In the News

Authored news articles for magazines and journals.....

Vous rêvez d'observer les icebergs à Terre-Neuve ? Dépêchez-vous by Frédéric Cyr, La Conversation	2022-07-15
How Iceberg Alley got its name and why it may be under threat by Frédéric Cyr, The Conversation	2022-06-16

Seaspiracy, un nouveau documentaire de Netflix à prendre avec un grain de sel... de mer 2021-05-03
by Frédéric Cyr, Le Gaboteur

A selection of work-related interviews.....

On warm ocean surface temperature in Newfoundland	2022-09-21
Radio interview, The Broadcast, CBC	
Des Icebergs à Terre-Neuve-et-Labrador	2022-06-06
TV interview (in French), Bonsoir Bonsoir!, Radio-Canada	
Icebergs et climat	2022-06-05
Radio interview (in French), Du Côté de Chez Catherine, Radio-Canada	
Incoming! Excitement builds for the return of ice giants	2022-04-11
by Marianne Mizera, AccuWeather	
Scientist calling for help to determine extent of thousands of mysterious seabird deaths	2022-04-08
by Juanita Mercer, Saltwire	
Retour des icebergs à Terre-Neuve : une saison prometteuse à l'horizon (in French)	2022-03-30
by Patrick Butler, Radio-Canada	
Why scientists want to clear the air about the role of seals and focus on ecosystems	2021-08-29
by Jenn Thornhill Verma, The Globe and Mail	
Moving to incorporate more climate data to assess fish stocks	2021-06-11
Radio interview, The Broadcast, CBC	
As the Climate Changes, So Does Managing Fisheries	2021-05-27
by Jenn Thornhill Verma, The Independent	
Experts discuss how warming oceans will affect groundfish fishery	2019-12-04
TV Interview with Leila Beaudoin, NTV	
Newfoundland salmon industry sweating prospect of another 'super chill'	2019-05-15
by Jason Huffman, Undercurrent News	