

Curriculum Vitae

Pierre St-Laurent, he/him/his
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Academic Appointments

Senior research scientist	Virginia Institute of Marine Science (VIMS), USA	2022–Present
Associate research scientist	Virginia Institute of Marine Science (VIMS), USA	2021
Assistant research scientist	Virginia Institute of Marine Science (VIMS), USA	2016–2020
Post-doctoral research associate	Virginia Institute of Marine Science (VIMS), USA	2015
Research professional (SSRP)	Old Dominion University (ODU), USA	2017–2020
Post-doctoral research associate	Old Dominion University (ODU), USA	2010–2016

Academic Background

Ph. D. Oceanography, Université du Québec à Rimouski, Canada	2010
Thesis: Seasonal and interannual variability of freshwaters in Arctic Seas: The case of Hudson Bay	
Advisor: F. Straneo, F.J. Saucier (deceased); Examiner: S.J. Déry.	
M. Sc. Oceanography, Université du Québec à Rimouski, Canada	2006
Thesis: Generation and propagation of barotropic waves in Foxe Basin, Hudson Strait, and Hudson Bay	
Advisor: J.-F. Dumais (retired), Examiner: C.J.R. Garrett (retired).	
B. Sc. Physics, Université Laval, Canada	2003

Contributions to Research

First-Authored Refereed Publications & Associated Datasets

On the sensitivity of coastal hypoxia to its external physical forcings,

St-Laurent, P, M.A.M. Friedrichs,

Journal of Advances in Modeling Earth Systems, 202x, accepted for publication on 14 Nov. 2023

Associated dataset: <https://doi.org/10.25773/q2kh-rd09>

Relative impacts of global changes and regional watershed changes on the inorganic carbon balance of the Chesapeake Bay, St-Laurent, P., M.A.M. Friedrichs, R.G. Najjar, E.H. Shadwick, H. Tian, Y. Yao,

Biogeosciences, 2020, 17(14), 3779-3796, <https://doi.org/10.5194/bg-17-3779-2020>

Associated dataset: <https://doi.org/10.25773/a36n-2e90>

Modeling the seasonal cycle of iron and carbon fluxes in the Amundsen Sea Polynya, Antarctica,

St-Laurent, P., P.L. Yager, R.M. Sherrell, H. Oliver, M.S. Dinniman and S.E. Stammerjohn,

J. Geophys. Res.: Oceans, 2019, 124(3), 1544-1565, <https://doi.org/10.1029/2018jc014773>

Associated dataset: <https://doi.org/10.25773/nhrj-yz78>

Impacts of atmos. nitrogen deposition on surface waters of the western North Atlantic mitigated by multiple feedbacks,

St-Laurent, P., M.A.M. Friedrichs, R.G. Najjar, D.K. Martins, M. Herrmann, S.K. Miller and J. Wilkin,

J. Geophys. Res.: Oceans, 2017, 122(11), 8406-8426, <https://doi.org/10.1002/2017jc013072>

Associated dataset: <https://doi.org/10.21220/V5KB03>

Pathways and supply of dissolved iron in the Amundsen Sea (Antarctica),

St-Laurent, P., P.L. Yager, R.M. Sherrell, S.E. Stammerjohn and M.S. Dinniman,

J. Geophys. Res.: Oceans, 2017, 122(9), 7135-7162, <https://doi.org/10.1002/2017jc013162>

Associated dataset: <https://doi.org/10.26008/1912/bco-dmo.729546.1>

Impact of local winter cooling on the melt of Pine Island Glacier, Antarctica,

St-Laurent, P., J.M. Klinck, and M.S. Dinniman,

J. Geophys. Res.: Oceans, 2015, 120(10), 6718-6732, <https://doi.org/10.1002/2015jc010709>

On the role of coastal troughs in the circulation of warm Circumpolar Deep Water on Antarctic shelves,
St-Laurent, P., J.M. Klinck, and M.S. Dinniman,
J. Phys. Oceanogr, 2013, 43(1), 51-64, <https://doi.org/10.1175/jpo-d-11-0237.1>

A conceptual model of an Arctic Sea,
St-Laurent, P., F. Straneo, and D.G. Barber,
J. Geophys. Res.: Oceans, 2012, 117(C6), C06010, <https://doi.org/10.1029/2011jc007652>

What is the fate of the river waters of Hudson Bay?,
St-Laurent, P., F. Straneo, J.-F. Dumais, and D.G. Barber,
J. Mar. Syst., 2011, 88(3), 352-361, <https://doi.org/10.1016/j.jmarsys.2011.02.004>

On the modification of tides in a seasonally ice-covered sea,
St-Laurent, P., F.J. Saucier, and J.-F. Dumais,
J. Geophys. Res.: Oceans, 2008, 113(C11), C11014, <https://doi.org/10.1029/2007jc004614>

Preprints of first-authored articles are available at <http://nordet.net/>

Co-authored Refereed Publications, Published Abstracts & Invited Seminars
See Appendices.

Non-Refereed Publications and Datasets

Dataset: A numerical simulation of the ocean, sea ice and ice shelves in the Amundsen Sea (Antarctica) over the period 2006-2022 and its associated code and input files, P. St-Laurent, 2023, dataset (size 2.2 terabytes), William & Mary ScholarWorks, <https://doi.org/10.25773/bt54-sj65>

Documentation for the Back of Envelope Ocean Model, P. St-Laurent, 2023, <http://nordet.net/beom.html>

Impacts of sea level rise on hypoxia in the Chesapeake Bay: A model intercomparison,
St-Laurent, P., M.A.M. Friedrichs, M. Li, W. Ni, technical report, Virginia Institute of Marine Science, William & Mary, October 2019, 34 pp, <https://doi.org/10.25773/42XY-JT30>

Ice pumps & Algae (educational booklet), 2017, ISBN 978-0-692-86607-8,
Twarog, C., P. St-Laurent, E.E. Hofmann, D.L. Dickerson and A.H. Brown.

Media Coverage & Feature Articles

Antarctica's majestic underwater world is trying to adapt to a warmer planet, CNN, Allison Chinchar, May 7, 2022.

'Comet' supercomputer used to simulate environmental changes in Chesapeake Bay,
Press release from the San Diego Supercomputer Center, Aug. 6, 2020,
subsequently covered by newswise.com, newsbreak.com, coastalnewstoday.com, enn.com, xsede.org, hpcwire.com

Exploring the links between melting ice and ecosystems, Research Features magazine, issue 121, p. 14-17, Dec. 2017.

Tidal timing, Research highlight in Nature Geoscience, Sep. 20, 2007, <https://doi.org/10.1038/ngeo.2007.13>

Professional Service

Service to Federal Agencies and Professional Societies

2023, Panelist, DOE (online panel)

2023, Site visit, NSF

2020, Panelist, NSF (online panel)

2017, Panelist, NSF, Alexandria VA

2016, Panelist, NSF, Arlington VA

2008–2009, Chair of Rimouski center, Canadian Meteorological & Oceanographic Society (CMOS)

Proposal Reviews

2023 WHOI Sea Grant Program
2022 NSF Physical Oceanography Program, NSF Antarctic Sciences (2 prop.), NSF P2C2 Program
2021 NSF Antarctic Sciences (2 prop.), National Research and Development Agency of Chile
2019 NSF Physical Oceanography Program, NSF AOAS Program, Chilean Antarctic Institute (INACH)
2018 NSF Physical Oceanography Program (2 prop.)
2017 NSF Physical Oceanography Program
2016 NSF Physical Oceanography Program (2 prop.), NSF Antarctic Ocean and Atmospheric Sciences
2015 NSF Physical Oceanography Program
2014 NSF Physical Oceanography Program, NSF Arctic Natural Sciences Program

Manuscript Reviews

2023 The Cryosphere, J.Geophys.Res.Oceans
2022 The Cryosphere, Geophys.Res.Lett. (2 manuscripts), Elementa, J.Clim.
2021 Geophys.Res.Lett. (3 manuscripts), Biogeosciences, The Cryosphere
2020 J.Clim., J.Geophys.Res.Oceans, J.Mar.Syst., Biogeosciences
2019 J.Clim., J.Phys.Oceanogr., J.Geophys.Res.Oceans, J.Mar.Syst.
2018 Nature Clim.Change, Geophys.Res.Lett., Ocean Model., J.Geophys.Res.Oceans(3), J.Mar.Syst.(2), J.Phys.Oceanogr.
2017 J.Geophys.Res.Oceans (5 reviews)
2016 Science, Geophys.Res.Lett., Ocean Model., Arctic, J.Geophys.Res.Oceans
2015 J.Phys.Oceanogr., Elementa, J.Geophys.Res.Oceans
2014 Nature Geosci., Geophys.Res.Lett., J.Phys.Oceanogr., J.Atmos.Ocean.Tech., Ocean Sci., Est.Coast.Shelf Sci.
2013 J.Geophys.Res.Oceans
2012 Ocean Model., J.Geophys.Res.Oceans, Oceanography
2011 J.Phys.Oceanogr., Atmosphere–Ocean
2008 Atmosphere–Ocean

Advisory Service

2022 Presentation for the Modeling Workgroup Quarterly Review (Oct.5).
2021 Presentation for the Modeling Workgroup Quarterly Review (Jul.7).
2021 Review panel: Habitat suitability model for Eastern Bay (MD) by the Oyster Recovery Partnership (Apr.6).
2020 Presentation for the Modeling Workgroup Quarterly Review (Apr.7).
2019 Presentation for the Modeling Workgroup Quarterly Review (Apr.2).
2019 Presentation for the Modeling Workgroup Quarterly Review (Feb.19).

Juried Shows, Exhibitions and Performances

2014, Judge at Tidewater Science and Engineering Fair, Norfolk VA, March 15, 2014.
2012, Judge at St. Pius X School's Annual Science fair, Norfolk VA, March 13, 2012.

Memberships of Professional Societies

Member of the American Meteorological Society (AMS), American Geophysical Union (AGU), European Geophysical Union (EGU), Coastal and Estuarine Research Federation (CERF), Canadian Meteorological and Oceanographic Society (CMOS).

Research Grants (as co- or lead-investigator)

Regional MERHAB: Developing a monitoring and forecast system for *Margalefidinium polykrikoides* and *Alexandrium monilatum* in the lower Chesapeake Bay, NOAA, Role: VIMS PI (Lead PI: M.Mulholland, ODU), Sep.1 2023 to

Aug. 31 2028, \$1,275,537 to VIMS.

Assessing 2035 climate change risks to TMDL in the Rappahannock River using SCHISM, EPA-I-R3-CBP-23-02, Role: Co-PI (PI: J.Shen), Aug. 1, 2023 to July 31 2028, \$335,450.

Forecasting the effects of climate change on Chesapeake Bay fisheries using physiologically informed habitat models, NOAA NCBO, Role: Co-PI (PI: M.C.Fabrizio), Dec. 1 2023 to Nov. 30 2026, \$383,479.

Collaborative Research: How are estuarine carbon and alkalinity dynamics influenced by macrobiota?, NSF 2148952, Role: Co-PI (PI: E.B.Rivest), Jul. 1 2022 to May 30 2025, \$1,281,723.

EPA-R3-CBP-21-08 CBP 2025 Tidal water model for the assessment of 2035 climate change risk to the Chesapeake TMDL, CB-96392201-0, Role: Co-PI (PI: Y.J.Zhang), Dec. 5 2021 to Dec. 4 2027, \$1,801,840.

MARACOOS Chesapeake Bay Environmental Forecast System (CBEFS): Operations and Expansion, NOAA NA21NOS0120096 / UDR0000079, Role: Co-PI (lead PI: M.A.M. Friedrichs), Aug. 1 2021 to Jul. 31 2024, \$384,948.

Chesapeake Bay Environmental Forecasting System: Accelerating the transition of HAB and pathogen models from research to operations, NOAA, Role: Co-PI (lead PI: M.A.M. Friedrichs), Sep. 1, 2021 to Aug. 31, 2024, \$892,842.

Summer flounder habitat availability in Chesapeake Bay, NOAA Chesapeake Bay Office (NCBO), Role: Co-PI (lead PI: J. Gartland), August 1, 2021 to March 31, 2022, \$35,000.

NSFGEO-NERC: Collaborative Research: Accelerating Thwaites Ecosystem Impacts for the Southern Ocean (ARTEMIS), NSF 1941292, Role: Co-PI (lead PI: P. Yager), August 1, 2021 to July 31, 2024, \$157,463.

Antarctic sea ice, fast ice and icebergs: Modulators of ocean–ice shelf interactions (AMICUS), NASA 20-CRYO2020-0034, Role: Co-PI (lead PI: S. Stammerjohn), Mar. 15, 2021 to Mar. 14, 2024, \$97,376.

Integrated Coastal Modeling (ICoM), DOE *via* PNNL, Role: Co-PI (lead PI: M.A.M. Friedrichs), Feb. 10, 2021 to Sep. 30, 2024, \$308,325.

Vulnerability of oyster aquaculture and restoration to ocean acidification and other co-stressors in the Chesapeake Bay, NOAA NA20OAR0170473, Role: Co-PI (lead PI: M.A.M. Friedrichs), Sept. 1, 2020 to Aug. 31, 2024, \$1,045,160.

ChesROMS OceansMap ecological forecasts, NOAA (through MARACOOS), Role: Co-PI (lead PI: M.A.M. Friedrichs), Jun. 1, 2019 to May 31, 2022, \$180,000.

How will sea level rise impact hypoxia in the Chesapeake Bay? A multiple model intercomparison project, United States Environmental Protection Agency (EPA), Role: Co-PI (lead PI: M.A.M. Friedrichs, co-PI: Ming Li, U.Maryland), Oct. 15, 2018 to June 15, 2019, \$66,222.

Vulnerability of the largest U.S. estuary to acidification: Implications of declining pH for shellfish hatcheries in the Chesapeake Bay, NOAA NA18OAR0170430, Role: Co-PI (lead PI: M.A.M. Friedrichs), Sep. 1, 2018 to Aug. 31, 2020, \$292,000.

Predicted impacts of changing climate and land-use on Chesapeake Bay water quality and biogeochemistry, High performance computing allocation for research, NSF XSEDE 160013, Role: Co-PI (lead PI: M.A.M. Friedrichs), Oct. 1, 2016 to Sept. 30, 2019, \$46,437.84 (944,177 SUs and 20,000 GB).

Investigating the role of mesoscale processes and ice dynamics in carbon and iron fluxes in a changing Amundsen Sea (INSPIRE), Collaborative research, NSF PLR–1443657, Role: Lead principal investigator, July 15, 2015 to June 30, 2018, \$154,951.

Contributions to Education

Students Supervised

Alexa Labossière (M.Sc.), VIMS (W&M): “Quantifying impacts of macrobiota on alkalinity in the York and Potomac Rivers”, in co-supervision with M.A.M. Friedrichs, 2023–Present.

Fei Da (Ph.D.), VIMS (W&M): “Chesapeake Bay carbonate cycle: Past, present, and future”, in co-supervision with M.A.M. Friedrichs, 2018–2023. Fei is now a postdoc at GFDL.

REU intern Jennifer Lin (B.Sc. Computational & Applied Mathematics and Statistics, W&M): “Empirical habitat models for harmful algae blooms in the Chesapeake Bay”, VIMS (W&M), funded by NSF Award 1950242, summer 2023.

REU intern Sarah Hancock (B.Sc. Mathematics & Computer sci., Davidson College): “Particulate organic matter (POM) distributions and dynamics in mid-Chesapeake Bay”, VIMS (W&M), funded by NSF Award 1950242, summer 2020. Sarah is now in the PhD program ‘Mathematical biology’ of the University of Tennessee at Knoxville.

Postdocs Supervised

Dante M.L. Horemans, VIMS (W&M): “Development of empirical habitat models for harmful algae blooms in the Chesapeake Bay”, in co-supervision with M.A.M. Friedrichs, 2022–Present.

Graduate Students Advisory Committee Service

Latoya N. Cherry, VIMS (W&M): “Residence time analysis in the Albemarle-Pamlico estuarine system (APES): Insights from numerical modeling”, Advisor: Courtney Harris, 2023–Present.

Olivia Szot (M.Sc.), VIMS (W&M): “Physical factors determining the timing and magnitude of Chesapeake Bay hypoxia”, Advisor: M.A.M. Friedrichs, 2023–Present.

Colin Hawes (M.Sc.), VIMS (W&M): “Impacts of future atmospheric climate change on Chesapeake Bay hypoxia”, Advisor: M.A.M. Friedrichs, 2022–Present.

Catherine Czajka (M.Sc.), VIMS (W&M): “Modeling the effects of coastal acidification on oyster growth in the Chesapeake Bay”, Advisors: M.A.M. Friedrichs & E.B. Rivest, 2022–Present.

Luke Frankel (M.Sc.), VIMS (W&M): “Quantifying the increased resiliency of Chesapeake Bay to hypoxia during wet years: A benefit of nutrient reductions”, Advisor: M.A.M. Friedrichs, 2019–2021. Luke is now a project scientist at FB Environmental Associates (Dover NH).

Fei Da (M.Sc.), VIMS (W&M): “Quantifying the effects of long-term changes in atmospheric nitrogen deposition on the Chesapeake Bay water quality”, Advisor: M.A.M. Friedrichs, 2016–2018.

Teaching

Guest instructor:

Implementation and analysis of a hydrodynamic coastal model (MS698), Instructor: C.K.Harris, VIMS, 2019, 2022.

Introduction to MATLAB (OEAS 406/506), Instructor: J.M.Klinck, Old Dominion University (ODU), 2018.

Coastal and Estuarine Dynamics (graduate course), Instructor: J.F.Dumais, Université du Québec (UQAR), 2006.

Guest lecturer:

Using ROMS–ECB on William & Mary’s High Performance Cluster, VIMS, Oct. 2,9, 2015.

Summer School Program in Oceanography, Université du Québec (UQAR), 2006–2008.

Contributions to inclusion in STEM

Supervised or co-supervised 3 individuals from groups underrepresented in STEM.

Served as primary mentor on 3 publications where the first-author was from groups underrepresented in STEM.

Co-authored 7 publications where the first author was from groups underrepresented in STEM.

Contributed 11 letters of recommendation for individuals from groups underrepresented in STEM.

Field Experience

RVIB N.B. Palmer, 6 weeks, January 2012. Role: CTD profiling and nutrients sampling in the Ross Sea, Antarctica. Project: Processes Regulating Iron Supply at the Mesoscale (PRISM), NSF ANT–0944165. Chief Scientist: D. McGillicuddy (WHOI).

CCGS Pierre Radisson, 2 weeks, September 2006. Role: CTD profiling and mooring deployment in Hudson Bay, Hudson Strait and Foxe Basin, Canada. Project: Climate and productivity of the Canadian Inland Seas (MERICA). Chief Scientist: M. Harvey (DFO-Canada).

R/V Coriolis II, 1 week, May 2005. Role: CTD tow-yow and in-board ADCP collection over the sill of the Saguenay Fjord, Canada. Chief Scientist: Y. Simard (UQAR/DFO-Canada).

Synergistic Activities

Software development: *Back of Envelope Ocean Model*, a free numerical solver for process-oriented studies (e.g., Zhao et al. 2023,2021) and GFD classes: <http://nordet.net/beom.html>

Science outreach: Environmental Studies Program of Virginia Beach City Public Schools, Chesapeake Bay Foundation's Brock Environmental Center, VB VA (March 31, 2022).
Co-authored the educational booklet *Ice pumps & Algae* (Twarog et al., ISBN 978-0-692-86607-8), featuring the scientific results from project NSF OPP-1443657.
Annual Big Blue Camp at ODU, Norfolk VA (June 18-19, 2018; June 26, 2017).
Annual STREAM Expo at St. John the Apostle School, VB VA (May 8, 2018; May 18, 2017).
Serve as jury in local science fairs (see Section *Professional Service*).
Various services to federal agencies and scientific journals (see Section *Professional Service*).

Awards, Certificates and Special Training

Top 10% most downloaded papers 1 year after publication: *Modeling the seasonal cycle of iron...*, JGR, 2020
Outstanding Reviewer, Journal of Marine Systems, Elsevier, 2018
Training Workshop on 4-D Variational Data Assimilation with ROMS, July–Aug. 2019
Advanced Climate Dynamics Course on ice sheet-ocean interactions, Lyngen (Norway), June 2010

Appendix: Co-authored Refereed Publications

Impacts and uncertainties of climate-induced changes in watershed inputs on estuarine hypoxia,
Hinson, K.E., M.A.M. Friedrichs, R.G. Najjar, M. Herrmann, Z. Bian, G. Bhatt, P. St-Laurent, H. Tian, G. Shenk,
Biogeosciences, 2023, 20(10), 1937-1961, <https://doi.org/10.5194/bg-20-1937-2023>

Forecasting *Prorocentrum minimum* blooms in the Chesapeake Bay using empirical habitat models,
Horemans, D.M.L., M.A.M. Friedrichs, P. St-Laurent, R.R. Hood, C.W. Brown,
Front. Mar. Sci., 2023, 10:1127649, <https://doi.org/10.3389/fmars.2023.1127649>

Sensitivity of the relationship between Antarctic ice shelves and iron supply to projected changes in the atmospheric forcing,
Dinniman, M.S., P. St-Laurent, K.R. Arrigo, E.E. Hofmann, G.L. van Dijken,
J. Geophys. Res.: Oceans, 2023, 128(2), e2022JC019210, <https://doi.org/10.1029/2022JC019210>

Comparing two ocean biogeochemical models of Chesapeake Bay with and without the sulfur cycle instead highlights the importance of particle sinking, burial, organic matter, nitrification and light attenuation,
Jin, R., M.-A. Pradal, K. Hantsoo, A. Gnanadesikan, P. St-Laurent, C.J. Bjerrum,
Ocean Modelling, 2023, 182, <https://doi.org/10.1016/j.ocemod.2023.102175>

Constructing a model including the cryptic sulfur cycle in Chesapeake Bay requires judicious choices for key processes and parameters, Jin, R., M.-A. Pradal, K. Hantsoo, A. Gnanadesikan, P. St-Laurent, C.J. Bjerrum,
MethodsX, 2023, 102253, <https://doi.org/10.1016/j.mex.2023.102253>

Nitrogen reductions have decreased hypoxia in the Chesapeake Bay: Evidence from empirical and numerical modeling,
Frankel, L.T., M.A.M. Friedrichs, P. St-Laurent, A.J. Bever, R.N. Lipcius, G. Bhatt, G.W. Shenk,
Science of the Total Environment, 2022, <https://doi.org/10.1016/j.scitotenv.2021.152722>

Extent and causes of Chesapeake Bay warming,
Hinson, K., M.A.M. Friedrichs, P. St-Laurent, F. Da, R.G. Najjar,
Journal of the American Water Resources Association, 2022, 58(6), <https://doi.org/10.1111/1752-1688.12916>

Environmentally-determined production frontiers and lease utilization in Virginia's eastern oyster aquaculture industry,
Beckensteiner, J., A. Scheld, P. St-Laurent, M.A.M. Friedrichs, D. Kaplan,
Aquaculture, 2021, vol.542, art.736883, <https://doi.org/10.1016/j.aquaculture.2021.736883>

Mechanisms driving decadal changes in the carbonate system of a coastal plain estuary,
Da, F., M.A.M. Friedrichs, P. St-Laurent, E.H. Shadwick, R.G. Najjar, K. Hinson,
J. Geophys. Res.: Oceans, 2021, 126(6), e2021JC017239, <https://doi.org/10.1029/2021JC017239>

Real-time environmental forecasts of the Chesapeake Bay: Model setup, improvements, and online visualization,
Bever, A.J., M.A.M. Friedrichs, P. St-Laurent,
Environmental modelling and software, 2021, vol.140, art.105036, <https://doi.org/10.1016/j.envsoft.2021.105036>

Effects of reduced shoreline erosion on Chesapeake Bay water clarity,
Turner, J.S., P. St-Laurent, M.A.M. Friedrichs, C.T. Friedrichs,
Science of the total environment, 2021, vol.769, article 145157, <https://doi.org/10.1016/j.scitotenv.2021.145157>

- Estimating shifts in phenology and habitat use of cobia in Chesapeake Bay under climate change,
 Crear, D.P., B.E. Watkins, M.A.M. Friedrichs, P. St-Laurent, K.C. Weng,
Frontiers in Marine Science, 2020, vol.7, article 579135, <https://doi.org/10.3389/fmars.2020.579135>
- Sensitivity of a shark nursery habitat to a changing climate,
 Crear, D.P., R.J. Latour, M.A.M. Friedrichs, P. St-Laurent, K.C. Weng,
Mar. Ecol. Prog. Ser., 2020, 652, 123-136, <https://doi.org/10.3354/meps13483>
- Constraining an ocean model under Getz Ice Shelf, Antarctica, using a gravity-derived bathymetry,
 Millan, R., P. St-Laurent, E. Rignot, M. Morlighem, J. Mouginot, B. Scheuchl,
Geophys. Res. Lett., 2020, 47(13), e2019GL086522, <https://doi.org/10.1029/2019GL086522>
- Impacts of water clarity variability on temperature and biogeochemistry in the Chesapeake Bay,
 Kim, G.E., P. St-Laurent, M.A.M. Friedrichs, A. Mannino,
Estuaries and Coasts, 2020, 43, 1973-1991, <https://doi.org/10.1007/s12237-020-00760-x>
- Analysis of iron sources in Antarctic continental shelf waters,
 Dinniman, M.S., P. St-Laurent, K.R. Arrigo, E.E. Hofmann, G.L. van Dijken,
J. Geophys. Res.: Oceans, 2020, 125(5), e2019JC015736, <https://doi.org/10.1029/2019JC015736>
- Challenges in quantifying long-term air-water carbon dioxide flux using estuarine water quality data: Case study for Chesapeake Bay, Herrmann, H., R.G. Najjar, F. Da, J. Friedman, M.A.M. Friedrichs, S. Goldberger, A. Menendez, E.H. Shadwick, E.G. Stets, P. St-Laurent, *J. Geophys. Res.: Oceans*, 2020, 125(7), e2019JC015610, <https://doi.org/10.1029/2019JC015610>
- Modeling iron and light controls on the summer *Phaeocystis antarctica* bloom in the Amundsen Sea Polynya,
 Oliver, H., P. St-Laurent, R.M. Sherrell and P.L. Yager,
Global Biogeochemical Cycles, 2019, 33(5), 570-596, <https://doi.org/10.1029/2018GB006168>
- Estuarine dissolved organic carbon flux from space: With application to Chesapeake and Delaware Bays,
 Signorini, S.R., P. St-Laurent and 9 other authors,
J. Geophys. Res.: Oceans, 2019, 124(6), 3755-3778, <https://doi.org/10.1029/2018jc014646>
- Ocean circulation causes strong variability in the Mid-Atlantic Bight nitrogen budget,
 Friedrichs, M.A.M., P. St-Laurent and 11 other authors,
J. Geophys. Res.: Oceans, 2019, 124(1), 113-134, <https://doi.org/10.1029/2018jc014424>
- Impacts of atmospheric nitrogen deposition and coastal nitrogen fluxes on oxygen concentrations in Chesapeake Bay,
 Da, F., M.A.M. Friedrichs and P. St-Laurent,
J. Geophys. Res.: Oceans, 2018, 123(7), 5004-5025, <https://doi.org/10.1029/2018jc014009>
- Carbon budget of tidal wetlands, estuaries, and shelf waters of Eastern North America,
 Najjar, R.G., P. St-Laurent and 28 other authors,
Global Biogeochemical Cycles, 2018, 32(3), 389-416, <https://doi.org/10.1002/2017gb005790>
- Observations of fresh, anticyclonic eddies in the Hudson Strait outflow,
 Sutherland, D.A., F. Straneo, S.J. Lentz, and P. St-Laurent,
J. Mar. Syst., 2011, 88(3), 375-384, <https://doi.org/10.1016/j.jmarsys.2010.12.004>
- On the resonance and influence of the tides in Ungava Bay and Hudson Strait,
 Arbic, B.K., P. St-Laurent, G. Sutherland, and C. Garrett,
Geophys. Res. Lett., 2007, 34(17), L17606, <https://doi.org/10.1029/2007g1030845>

Appendix: Invited Seminars (excluding seminars at home institutions)

- Sensitivity of Chesapeake Bay hypoxia to physical forcings,
 Webinar to the Integrated Coastal Modeling (ICoM) group, host: R. Hetland and I. Kraucunas, Sep. 21, 2022.
- Modeling circulation and biogeochemical cycling in the GP17-ANT region,
 Plenary speaker, Workshop for section GP17-ANT of US Geotraces (virtual), host: P. Sedwick, May 6–8, 2020.
- Effects of sea level rise on hypoxia in the Chesapeake Bay: A model intercomparison,
 Johns Hopkins University, Earth & Planetary Sciences Seminars, Baltimore MD, host: M. Pradal, Oct. 23, 2019.
- Modeling the pathways of oceanic heat and glacial meltwater on the continental shelf of the Amundsen Sea, Antarctica,
 UC Irvine, Earth System Science Seminars, Irvine CA, host: Eric Rignot, Jan. 15, 2019.
- Seasonal and spatial variability of glacial meltwater in the Amundsen Sea: Insight from numerical models,
 Lamont-Doherty Earth Observ. (LDEO), Ocean/Climate Phys. Div., Palisades NY, host: Xiaojun Yuan, May 23, 2014.

Appendix: Sessions Chaired at National/International Conferences

Biogeochemical cycling and transport across the land-ocean continuum, R.G. Najjar, M.A.M. Friedrichs, P. St-Laurent, S. Pan, session at the 2019 CERF conference, Mobile AL, November 3-7, 2019.

Appendix: Presentations at Professional Meetings and Published Abstracts

- How does the oceanic heat supply to ice shelves respond to year-to-year changes in the Amundsen icescape? (2024) St-Laurent, P., S.E. Stammerjohn, T. Maksym, abstract HE23A-01 submitted to the Ocean Sciences Meeting 2024, 18–23 February 2024.
- Impacts of Antarctic subglacial freshwater from the grounding zone to the open continental shelf (2024), Dinniman, M.S., P. St-Laurent, W. Sauthoff, M. Siegfried, abstract HE23A-09 submitted to the Ocean Sciences Meeting 2024, 18–23 February 2024.
- Air-sea CO₂ exchange adjacent to a melting ice shelf (project ARTEMIS) (2024), Yager, P.L., C. Schine, A.J. Schuster, S.E. Belcher, H. Oliver, S.E. Stammerjohn, R.L. Totten, R.M. Sherrell, P. St-Laurent and Team ARTEMIS, abstract AII4A-2311 submitted to the Ocean Sciences Meeting 2024, 18–23 February 2024.
- Sea ice as modulator of ocean-ice shelf interactions (2024) Stammerjohn, S.E., P. St-Laurent, T. Maksym, P.L. Yager, R.M. Sherrell, abstract HE31A-03 submitted to the Ocean Sciences Meeting 2024, 18–23 February 2024.
- Iron sources in the Amundsen Sea: Insights from soluble, colloidal, dissolved and particulate fractions (2024), Chinni, V., L. Herbert, J. Steffen, S.E. Jenness, K. Bu, J.N. Fitzsimmons, R.M. Bundy, H. Oliver, P. St-Laurent, P.L. Yager, R.M. Sherrell, abstract HE53A-08 submitted to the Ocean Sciences Meeting 2024, 18–23 February 2024.
- Variable benthic fluxes of iron to a coastal Antarctic ecosystem revealed by a coupled modeling-observational approach (Amundsen Sea, West Antarctica) (2024), Herbert, L., P. St-Laurent, J. Steffen, H. Oliver, J.N. Fitzsimmons, R.M. Sherrell, abstract HE53A-06 submitted to the Ocean Sciences Meeting 2024, 18–23 February 2024.
- How does colored dissolved organic matter (CDOM) influence the distribution and intensity of hypoxia in coastal oceans? (2024) Jin, R., A. Gnanadesikan, M.-A. S. Pradal, P. St-Laurent, abstract CB34A-1066 submitted to the Ocean Sciences Meeting 2024, 18–23 February 2024.
- Assessing vulnerability of eastern oyster producers in Chesapeake Bay to ocean acidification and multiple stressors (2024), Katz, B., D.J. Wrathall, S. Blachman, M.J. Brush, T. Cooper-Kolb, C. Czajka, F. Da, K. Hudson, E.B. Rivest, P. St-Laurent, B. Vogt, M.A.M. Friedrichs, abstract CC33A-08 submitted to the Ocean Sciences Meeting 2024, 18–23 February 2024.
- Controls on the carbonate system of a coastal plain estuary: Rivers, tidal wetlands, and tidal cycles (2024) Friedrichs, M.A.M., F. Da, P. St-Laurent, R. Najjar, E.H. Shadwick, abstract CB44A-1115 submitted to the Ocean Sciences Meeting 2024, 18–23 February 2024.
- Impact of tropical storms on the carbonate chemistry of two contrasting tidal tributaries in a coastal plain estuary (2024) Labossière, A., M.A.M. Friedrichs, P. St-Laurent, R. Najjar, abstract CB51A-04 submitted to the Ocean Sciences Meeting 2024, 18–23 February 2024.
- Interacting effects of coastal acidification and climate change co-stressors projected to reduce oyster growth in Chesapeake Bay (2024) Czajka, C., M.A.M. Friedrichs, E.B. Rivest, P. St-Laurent, M.J. Brush, F. Da, abstract CC23A-07 submitted to the Ocean Sciences Meeting 2024, 18–23 February 2024.
- Relative roles of atmosphere, ocean, and land in modeled climate-induced changes to mid-21st century Chesapeake Bay hypoxia (2024) Hawes, C., M.A.M. Friedrichs, P. St-Laurent, K. Hinson, R. Najjar, abstract CC51A-07 submitted to the Ocean Sciences Meeting 2024, 18–23 February 2024.
- Drivers of hypoxia onset in Chesapeake Bay (2024), Szot, O., M.A.M. Friedrichs, P. St-Laurent, A.J. Bever, C.K. Harris, abstract CP52A-07 submitted to the Ocean Sciences Meeting 2024, 18–23 February 2024.
- Evaluating the prediction skill of statistical coastal species distribution models trained with mechanistic model simulations (2024) Horemans, D.M.L., M.A.M. Friedrichs, P. St-Laurent, R.R. Hood, C.W. Brown, abstract DO12A-03 submitted to the Ocean Sciences Meeting 2024, 18–23 February 2024.
- How does the circulation of the five largest tributaries of the Chesapeake Bay compare? (2023) St-Laurent, P., C.T. Friedrichs, M.A.M. Friedrichs, presentation at the 2023 CERF conference, Portland OR, 12–16 Nov. 2023.
- Evaluating the impact of hurricanes on carbonate chemistry in the Chesapeake Bay (2023) Labossière, A., M.A.M. Friedrichs, P. St-Laurent, R.G. Najjar, presentation at the 2023 CERF conference, Portland OR, 12–16 Nov. 2023.

- Variability in the timing of hypoxia onset in the Chesapeake Bay (2023) Szot, O.N., M.A.M. Friedrichs, P. St-Laurent, A.J. Bever, presentation at the 2023 CERF conference, Portland OR, 12–16 Nov. 2023.
- Relative roles of atmosphere, ocean, and land on future climate-induced changes in Chesapeake Bay hypoxia (2023) Hawes, C., M.A.M. Friedrichs, P. St-Laurent, R.G. Najjar, M. Herrmann, presentation at the 2023 CERF conference, Portland OR, 12–16 Nov. 2023.
- Acidification and other climate change stressors projected to impact oyster growth in Chesapeake Bay (2023) Czajka, C., M.A.M. Friedrichs, E.B. Rivest, P. St-Laurent, M. Brush, presentation at the 2023 CERF conference, Portland OR, 12–16 Nov. 2023.
- Calcite saturation state responses to extreme discharge and climate change: Implications for shellfish aquaculture and restoration (2023) Da, F., M.A.M. Friedrichs, P. St-Laurent, R.G. Najjar, E.B. Rivest, E.H. Shadwick, presentation at the 2023 CERF conference, Portland OR, 12–16 Nov. 2023.
- Artificial neural networks for riverine biogeochemistry in a real-time environmental forecast system of Chesapeake Bay (2023) Bever, A.J., M.A.M. Friedrichs, P. St-Laurent, presentation at the 2023 CERF conference, Portland OR, 12–16 Nov. 2023.
- Quantifying uncertainties in climate projections of Chesapeake Bay hypoxia (2023) Hinson, K., M.A.M. Friedrichs, P. St-Laurent, R.G. Najjar, M. Herrmann, H. Tian, Z. Bian, G. Shenk, G. Bhatt, presentation at the 2023 CERF conference, Portland OR, 12–16 Nov. 2023.
- Does exposure to coastal acidification correlate with site-specific effects on oyster production? (2023) Rivest, E., B. Katz, P. St-Laurent, K. Hudson, D. Wrathall, M.A.M. Friedrichs, presentation at the 2023 CERF conference, Portland OR, 12–16 Nov. 2023.
- How does the circulation of the five largest tributaries of the Chesapeake Bay compare? (2023) St-Laurent, P., C.T. Friedrichs, M.A.M. Friedrichs, presentation at the Gordon Research Conference on Coastal Ocean Dynamics, Smithfield RI, June 18–23, 2023.
- How does the circulation of the five largest tributaries of the Chesapeake Bay compare? (2023) St-Laurent, P., C.T. Friedrichs, M.A.M. Friedrichs, presentation at the 2023 York River and small coastal basins symposium, Gloucester Point VA, 17 May.
- Impacts of future climate change on York River carbonate chemistry and oyster growth (2023) Czajka, C., M.A.M. Friedrichs, E.B. Rivest, P. St-Laurent, M. Brush, presentation at the 2023 York River and small coastal basins symposium, Gloucester Point VA, 17 May.
- Quantifying impacts of oyster restoration on alkalinity in the lower York River (2023) Labossière, A., M.A.M. Friedrichs, P. St-Laurent, E.B. Rivest, R.G. Najjar, presentation at the 2023 York River and small coastal basins symposium, Gloucester Point VA, 17 May.
- Characterization of habitat suitability in Chesapeake Bay: Integrating carbonate chemistry variability and ocean acidification thresholds (2023) Rivest, E.B., P. St-Laurent, F. Da, M.A.M. Friedrichs, presentation at the 2023 York River and small coastal basins symposium, Gloucester Point VA, 17 May.
- Forecasting *Procentrum minimum* blooms in the Chesapeake Bay using empirical habitat models (2023) Horemans, D.M.L., M.A.M. Friedrichs, P. St-Laurent, R.R. Hood, C.W. Brown, presentation at the 2023 Liège Colloquium “Machine learning and data analysis in oceanography”, Liège, Belgium, 8–12 May.
- S.T.A.R.: Shellfish Thresholds and Aquaculture Resilience (2023) St-Laurent, P., M.A.M. Friedrichs, S.A. Blachman, M.J. Brush, C.R. Czajka, F. Da, K.L. Hudson, B. Katz, E. Rivest, B. Vogt, D.J. Wrathall, presentation at the NOAA ocean acidification community meeting & mini symposium, Scripps Seaside Forum, La Jolla CA, 4–6 Jan.
- Impacts of future climate change on Chesapeake Bay carbonate chemistry and oyster growth (2023) Czajka, C., M.A.M. Friedrichs, E.B. Rivest, P. St-Laurent, presentation at the NOAA ocean acidification community meeting & mini symposium, Scripps Seaside Forum, La Jolla CA, 4–6 Jan.
- Sensitivity of Chesapeake Bay hypoxia to physical forcings: A regional Earth system modeling perspective (2022) St-Laurent, P., M.A.M. Friedrichs, R.G. Najjar, J. Wilkin, paper GC52J-0262 presented at 2022 Fall Meeting, AGU, 12-16 Dec.
- A physical-biogeochemical model of Delaware Bay for climate applications (2022) Najjar, R.G., M. Herrmann, J. Wilkin, A.G. Lopez, P. St-Laurent, M.A.M. Friedrichs, paper GC52J-0258 presented at 2022 Fall Meeting, AGU, 12-16 Dec.
- On the relative importance of offshelf/onshelf drivers of variability in mCDW inventory on the Amundsen shelf, Antarctica (2022) St-Laurent, P., S.E. Stammerjohn, T. Maksym, R.M. Sherrell, paper C15D-0621 presented at 2022 Fall Meeting, AGU, 12-16 Dec.

- Sea ice, fast ice, and icebergs as modulators of ocean-ice shelf interactions (2022) Stammerjohn, S.E., P. St-Laurent, T. Maksym, P.L. Yager, R.M. Sherrell, paper C41C-03 presented at 2022 Fall Meeting, AGU, 12-16 Dec.
- Thwaites Glacier's data-driven dynamics (2022) Schwans, E., B.R. Parizek, R.B. Alley, S. Anandkrishnan, M. Morlighem, P. St-Laurent, paper C45B-07 presented at 2022 Fall Meeting, AGU, 12-16 Dec.
- The delivery of colored dissolved organic matter (CDOM) may affect the distribution and intensity of hypoxia in coastal oceans (2022) Jin, R., A. Gnanadesikan, M.S. Pradal, P. St-Laurent, M.A.M. Friedrichs, paper OS52B-0508 presented at 2022 Fall Meeting, AGU, 12-16 Dec.
- Predicting harmful algal blooms in the Chesapeake Bay using empirical habitat models, D.M.L. Horemans, M.A.M. Friedrichs, P. St-Laurent, R.R. Hood, C.W. Brown, 11th U.S. Symposium on Harmful Algae, Albany NY, October 23-28, 2022.
- Impacts of future climate change on Chesapeake Bay carbonate chemistry and oyster growth, C. Czajka, M.A.M. Friedrichs, E.B. Rivest, P. St-Laurent, M. Brush, 5th International Symposium on the Ocean in a High CO₂ World, Lima, Peru, Sep. 13-16, 2022.
- Effects of the resolution of model inputs on real-time environmental forecasting, A. Bever, P. St-Laurent, M.A.M. Friedrichs, Chesapeake Community Research Symposium (ChesCRS), Annapolis MD, June 6-8, 2022.
- Controls on the carbonate system of the York River Estuary, F. Da, M.A.M. Friedrichs, P. St-Laurent, E.H. Shadwick, E.B. Rivest, R.G. Najjar, Chesapeake Community Research Symposium (ChesCRS), Annapolis MD, June 6-8, 2022.
- Variability of the estuarine circulation inside tidal tributaries of the Chesapeake Bay, P. St-Laurent, C.T. Friedrichs, M.A.M. Friedrichs, Chesapeake Community Research Symposium (ChesCRS), Annapolis MD, June 6-8, 2022.
- Predicting harmful algal blooms in the Chesapeake Bay using empirical habitat models, D.M.L. Horemans, M.A.M. Friedrichs, P. St-Laurent, R.R. Hood, C.W. Brown, Chesapeake Community Research Symposium (ChesCRS), Annapolis MD, June 6-8, 2022.
- Impacts of future climate change on Chesapeake Bay carbonate chemistry and oyster growth, C. Czajka, M.A.M. Friedrichs, E. Rivest, P. St-Laurent, Mark Brush, Chesapeake Community Research Symposium (ChesCRS), Annapolis MD, June 6-8, 2022.
- The direct effect of warming dominates future increases in Chesapeake Bay hypoxia, C. Hawes, M.A.M. Friedrichs, P. St-Laurent, R.G. Najjar, M. Herrmann, Chesapeake Community Research Symposium (ChesCRS), Annapolis MD, June 6-8, 2022.
- Nitrogen reductions have decreased hypoxia in the Chesapeake Bay: Evidence from empirical and numerical modeling, L.T. Frankel, M.A.M. Friedrichs, P. St-Laurent, A.J. Bever, R.N. Lipcius, G. Bhatt, G.W. Shenk, Chesapeake Community Research Symposium (ChesCRS), Annapolis MD, June 6-8, 2022.
- Watershed climate scenario uncertainty and implications for Chesapeake Bay hypoxia, Hinson, K., M.A.M. Friedrichs, R.G. Najjar M. Herrmann, P. St-Laurent, Z. Bian, G. Bhatt, H. Tian, G. Shenk, Chesapeake Community Research Symposium (ChesCRS), Annapolis MD, June 6-8, 2022.
- Probabilistic projections of watershed climate impacts on hypoxia in Chesapeake Bay, United States, K. Hinson, M.A.M. Friedrichs, M. Herrmann, R.G. Najjar, P. St-Laurent, presentation at the 53rd International Liège Colloquium on Ocean Dynamics, Liège, Belgium, May 16-20, 2022.
- Impacts of future atmospheric climate change on U.S. Chesapeake Bay hypoxia, C. Hawes, M.A.M. Friedrichs, P. St-Laurent, R.G. Najjar, M. Herrmann, presentation at the 53rd International Liège Colloquium on Ocean Dynamics, Liège, Belgium, May 16-20, 2022.
- Predicting harmful algal blooms in the Chesapeake Bay using empirical habitat models, D.M.L. Horemans, M.A.M. Friedrichs, P. St-Laurent, R.R. Hood, C.W. Brown, presentation at the Ecological Forecasting Workshop, Woods Hole MA, April 12-14, 2022.
- Sensitivity of the relationship between Antarctic ice shelves and iron supply to projected changes in the atmospheric forcing, Dinniman, M.S., P. St-Laurent, K.R. Arrigo, E.E. Hofmann, G.L. van Dijken, abstract EGU22-3041, presentation at the EGU General Assembly 2022, Vienna, Austria, April 3-8, 2022.
- Examining the role of mixing in the circulation of the York and Rappahannock estuaries (2022) St-Laurent, P., C.T. Friedrichs, M.A.M. Friedrichs, presentation at the 2022 Ocean Sciences meeting, virtual meeting, February 27 to March 4 2022.
- Integrating carbonate chemistry variability and ocean acidification thresholds to characterize habitat suitability for Eastern oysters (2022) Rivest, E.B., P. St-Laurent, F. Da, M.A. M. Friedrichs, presentation at the 2022 Ocean Sciences meeting, virtual meeting, February 27 to March 4 2022.

- Sensitivity of the relationship between Antarctic ice shelves and iron supply to projected changes in the atmospheric forcing (2022) Dinniman, M.S., P. St-Laurent, K.R. Arrigo, E.E. Hofmann, G.L. van Dijken, presentation at the 2022 Ocean Sciences meeting, virtual meeting, February 27 to March 4 2022.
- Processes driving carbonate system variability in the York River Estuary (2022) Da, F., M.A.M. Friedrichs, P. St-Laurent, E.H. Shadwick, E.B. Rivest, R.G. Najjar, presentation at the the 2022 Ocean Sciences meeting, virtual meeting, February 27 to March 4 2022.
- Impacts of atmospheric climate change on Chesapeake Bay hypoxia (2022), Hawes, C., M.A.M. Friedrichs, P. St-Laurent, R.G. Najjar, M. Herrmann, presentation at the 2022 Ocean Sciences meeting, virtual meeting, February 27 to March 4 2022.
- Nitrogen reductions have decreased hypoxia in the Chesapeake Bay: Evidence from empirical and numerical modeling (2022) Friedrichs, M.A.M., L. Frankel, P. St-Laurent, A. Bever, R. Lipcius, G. Bhatt, G. Shenk, presentation at the 2022 Ocean Sciences meeting, virtual meeting, February 27 to March 4 2022.
- Climate change-driven terrestrial inputs increases likelihood of hypoxia in a eutrophied estuary (2022) Hinson, K., M.A.M. Friedrichs, M. Herrmann, G. Bhatt, Z. Bian, R.G. Najjar, G. Shenk, P. St-Laurent, Y. Yao, H. Tian, presentation at the 2022 Ocean Sciences meeting, virtual meeting, February 27 to March 4 2022.
- Data-driven dynamics on Thwaites Glacier, West Antarctica (2021) Schwans, E., B.R. Parizek, R.B. Alley, M. Morlighem, S. Anandkrishnan, D. Pollard, P. St-Laurent, presentation at the 2021 Fall AGU meeting, New Orleans LA, December 13-17 2021.
- Sensitivity of the relationship between Antarctic ice shelves and iron supply to projected changes in the atmospheric forcing (2021) Hofmann, E.E., M.S. Dinniman, P. St-Laurent, K.R. Arrigo, G.L. van Dijken, abstract 823106, presentation at the 2021 Fall AGU meeting, New Orleans LA, December 13-17 2021.
- A habitat suitability index for oyster restoration in Maryland (2021) Coleman, K., E. Amrhein, E. Wills, S. Coleman, P. St-Laurent, A. Lopez, H. Ward Slacum, poster presentation at the 151st annual meeting of the American Fisheries Society, Baltimore MD, November 6-10 2021.
- Contrasting the estuarine circulation of the York and Rappahannock estuaries (2021) St-Laurent, P., M.A.M. Friedrichs, C.T. Friedrichs, presentation at the 2021 CERF conference (virtual), November 1-11 2021.
- Characterization of carbonate chemistry variability enhances interpretation of ocean acidification thresholds for Eastern oysters (2021) Rivest, E.B., P. St-Laurent, F. Da, M.A.M. Friedrichs, presentation at the 2021 CERF conference (virtual), November 1-11 2021.
- Long-term changes in estuarine carbon cycling: The view from the Chesapeake Bay (2021) Najjar, R.G., M.A.M. Friedrichs, M. Herrmann, S. Pan, E.H. Shadwick, P. St-Laurent, E.G. Stets, H. Tian, Y. Yao, presentation at the 2021 CERF conference (virtual), November 1-11 2021.
- Forecasting and reporting of daily hypoxia severity in Chesapeake Bay (2021) Bever, A.J., M.A.M. Friedrichs, P. St-Laurent, D. Malmquist, presentation at the 2021 CERF conference (virtual), November 1-11 2021.
- Physical and biogeochemical controls of diel carbonate system variability in a coastal plain estuary (2021) Da, F., M.A.M. Friedrichs, P. St-Laurent, E.H. Shadwick, E.B. Rivest, presentation at the 2021 CERF conference (virtual), November 1-11 2021.
- Quantifying the increased resiliency of Chesapeake Bay to hypoxia using a combined data/modeling approach (2021) Frankel, L.T., M.A.M. Friedrichs, P. St-Laurent, A.J. Bever, R.N. Lipcius, presentation at the 2021 CERF conference (virtual), November 1-11 2021.
- Impact of variability in bed character beneath Thwaites Glacier (2021) Schwans, E., B.R. Parizek, R.B. Alley, M. Morlighem, S. Anandkrishnan, D. Pollard, P. St-Laurent, presentation at the 2021 WAIS workshop, Sterling VA, September 20-23 2021.
- Glacially derived sediment sources of iron fueling productivity in the Amundsen Sea (2021) Herbert, L.C., A. Lepp, L. Simkins, J. Wellner, S. Severmann, R.M. Sherrell, P. Yager, S. Stammerjohn, P. St-Laurent, presentation at the 2021 WAIS workshop, Sterling VA, September 20-23 2021.
- Sensitivity of the relationship between Antarctic ice shelves and iron supply to projected changes in the atmospheric forcing (2021) Dinniman, M.S., P. St-Laurent, K.R. Arrigo, E.E. Hofmann, G.L. van Dijken, presentation at the 2021 WAIS workshop, Sterling VA, September 20-23 2021.
- Impacts of sediment inputs from shoreline erosion on water clarity: Results from a Chesapeake Bay modeling study (2021) Turner, J.S., P. St-Laurent, M.A.M. Friedrichs, C.T. Friedrichs, presentation at the Advances in Marine Ecosystem Modelling Research (AMEMR) symposium, virtual meeting, July 12-15 2021.

- Mechanisms driving decadal changes in the carbonate system of a coastal plain estuary (2021) Da, F., M.A.M. Friedrichs, P. St-Laurent, E.H. Shadwick, R.G. Najjar, presentation at the Advances in Marine Ecosystem Modelling Research (AMEMR) symposium, virtual meeting, July 12-15 2021.
- Quantifying the increased resiliency of the Chesapeake Bay to hypoxia as a result of nutrient reductions (2021) L.T. Frankel, M.A.M. Friedrichs, P. St-Laurent, A.J. Bever, R.N. Lipcius, presentation at the Advances in Marine Ecosystem Modelling Research (AMEMR) symposium, virtual meeting, July 12-15 2021.
- Mechanisms driving decadal changes in the carbonate system of a coastal plain estuary (2021) Da, F., M.A.M. Friedrichs, P. St-Laurent, E.H. Shadwick, R.G. Najjar, K. Hinson, presentation at the ASLO 2021 Aquatic Sciences Meeting, virtual meeting, June 22-27, 2021.
- Quantifying the increased resiliency of the Chesapeake Bay to hypoxia during wet years: A benefit of nutrient reductions (2021) L.T. Frankel, M.A.M. Friedrichs, P. St-Laurent, A.J. Bever, R.N. Lipcius, presentation at the ASLO 2021 Aquatic Sciences Meeting, virtual meeting, June 22-27, 2021.
- Quantifying uncertainty in the impact of climate change on hypoxia (2021) Hinson, K.E., M.A.M. Friedrichs, R.G. Najjar, M. Herrmann, G. Shenk, G. Bhatt, Y. Yao, Z. Bian, H. Tian, P. St-Laurent, presentation at the ASLO 2021 Aquatic Sciences Meeting, virtual meeting, June 22-27, 2021.
- Re-examining the estuarine circulation of the York River (2021) St-Laurent, P., M.A.M. Friedrichs, C. Friedrichs, presentation at the 2021 York River Symposium hosted by the Chesapeake Bay National Estuarine Research Reserve (CBNERR) of Virginia, virtual meeting, May 13, 2021.
- Controls of the diel variability in the York River carbonate system (2021) Da, F., M.A.M. Friedrichs, P. St-Laurent, E.H. Shadwick, presentation at the 2021 York River Symposium hosted by the Chesapeake Bay National Estuarine Research Reserve (CBNERR) of Virginia, virtual meeting, May 13, 2021.
- Mechanisms driving decadal changes in the carbonate system of a coastal plain estuary (2021) Da, F., M.A.M. Friedrichs, P. St-Laurent, E.H. Shadwick, R.G. Najjar, presentation at the North American Carbon Program (NACP) 7th open science meeting, virtual meeting, March 2021.
- Sensitivity to changes in the winds of cryosphere contributions to micronutrient supply to the surface waters around Antarctica (2020) Dinniman, M.S., P. St-Laurent, K.R. Arrigo, E.E. Hofmann, G. van Dijken, presentation at the AGU Fall Meeting 2020 (abstract 754049), San Francisco, CA, Dec. 7-11, 2020.
- Constraining an ocean model under Getz Ice Shelf, Antarctica, using a gravity-derived bathymetry (2020) St-Laurent, P., R. Millan, E. Rignot, M.S. Dinniman, presentation at SCAR 2020 Online (Scientific Committee on Antarctic Research), 3-7 August, 2020.
- Direct and indirect contributions of ice shelves to micronutrient supply to the surface waters around Antarctica (2020), Dinniman, M.S., P. St-Laurent, K. Arrigo, E.E. Hofmann, G. van Dijken, presentation at SCAR 2020 Online (Scientific Committee on Antarctic Research), 3-7 August, 2020.
- Relative impacts of global climate change and regional watershed changes on the inorganic carbon balance of the Chesapeake Bay (2020) St-Laurent, P., M.A.M. Friedrichs, R.G. Najjar, E.H. Shadwick, H. Tian, Y. Yao, Goldschmidt Abstracts, 2020, virtual conference, 21-26 June, 2020, <https://doi.org/10.46427/gold2020.2464>
- Primary stressors impacting the long-term changes of the Chesapeake Bay carbonate system (2020) Da, F., M.A.M. Friedrichs, P. St-Laurent, E.H. Shadwick, R.G. Najjar, Goldschmidt Abstracts, 2020 507, virtual conference, 21-26 June, 2020.
- Challenges in quantifying long-term air-water carbon dioxide flux using estuarine water quality data: Case study for Chesapeake Bay (2020) Herrmann, M., R.G. Najjar, F. Da, J. Friedman, M.A.M. Friedrichs, S. Goldberger, A. Menendez, E.H. Shadwick, E.G. Stets, P. St-Laurent, Goldschmidt Abstracts, 2020 1026, virtual conference, 21-26 June, 2020.
- Relative impacts of global climate change and regional watershed changes on the inorganic carbon balance of the Chesapeake Bay (2020) St-Laurent, P., M.A.M. Friedrichs, R.G. Najjar, E.H. Shadwick, H. Tian, Y. Yao, presentation at the 2020 Chesapeake Community Research Symposium (ChesCRS), virtual symposium (previously: Annapolis MD), 8-10 June, 2020.
- Increased resiliency of Chesapeake Bay to hypoxia during wet years: A benefit of nutrient reductions (2020) Frankel, L.T., M.A.M. Friedrichs, P. St-Laurent, A.J. Bever, presentation at the 2020 Chesapeake Community Research Symposium (ChesCRS), virtual symposium (previously: Annapolis MD), 8-10 June, 2020.
- Primary stressors impacting the long-term changes of the Chesapeake Bay carbonate system (2020) Da, F., M.A.M. Friedrichs, P. St-Laurent, E.H. Shadwick, R.G. Najjar, presentation at the 2020 Chesapeake Community Research Symposium (ChesCRS), virtual symposium (previously: Annapolis MD), 8-10 June, 2020.
- Challenges in quantifying long-term air-water carbon dioxide flux using estuarine water quality data: Case study for Chesapeake Bay (2020) Herrmann, M., R.G. Najjar, F. Da, J. Friedman, M.A.M. Friedrichs, S. Goldberger, A. Menendez, E.H.

- Shadwick, E.G. Stets, P. St-Laurent, presentation at the 2020 Chesapeake Community Research Symposium (ChesCRS), virtual symposium (previously: Annapolis MD), 8-10 June, 2020.
- Sea level rise increases summer bottom oxygen concentrations in Chesapeake Bay (2020) Friedrichs, M.A.M., P. St-Laurent, W. Ni, M. Li, presentation at the 2020 Chesapeake Community Research Symposium (ChesCRS), virtual symposium (previously: Annapolis MD), 8-10 June, 2020.
- Drivers of warming in the Chesapeake Bay: A 35-year retrospective analysis (2020) Hinson, K., M.A.M. Friedrichs, P. St-Laurent, R.G. Najjar, presentation at the 2020 Chesapeake Community Research Symposium (ChesCRS), virtual symposium (previously: Annapolis MD), 8-10 June, 2020.
- Water clarity impacts of sediment inputs from shoreline erosion in the Chesapeake Bay: A modeling study (2020) Turner, J.S., P. St-Laurent, M.A.M. Friedrichs, C.T. Friedrichs, presentation at the 2020 Chesapeake Community Research Symposium (ChesCRS), virtual symposium (previously: Annapolis MD), 8-10 June, 2020.
- Effects of sea level rise on the seasonal hypoxia of Chesapeake Bay (2020) St-Laurent, P., M.A.M. Friedrichs, M. Li, W. Ni, presentation at the 2020 Ocean Sciences Meeting (abstract 653394), San Diego CA, 16-21 February, 2020.
- Direct and indirect contributions of ice shelves to micronutrient supply to the surface waters around Antarctica (2020) Dinniman, M.S., P. St-Laurent, K.R. Arrigo, E.E. Hofmann, G. van Dijken, presentation at the 2020 Ocean Sciences Meeting (abstract 639615), San Diego CA, 16-21 February, 2020.
- High-resolution ocean model illustrates how ice-ocean interactions impact the CO₂ uptake of an Antarctic coastal polynya (2020) Yager, P.L., H. Oliver, P. St-Laurent, R.M. Sherrell, S.E. Stammerjohn, presentation at the 2020 Ocean Sciences Meeting (abstract 656955), San Diego CA, 16-21 February, 2020.
- Quantifying the Impact of Nutrient Reductions on Dissolved Oxygen in the Chesapeake Bay: Has the Bay Become More Resilient? (2020) Frankel, L.T., P. St-Laurent, A.J. Bever, M.A.M. Friedrichs, presentation at the 2020 Ocean Sciences Meeting (abstract 643174), San Diego CA, 16-21 February, 2020.
- Primary stressors and mechanisms impacting the long-term variability of the Chesapeake Bay carbonate system (2020) Da, F., M.A.M. Friedrichs, P. St-Laurent, E. Shadwick, R. Najjar, presentation at the 2020 Ocean Sciences Meeting (abstract 654920), San Diego CA, 16-21 February, 2020.
- Shoreline erosion impacts on Chesapeake Bay water clarity: an analysis of effects on light attenuation using a coupled hydrodynamic-biogeochemical model (2020) Turner, J.S., P. St-Laurent, M.A.M. Friedrichs, C.T. Friedrichs, presentation at the 2020 Ocean Sciences Meeting (abstract 646631), San Diego CA, 16-21 February, 2020.
- A thirty-year retrospective analysis of Chesapeake Bay warming (2020) Hinson, K., P. St-Laurent, M.A.M. Friedrichs, R. Najjar, presentation at the 2020 Ocean Sciences Meeting (abstract 650971), San Diego CA, 16-21 February, 2020.
- Real-time Forecasts of Acidification and Hypoxia in the Chesapeake Bay: Model Setup and Online Visualization (2020) Bever, A.J., M.A.M. Friedrichs, F. Da, P. St-Laurent, K. Hudson, A. Morandi, presentation at the 2020 Ocean Sciences Meeting (abstract 654738), San Diego CA, 16-21 February, 2020.
- Recent contribution of airborne gravity data to the modern observation of the cryosphere (2019) Millan, R., E.J. Rignot, J. Mouginot, M. Morlighem, A. Rivera, L. An, P. St-Laurent, A.A. Bjork, P. Dutrieux, presentation at the 2019 AGU Fall Meeting, abstract 487901, San Francisco CA, December 9-13, 2019.
- Role of the eastern shear margin in Thwaites Glacier's dynamics (2019) Schwans, E., B.R. Parizek, R.B. Alley, M. Morlighem, P. St-Laurent, R.T. Walker, presentation at the 2019 AGU Fall Meeting, abstract 513156, San Francisco CA, December 9-13, 2019.
- Analysis of Iron Sources in Antarctic Continental Shelf Waters (2019) Hofmann, E.E., M.S. Dinniman, P. St-Laurent, K.R. Arrigo, G. van Dijken, presentation at the 2019 AGU Fall Meeting, abstract 519325, San Francisco CA, December 9-13, 2019.
- Impacts of sea level rise on Chesapeake Bay and its seasonal hypoxia (2019) St-Laurent, P., M.A.M. Friedrichs, M. Li, W. Ni, presentation at the 2019 CERF conference, Mobile AL, November 3-7, 2019.
- Interannual variability of the Chesapeake Bay carbonate system (2019) Da, F., M.A.M. Friedrichs, P. St-Laurent, E.H. Shadwick and R.G. Najjar, presentation at the 2019 CERF conference, Mobile AL, November 3-7, 2019.
- Short-term forecasts of acidification metrics in the Chesapeake Bay (2019) Friedrichs, M.A.M., A.J. Bever, F. Da, P. St-Laurent, and K. Hudson, presentation at the 2019 CERF conference, Mobile AL, November 3-7, 2019.
- Effects of shoreline erosion on Chesapeake Bay water clarity (2019) Friedrichs, C.T., J.S. Turner, P. St-Laurent and M.A.M. Friedrichs, presentation at the 2019 CERF conference, Mobile AL, November 3-7, 2019.
- How WAIS meltwater and earlier springtime opening may flip the Amundsen Sea Polynya from carbon sink to source (2019) Yager, P.L., H. Oliver, P. St-Laurent, R.M. Sherrell, S.E. Stammerjohn, presentation at the 2019 WAIS workshop, Julian CA, Oct. 16-18, 2019.

- Direct and indirect contributions of ice shelves to micronutrient supply to the surface waters around Antarctica (2019) Dinniman, M.S., P. St-Laurent, K.R. Arrigo, E.E. Hofmann, G. van Dijken, presentation at the 33rd Forum for Research into Ice Shelf Processes (FRISP), Oxford UK, 15-18 September, 2019.
- An integrative approach to modeling species distribution: Combining correlative and mechanistic relationships to predict climate impacts on species (2019) Crear, D., A. Hobday, R. Latour, R. Brill, M.A.M. Friedrichs, P. St-Laurent, K. Weng, presentation at the 2019 Species on the Move conference, Kruger National Park, South Africa, July 22-26, 2019.
- How ice sheet-ocean interactions impact the carbon cycle of an Antarctic coastal polynya (2019) Yager, P.L., P. St-Laurent, H. Oliver, R.M. Sherrell, S.E. Stammerjohn and M.S. Dinniman, presentation at the 25th International Symposium on Polar Sciences, Korea Polar Research Institute, Incheon, Republic of Korea, May 13-15, 2019.
- Iron sources to the Amundsen Sea: Glacial ice melt may not be the main input (2019) Sherrell, R.M., P.L. Yager, H. Oliver, P. St-Laurent, M.S. Dinniman, S.E. Stammerjohn and M. Lagerstrom, presentation at the 25th International Symposium on Polar Sciences, Korea Polar Research Institute, Incheon, Republic of Korea, May 13-15, 2019.
- Ocean circulation causes strong variability in Mid-Atlantic Bight net community production (2018) St-Laurent, P., M.A.M. Friedrichs, Y. Xiao, E.E. Hofmann, K. Hyde, A. Mannino, R.G. Najjar, D. Narvaez, S.R. Signorini, H. Tian, J. Wilkin, Y. Yao, J. Xue, Abstract OS22A-02 presented at 2018 AGU Fall Meeting, Washington DC, December 10-14, 2018.
- Controls on summer phytoplankton blooms in a highly productive Antarctic coastal polynya (2018) Oliver, H., P. St-Laurent, R.M. Sherrell, P.L. Yager, Abstract OS34B-06 presented at 2018 AGU Fall Meeting, Washington DC, December 10-14, 2018.
- High-resolution numerical ocean model illustrates how ice-sheet ocean interactions impact the biological pump of an Antarctic coastal polynya (2018) Yager, P.L., P. St-Laurent, H. Oliver, R.M. Sherrell, S.E. Stammerjohn, M.S. Dinniman, 2018, Abstract C12B-07 presented at 2018 AGU Fall Meeting, Washington DC, December 10-14, 2018.
- Direct and indirect contributions of the cryosphere to micronutrient supply to the open surface waters around Antarctica (2018) Dinniman, M.S., P. St-Laurent, K.R. Arrigo, E.E. Hofmann, G. van Dijken, Abstract C21C-0370 presented at 2018 AGU Fall Meeting, Washington DC, December 10-14, 2018.
- Ice Sheet System Model (ISSM) studies of controls on stability of Thwaites and Pine Island Glaciers, West Antarctica (2018) Schwans, E., B.R. Parizek, R.B. Alley, D. Pollard, M. Morlighem, R.T. Walker, T. LaBirt, H. Seroussi and P. St-Laurent, Abstract C31C-0515 presented at 2018 AGU Fall Meeting, Washington DC, December 10-14, 2018.
- Impacts of changes in watershed nutrient inputs and climate on carbon cycling in Chesapeake Bay (2018) Friedrichs, M.A.M., P. St-Laurent, R.G. Najjar, E.H. Shadwick, H. Tian and Y. Yao, Abstract H11P-0658 presented at 2018 AGU Fall Meeting, Washington DC, December 10-14, 2018.
- Impact of future warming on the Chesapeake Bay carbonate system: Air-sea CO₂ exchange vs. biogeochemical processes (2018) Da, F., M.A.M. Friedrichs, P. St-Laurent, E.H. Shadwick, Abstract OS41C-1191 presented at 2018 AGU Fall Meeting, Washington DC, December 10-14, 2018.
- Increased dermo disease in Chesapeake Bay oysters caused by continued warming and nutrient loading (2018) Hofmann, E.E., J.M. Klinck, E.N. Powell, M.A.M. Friedrichs, P. St-Laurent, H. Tian, Abstract OS22A-07 presented at 2018 AGU Fall Meeting, Washington DC, December 10-14, 2018.
- Improved estimates of light in water impacts estuarine biogeochemistry by intensifying stratification in the Chesapeake Bay (2018) Kim, G., P. St-Laurent, M.A.M. Friedrichs, A. Mannino, Abstract OS23A-07 presented at 2018 AGU Fall Meeting, Washington DC, December 10-14, 2018.
- Estuarine dissolved organic carbon flux from space: With application to Chesapeake and Delaware Bays (2018) Signorini, S.R., A. Mannino, M.A.M. Friedrichs, P. St-Laurent, J. Wilkin, A. Tabatabai, R.G. Najjar, E.E. Hofmann, F. Da, H. Tian, Y. Yao, Abstract OS24A-05 presented at 2018 AGU Fall Meeting, Washington DC, December 10-14, 2018.
- Warmer waters welcome increased nutrient loading: Linking effects of future climate change to Chesapeake Bay hypoxia (2018) Hinson, K., M.A.M. Friedrichs, G. Bhatt, M. Herrmann, R. Najjar, H. Tian, Y. Yao, P. St-Laurent, Abstract OS41C-1189 presented at 2018 AGU Fall Meeting, Washington DC, December 10-14, 2018.
- Effects of shoreline erosion and organic matter sinking rates on Chesapeake Bay water clarity (2018) Turner, J.S., M.A.M. Friedrichs, C.T. Friedrichs, P. St-Laurent, Abstract OS41C-1188 presented at 2018 AGU Fall Meeting, Washington DC, December 10-14, 2018.
- Controls on marine primary productivity in a coastal polynya receiving large iron inputs from melting West Antarctic ice shelves (2018) Oliver, H., P. St-Laurent, R.M. Sherrell, P.L. Yager, presentation at the 2018 WAIS workshop, Stony Point NY, Sep. 16-20, 2018.
- Hi-res. model illustrates how melting ice impacts coastal carbon cycle (2018) Yager, P.L., P. St-Laurent, H. Oliver, R.M. Sherrell, S.E. Stammerjohn, M.S. Dinniman, presentation at the the 2018 WAIS workshop, Stony Point NY, Sep. 16-20,

2018.

- Bed character of Thwaites Glacier: Implications for stability (2018) Schwans, E., B.R. Parizek, R.B. Alley, D. Pollard, M. Morlighem, H. Seroussi, P. St-Laurent, presentation at the 2018 WAIS workshop, Stony Point NY, September 16-19, 2018.
- The role of light on biogeochemistry and phytoplankton species composition in the Chesapeake Bay (2018) Kim, G., A. Mannino, M.A.M. Friedrichs, P. St-Laurent, S. Preheim, presentation at the Gordon Research Conference (Ocean Global Change Biology), Waterville Valley NH, July 14-20, 2018.
- Changes in Chesapeake Bay air-sea CO₂ fluxes over the past century (2018) St-Laurent, P., M.A.M. Friedrichs, R.G. Najjar, E.H. Shadwick, presentation at the 2018 Chesapeake Bay Research and Modeling Symposium, Annapolis MD, June 12-14, 2018.
- Impacts of direct atmospheric nitrogen deposition and coastal nitrogen fluxes on Chesapeake Bay hypoxia (2018) Da, F., M.A.M. Friedrichs, P. St-Laurent, presentation at the 2018 Chesapeake Bay Research and Modeling Symposium, Annapolis MD, June 12-14, 2018.
- Ice shelf meltwater pump contribution to vertical exchange around Antarctica (2018) Dinniman, M., P. St-Laurent, K. Arrigo, E. Hofmann, J. Klinck, R.M. Sherrell, S. Stammerjohn and P.L. Yager, 2018 SCAR/IASC Open Science Conference, Davos, Switzerland, June 15-26, 2018.
- Does light or iron control the Amundsen Sea Polynya phytoplankton bloom? (2018) Oliver, H., P. St-Laurent, R.M. Sherrell, P.L. Yager, presentation at the Ocean Carbon and Biogeochemistry Summer Workshop, Woods Hole MA, June 25-28, 2018.
- Interannual Variability of Lateral Nitrogen and Carbon Fluxes along the Mid-Atlantic Bight (2018) St-Laurent, P., and M.A.M. Friedrichs, presentation at the 2018 Ocean Sciences Meeting, Portland OR, Feb.11-16, 2018.
- Impacts of direct atmospheric deposition of nitrogen and continental shelf nitrogen fluxes on Chesapeake Bay hypoxia (2018) Da, F., M.A.M. Friedrichs and P. St-Laurent, presentation at the 2018 Ocean Sciences Meeting, Portland OR, Feb.11-16, 2018.
- Changes in Chesapeake Bay Carbon Cycling over the Past Century (2018) Friedrichs, M.A.M., P. St-Laurent, D.E. Kaufman, F. Da, E.H. Shadwick, R.G. Najjar, Y. Yao and H. Tian, presentation at the 2018 Ocean Sciences Meeting, Portland OR, Feb.11-16, 2018.
- Carbon Budget of Tidal Wetlands, Estuaries, and Shelf Waters of Eastern North America (2018) Najjar, R.G., M. Herrmann, R. Alexander, E.W. Boyer, D. Burdige, D.E. Butman, W.J. Cai, E.A. Canuel, R.F. Chen, M.A.M. Friedrichs, R.A. Feagin, P.C. Griffith, A. Hinson, J.R. Holmquist, X. Hu, W.M. Kemp, K.D. Kroeger, A. Mannino, S.L. McCallister, W.R. McGillis, M.R. Mulholland, C.H. Pilskaln, J. Salisbury, S.R. Signorini, P. St-Laurent, H. Tian, M. Tzortziou, P. Vlahos, A.Z. Wang, R.C. Zimmerman, presentation at the 2018 Ocean Sciences Meeting, Portland OR, Feb.11-16, 2018.
- Chesapeake Bay Export of Dissolved Organic Carbon from Space-borne Data (2018) Signorini, S.R., A. Mannino, M.A.M. Friedrichs, P. St-Laurent, J. Wilkin, presentation at the 2018 Ocean Sciences Meeting, Portland OR, Feb.11-16, 2018.
- The ice shelf meltwater pump contribution to vertical exchange over the open shelf in the Amundsen Sea and elsewhere around Antarctica (2018) Dinniman, M.S., P. St-Laurent, K.R. Arrigo, E.E. Hofmann, J.M. Klinck, R.M. Sherrell, S.E. Stammerjohn and P.L. Yager, presentation at the 2018 Ocean Sciences Meeting, Portland OR, Feb.11-16, 2018.
- What controls the massive phytoplankton bloom in the Amundsen Sea Polynya? (2018) Oliver, H., P. St-Laurent, R.M. Sherrell and P.L. Yager, presentation at the 2018 Ocean Sciences Meeting, Portland OR, Feb.11-16, 2018.
- High iron in outflow waters from the Dotson Ice Shelf cavity, Amundsen Sea, West Antarctica: Is glacial meltwater really the source? (2018) Sherrell, R.M., P.L. Yager, P. St-Laurent, M.S. Dinniman, S.E. Stammerjohn, M. Lagerstrom and K.M. Harazin, presentation at the 2018 Ocean Sciences Meeting, Portland OR, Feb.11-16, 2018.
- Simulating ice dynamics in the Amundsen Sea sector (2017) Schwans, E., B. Parizek, M. Morlighem, R.B. Alley, D. Pollard, R.T. Walker, P. Lin, P. St-Laurent, T. LaBirt and H. Seroussi, presentation at the AGU Fall meeting, New Orleans LA, Dec. 11-15, 2017.
- Impacts of direct atmospheric nitrogen deposition and coastal nitrogen fluxes on Chesapeake Bay hypoxia (2017) Da, F., M.A.M. Friedrichs, P. St-Laurent, presentation at the CERF meeting, Providence RI, Nov. 5-9, 2017.
- Air-sea CO₂ flux variability in the Chesapeake Bay (2017) St-Laurent, P., M.A.M. Friedrichs, E.H. Shadwick, F. Da, R.G. Najjar, H. Tian, presentation at the CERF meeting, Providence RI, Nov. 5-9, 2017.
- 'Meltwater pump' mechanism directly links the extreme Amundsen Sea phytoplankton bloom to the melting ice shelf (2017) Yager, P.L., P. St-Laurent, R.M. Sherrell, M.S. Dinniman and S.E. Stammerjohn, presentation at the WAIS meeting, Coupeville WA, Oct. 8-11, 2017.

Physical and biological controls on phytoplankton blooms in the Amundsen Sea Polynya (2017) Oliver, H., P. St-Laurent, R.M. Sherrell, P.L. Yager, presentation at the International Goldschmidt Conference, Paris (France), August 13-18, 2017.

Air-sea CO₂ variability in the Chesapeake Bay (2017) Friedrichs, M.A.M., E.H. Shadwick, R.G. Najjar, P. St-Laurent, F. Da, H. Tian, poster presentation at the OCB summer workshop, Woods Hole MA, June 26-29, 2017.

Ice shelf melt-driven circulation of the deep layers in the Amundsen Sea, Antarctica (2017) St-Laurent, P., M.S. Dinniman, poster presentation at the 31st Forum for Research into Ice Shelf Processes (FRISP) workshop, Bergen (Norway), June 19-22, 2017.

Impacts of direct atmospheric deposition of nitrogen on Chesapeake Bay oxygen and nitrogen cycling (2017) Da, F., M.A.M. Friedrichs and P. St-Laurent, presentation at the Gordon Research Conference on Coastal Ocean Dynamics, Biddeford ME, June 11-16, 2017.

Chesapeake Bay export of dissolved organic carbon from space-borne data (2017) Signorini, S.R., A. Mannino, M.A.M. Friedrichs, P. St-Laurent, J. Wilkin, poster presentation at the International Ocean Colour Science (IOCS)-OCRT meeting, Lisbon (Portugal), May 15-18, 2017.

How the cryosphere may affect iron supply to Antarctic phytoplankton blooms (2017) Dinniman, M.S., P. St-Laurent, E. Hofmann, J.M. Klinck, S. Mack, oral presentation at The Southern Ocean Workshop: Its dynamics, biogeochemistry and role in the climate system, Boulder CO, April 10-13, 2017.

What makes a bloom in the Amundsen Sea Polynya? A 1-D biogeochemical modeling perspective (2017) Oliver, H., P. St-Laurent, R.M. Sherrell, P.L. Yager, presentation at the Gordon Research Conference on Polar Marine Science, Ventura CA, March 26-31, 2017.

Fluxes of carbon and nutrients from upstream landscapes to the coastal ocean (2017) Friedrichs, M.A.M., P. St-Laurent, NACP/AmeriFlux Meeting, North Bethesda MD, March 27-30, 2017.

The effect of atmospheric nitrogen deposition on primary productivity and nitrogen uptake along oligotrophic waters of the eastern United States (2017) Bernhardt, P.W., M.R. Mulholland, B. Widner, C. Sookhdeo, P. Sedwick, P. St-Laurent, M. Friedrichs, R.G. Najjar, ASLO Meeting, Honolulu HI, February 26 to March 3, 2017.

Variability of physical parameters influencing the bloom of the most productive Antarctic coastal polynya (Amundsen Sea Polynya) (2016) St-Laurent, P., M.S. Dinniman, E.E. Hofmann, R.M. Sherrell, S.E. Stammerjohn, P.L. Yager, 2016 WAIS workshop, Sterling VA, Oct. 3-6, 2016.

Melting ice enhances coastal biological productivity, 2016 WAIS workshop (2016) Yager, P.L., P. St-Laurent, R.M. Sherrell, H. Oliver, M.S. Dinniman, S.E. Stammerjohn, 2016 WAIS workshop, Sterling VA, Oct. 3-6, 2016.

Simulating the upward transport of sediment-derived iron associated with the overturning circulation in ice shelf cavities of the Amundsen Sea, Antarctica (2016) St-Laurent, P., M.S. Dinniman, E.E. Hofmann, R.M. Sherrell, S.E. Stammerjohn, P.L. Yager, IGS Symposium on Ice Shelf-Ocean Interactions, La Jolla CA, July 10-15, 2016.

Impacts of direct atmospheric deposition of nitrogen on Chesapeake Bay hypoxia (2016) Da, F., M.A.M. Friedrichs, P. St-Laurent, ChesMS16, Williamsburg VA, June 1-2, 2016.

Transport pathways of nutrients in the Amundsen Sea, Antarctica (2016) St-Laurent, P., M.S. Dinniman, E.E. Hofmann, R. Sherrell, S. Stammerjohn, P. Yager, E. Randall-Goodwin, AGU-ASLO-TOS Ocean Sciences Meeting, New Orleans LA, February 2016.

Deposition of atmospheric nitrogen to coastal ecosystems (DANCE): A study in seasonally oligotrophic waters off the eastern U.S. (2016) Najjar, R.G., P. Sedwick, M. Mulholland, M.A.M. Friedrichs, A. Thompson, D. Martins, P. Bernhardt, M. Herrmann, L. Price, B. Sohst, C. Sookhdeo, P. St-Laurent, B. Widner, AGU-ASLO-TOS Ocean Sciences Meeting, New Orleans LA, February 2016.

Investigating the role of mesoscale processes and ice dynamics in carbon and iron fluxes in a changing Amundsen Sea (INSPIRE) (2016) Mu, L., P. Yager, P. St-Laurent, M. Dinniman, E. Hofmann, H. Oliver, R. Sherrell, S. Stammerjohn, AGU-ASLO-TOS Ocean Sciences Meeting, New Orleans LA, February 2016.

Comparing the impact of atmospheric nitrogen deposition and wind mixing on biological productivity during storm events (2015) St-Laurent, P., M.A.M. Friedrichs, R.G. Najjar, M. Herrmann, Ocean Carbon and Biogeochemistry workshop, Woods Hole, MA, July 2015.

Dispersion of glacial meltwater by eddies in the Amundsen Sea (2014) St-Laurent, P., J.M. Klinck, M.S. Dinniman, AGU-ASLO-TOS Ocean Sciences Meeting, Honolulu HI, February 2014.

What determines the differences in basal melt between ice shelves in the Amundsen Sea? (2013) St-Laurent, P., J.M. Klinck, M.S. Dinniman, West Antarctic Ice Sheet (WAIS) workshop, Sterling VA, Sept. 28 to Oct. 2, 2013.

What determines the differences in basal melt between ice shelves in the Amundsen Sea? (2013) St-Laurent, P., J.M. Klinck, M.S. Dinniman, Forum for Research in Ice Shelves Processes (FRISP), Powys, Wales, June 17-19, 2013.

- Stable vs. unstable slope currents and cross-shelf exchanges in coastal troughs (2013) St-Laurent, P., J.M. Klinck, M.S. Dinniman, presentation at the Gordon Research Conference on Coastal Ocean Circulation, Biddeford ME, June 9-14, 2013.
- Influence of ocean circulation patterns on ocean heat transport to ice shelves (2012) St-Laurent, P., J.M. Klinck, M.S. Dinniman, West Antarctic Ice Sheet (WAIS) workshop, Eatonville WA, September 20-22, 2012.
- Comparing the oceanic heat transport to Antarctic ice shelves for two generic continental shelves (2012) St-Laurent, P., J.M. Klinck, M.S. Dinniman, 26th Forum for Research into Ice Shelf Processes (FRISP), Utö Vårdshus, Sweden, June 12-14, 2012.
- Cross-shelf exchanges in Antarctica in the presence of troughs (2012) St-Laurent, P., J.M. Klinck, M.S. Dinniman, 2012 International Polar Year (IPY) conference, Montréal Québec, April 23-27, 2012.
- Cross-shelf exchanges induced by troughs (2012) St-Laurent, P., J.M. Klinck, M.S. Dinniman, AGU-ASLO-TOS Ocean Sciences Meeting, Salt Lake City UT, February 2012.
- What controls the time scale of Circumpolar Deep Water intrusions onto Antarctic continental shelves? (2011) Dinniman, M.S., P. St-Laurent, J.M. Klinck, Oral presentation at the 25th IUGG General Assembly, Melbourne, Australia, June 28 to July 7, 2011.
- On the role of coastal troughs in the transport of heat to ice shelves (2011) St-Laurent, P., J.M. Klinck, M.S. Dinniman, 2011 presentation at the Gordon Research Conference on Coastal Ocean Modeling, Mount Holyoke College MA, June 26-30, 2011.
- On the role of coastal troughs in the transport of ocean heat to ice shelves (2011) St-Laurent, P., J.M. Klinck, M.S. Dinniman, IGS-FRISP Meeting, La Jolla CA, June 6-10, 2011.
- Idealized experiments of warm Circumpolar Deep Water intruding over the continental shelf (2010) St-Laurent, P., J.M. Klinck, M.S. Dinniman, West Antarctic Ice Sheet (WAIS) workshop, Lake Raystown PA, September 22-25, 2010.
- Storage and release of freshwater in a subarctic basin: The case of Hudson Bay (2010) St-Laurent, P., F. Straneo, J.-F. Dumais, D.G. Barber, AGU-ASLO-TOS Ocean Sciences Meeting, Portland OR, Feb. 2010.
- What is the Fate of the Riverine Freshwater of Hudson Bay? (2009) St-Laurent, P., F. Straneo, J.-F. Dumais, D.G. Barber, Sixth ArcticNet Annual Scientific Meeting, Victoria BC, Canada, Dec. 2009.
- What is the Fate of the Riverine Freshwater of Hudson Bay? (2009) St-Laurent, P., F. Straneo, J.-F. Dumais, D.G. Barber, Gordon Research Conference on Coastal Ocean Circulation, New-London NH, 2009.
- New observations and numerical simulations of the sea ice-ocean seasonal cycle in Hudson Bay, Foxe Basin and Hudson Strait, Canada (2006) St-Laurent, P., M. Defossez, F.J. Saucier, F. Straneo, S. Senneville, J.-F. Dumais, AGU-ASLO-TOS Ocean Sciences Meeting, Honolulu HI, Feb. 2006.