

Mathieu Dever | Curriculum Vitae

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Education

PhD in Physical Oceanography **Halifax, Canada**

Dalhousie University, Bedford Institute of Oceanography

2011-2017

Thesis title: *Dynamics of the Nova Scotia Current and its relationship with Atlantic Salmon migration patterns over the Scotian Shelf.*

Supervisors: Dr. David Hebert and Dr. Jinyu Sheng

MSc in Physical Oceanography and Climate **Southampton, U.K.**

National Oceanography Centre of Southampton

2009-2010

Thesis title: *How are Mode Waters Formed in the Ocean?*

Supervisors: Dr. Alberto Naveira-Garabato and Dr. Kevin Oliver

BSc Specialized, Major in Physics, minor in Chemistry **Ottawa, Canada**

University of Ottawa

2006-2009

"Licence de Physique-Chimie et Sciences de la Terre" **Orsay, France**

Universite Paris XI

2005-2006

Experience

Professional experience.....

Postdoctoral Investigator **Woods Hole, MA, USA**

Woods Hole Oceanographic Institution, Department of Physical Oceanography

2017-present

Physical Scientist **Halifax, Canada**

Bedford Institute of Oceanography, Department of Fisheries and Ocean Canada

2014

Guest student **Bergen, Norway**

Institute of Marine Research (Havforskningsinstituttet)

2013

Geophysical Institute at the University of Bergen

Teaching experience.....

Instructor – Marine Modelling course **Halifax, Canada**

Dalhousie University, 12 students

2015

Instructor for a Marine Modelling graduate course. Included teaching and marking duties.

Teaching assistant – Marine Modelling course **Halifax, Canada**

Dalhousie University, 15 students

2014

Teacher Assistant for a Marine Modelling graduate course taught by Dr. Katja Fennel.

Coordinator – MATLAB module **Halifax, Canada**

Dalhousie University, 10 students

2013

Creation of a series of 6 MATLAB workshops to introduce new students to MATLAB programming and solve specific problems encountered by the students

Sea-going experience.....

CCGS Hudson **Halifax, Canada**

Duration: 21 days, Atlantic Zone Monitoring Program Cruise

Sep 2015

Duration: 20 days, Atlantic Zone Monitoring Program Cruise

Sep 2014

Duration: 23 days, Atlantic Zone Monitoring Program Cruise

Apr 2013

Lead data collection and logging for CTDs and lowered ADCPs.

OTN Tracker **Halifax, Canada**
Duration: daily trips 2011-2013
Deployed or recovered underwater gliders. Collected of water samples at deployment/recovery site.

M/V Dominion Victory **Halifax, Canada**
Duration: 2 days Apr 2011
Deployed 70 acoustic receivers and benthic pods along the Halifax Line.

Volunteering experience.....

Panel member **Woods Hole, U.S.A**
Summer Student Fellows and Partnership Education Program – WHOI 2017

Panel member for abstract review **Halifax, Canada**
International Conference in Fish Telemetry (ICFT) – Dalhousie University 2015

Volunteer for conference organization **Halifax, Canada**
International Workshop on Modelling the Ocean – Dalhousie University 2014

Editor for “Current Tides” **Halifax, Canada**
Dalhousie University 2012-2013
Creation of a student-written scientific magazine promoting the Oceanography department at Dalhousie University worldwide.

Awards and scholarships

Prediction and Observation of the Marine Environment Travel Grant **Bergen, Norway**
Institute of Marine Research and University of Bergen 2013
Competitive travel grant for a 6-month exchange with the Institute of Marine Research in Bergen, Norway

Languages

French: Native

English: Fluent *Test Of English as a Foreign Language (TOEFL), 108 / 120, 2008*
International English Language Testing System (IELTS), 8.5 / 9, 2014

Spanish: Basic: speaking and writing, Intermediate: reading

Computer skills

Intermediate: HTML, CSS, Java, R, Photoshop, Python

Advanced: Matlab, Latex, Git, Linux, Fortran

Publications

In preparation or submitted.....

Dever M., Skagseth Ø., Drinkwater K. and Hebert D. Frontal dynamics of a buoyant coastal current: quantifying buoyancy, winds and isopycnal tilting influence on the Nova Scotia Current. *submitted*

Dever M., Kocik J., Hebert D., Zydlewski J., Hawkes J., Stich D. Linkage Between Coastal Conditions, Detection Patterns and Migratory Behavior of Atlantic Salmon Postsmolts across the Scotian Shelf. *In prep.*

Peer-reviewed publications.....

Dever M., Hebert D., Greenan B.J., Sheng J. and Smith P.C. (2016) Hydrography and coastal circulation along the Halifax Line and the connections with the Gulf of St Lawrence. *Atmosphere-Ocean*. DOI: 10.1080/07055900.2016.1189397

Shan S, Sheng J, Ohashi K, **Dever M.** (2016) Assessing the performance of a multi-nested ocean circulation model using satellite remote sensing and in-situ observations. *Satellite Oceanography and Meteorology*.

DOI: 10.18063/SOM.2016.01.004

Ross T., Craig S., Comeau A., Davis R., **Dever M.** and Beck M., (2017) Blooms and subsurface phytoplankton layers on the Scotian Shelf: Insights from profiling gliders. *Journal of Marine Systems*. DOI: 10.1016/j.jmarsys.2017.03.007

Non-peer reviewed publications.....

Hebert, D., Pettipas, R., Brickman, D., and **Dever, M.** (2016). Meteorological, Sea Ice and Physical Oceanographic Conditions on the Scotian Shelf and in the Gulf of Maine during 2015. *DFO Can. Sci. Advis. Sec. Res. Doc.* 2016/083. v + 49 p.

<http://www.dfo-mpo.gc.ca/csas-sccs/publications/resdocs-docrech/2016/>

Hebert, D., Pettipas, R., Brickman, D., and **Dever, M.** (2015). Meteorological, Sea Ice and Physical Oceanographic Conditions on the Scotian Shelf and in the Gulf of Maine during 2014. *DFO Can. Sci. Advis. Sec. Res. Doc.* 2015/040. v + 49 p.

<http://www.dfo-mpo.gc.ca/csas-sccs/publications/resdocs-docrech/2015/>

Hebert, D., Pettipas, R., Brickman, D., and **Dever, M.** (2014). Meteorological, Sea Ice and Physical Oceanographic Conditions on the Scotian Shelf and in the Gulf of Maine during 2013. *DFO Can. Sci. Advis. Sec. Res. Doc.* 2014/070. v + 40 p.

<http://www.dfo-mpo.gc.ca/csas-sccs/publications/resdocs-docrech/2014/>

Hebert, D., Pettipas, R., Brickman, D., and **Dever, M.** (2013). Meteorological, Sea Ice and Physical Oceanographic Conditions on the Scotian Shelf and in the Gulf of Maine during 2012. *DFO Can. Sci. Advis. Sec. Res. Doc.* 2013/058. v + 46 p.

<http://www.dfo-mpo.gc.ca/csas-sccs/publications/resdocs-docrech/2013/>

Presentations

Invited Talks.....

Dever M., Hebert D. and Sheng J. (2016, December).

Investigating the dynamics of a buoyant coastal current using observations and a simple conceptual model.

Invited speaker at Woods Hole Oceanographic Institution, Woods Hole, U.S.A.

Dever M., Hebert D., Greenan B. and Sheng J. (2016, April).

Getting to the bottom of surface currents: Investigating the dynamics of a coastally-trapped, buoyancy-driven current.

Invited speaker at the National Oceanography Centre in Southampton, Southampton, UK.

Dever M., Kocik J., Hebert D., Zydlewski J., Hawkes J., Stich D. and Greenan B. (2015, December, January and February).

Linkage Between Coastal Conditions, Detection Patterns and Migratory Behavior of Atlantic Salmon Smolts (Salmo salar) Along the Halifax Line.

Invited speaker at the University of Maine (Orono, ME, U.S.A.), at the Bedford Institute of Oceanography (Dartmouth, NS, Canada) and in the biology Department at Dalhousie University (Halifax, NS, Canada).

Seminar Talks.....

Dever M. (2016, April).

Physical Dynamics and Biological Impacts of the Nova Scotia Current using Observations, Theory, and Modeling.

Presented at Dalhousie University, Halifax, NS, Canada

Dever M., Drinkwater K., Skagseth Ø., Sundby S. and Hebert D. (2014, February).
Improved method to characterize coastally-trapped, buoyancy-driven currents: A comparison between the Norwegian Coastal Current and the Nova Scotia Current.
Presented as part of the Physical Oceanography and Meteorology Seminar Series at Dalhousie University, Halifax, NS, Canada.

Dever M., Drinkwater K., Skagseth Ø., Sundby S. and Hebert D. (2013, December).
Improved method to characterize coastally-trapped, buoyancy-driven currents: A comparison between the Norwegian Coastal Current and the Nova Scotia Current.
Presented at the Geophysical Institute at the University in Bergen, Bergen, Norway.

Dever M., Drinkwater K., Skagseth Ø., Sundby S. and Hebert D. (2013, September).
Getting to the bottom of surface currents using both Canadian and Norwegian coastal currents.
Presented at the Institute of Marine Research, Bergen, Norway.

Dever M., Hebert D., Greenan B. and Sheng J. (2013, June).
On Buoyancy-Driven, Coastally-Trapped Currents: Theory, scientific questions and proposed approach.
Presented as part of the Physical Oceanography and Meteorology Seminar Series at Dalhousie University, Halifax, NS, Canada.

Conferences.....

Dever M., Mahadevan A., Nicholson D. and Omand M.M. (2017, July).
Interactions between submesoscale dynamics and sinking particles: a pre-EXPORTS study.
Poster presented at the Ocean Carbon & Biogeochemistry Workshop 2017, Woods Hole, MA, U.S.A.
DOI: doi.org/10.13140/RG.2.2.25617.02409

Dever M., Hebert D., Greenan B. and Sheng J. (2016, February).
Characterization of the Nova Scotia coastally-trapped Current and monitoring of the associated density front using underwater gliders.
Presented at the Ocean Sciences meeting, New Orleans, LA, U.S.A.

Dever M., Kocik J., Hebert D., Zydlewski J., Hawkes J., Stich D. and Greenan B. (2016, February).
*Linkage Between Coastal Conditions, Detection Patterns and Migratory Behavior of Atlantic Salmon Smolts (*Salmo salar*) Along the Halifax Line.*
Poster presented at the Ocean Sciences meeting, New Orleans, LA, U.S.A.

Ross T., Craig S., **Dever M.**, Beck M., Comeau A. and Davis R. (2016, February).
The physical context of seasonal and inter-annual variability in phytoplankton across the Scotian Shelf: Insights from profiling gliders.
Poster presented at the Ocean Sciences meeting, New Orleans, LA, U.S.A.

Dever M., Kocik J., Zydlewski J., Hebert D., and Greenan B. (2014, August).
Linkage between coastal conditions and migration of Atlantic Salmon smolts along the Halifax Line.
Presented at the American Fisheries Society annual meeting, Quebec, PQ, Canada

Dever M., Drinkwater K., Skagseth Ø., Sundby S. and Hebert D. (2014, February).
Improved method to characterize coastally-trapped, buoyancy-driven currents: A comparison between the Norwegian Coastal Current and the Nova Scotia Current.
Presented at the Ocean Sciences meeting, Honolulu, HI, U.S.A.

Dever M., Hebert D., Greenan B., Sheng J. and Smith P. (2012, May).
Observing Circulation and physical properties along the Halifax Line using the Ocean Tracking Network.
Poster presented at the Canadian Meteorological and Oceanographic Society's Conference, Montreal, PQ, Canada

Kocik J., Hawkes J., Stich D., Zydlewski J., **Dever M.**, Byron C. and Lamont A. (2012, October).
Blue Highways: The Migration Ecology of Atlantic Salmons from Maine estuaries to the Scotian Shelf.
Presented at the American Fisheries Society annual meeting, St Paul, MN, U.S.A.

Symposia.....

Dever M., Hebert D., Greenan B., Sheng J. and Smith P. (2014, June).
Bio-physical interactions between Atlantic Salmon and coastal conditions along the Halifax Line.
Presented at the Ocean Tracking Network Symposium, Ottawa, ON, Canada

Dever M., Kocik J., Hebert D., Greenan B. and Smith P. (2013, June).
Do ocean physics have an impact on fish migration patterns?
Presented at the Ocean Tracking Network Symposium, Halifax, NS, Canada

Dever M., Hebert D., Greenan B., Sheng J. and Smith P. (2012, June).
Observing Circulation and Physical Properties Along the Halifax Line Using the Ocean Tracking Network.
Presented at the Ocean Tracking Network Symposium, Halifax, NS, Canada

Dever M., Hebert D., Greenan B., Sheng J. and Smith P. (2011, June).
Preliminary Analysis of Physical Oceanographic Measurements on the Halifax Line.
Presented at the Ocean Tracking Network Symposium, Halifax, NS, Canada