

Curriculum Vitae



Diego A. Ibarra

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- Age: 37
- Marital status: Married (no children)
- Nationality: Mexican and permanent resident of Canada
- Current residence: Halifax, NS, Canada
- Current employment: Post-Doc in Fisheries Oceanography
- Language: Spanish and English

SUMMARY

- **1** Funded research proposals (\$119,368 over 2 years)
- **8** Scholarships (total value: \$316,000 USD)
- **6** Awards and recognitions
- **31** Oral and poster presentations (in 6 countries)
- Participated in **19** research projects (in 3 countries)
- Teaching: Professor (part-time Academic) of undergraduate course: Intertidal Ecology and Diversity

PUBLICATIONS

- **2** Articles in peer-reviewed journals
- **1** Manuscript **submitted** to peer-reviewed journal
- **4** Manuscripts (**in preparation**) for submission to peer-reviewed journals shortly after PhD defense
- **2** Articles in (non-refereed) primary sources
- **4** Articles in (non-refereed) public outreach sources

EDUCATION

<ul style="list-style-type: none"> • PhD in Oceanography DEPARTMENT OF OCEANOGRAPHY – DALHOUSIE UNIVERSITY <i>Focus:</i> Bivalve aquaculture, bio-optics and physical-planktonic-microbiota 3-D modelling <i>Thesis title:</i> Interactions between macrobiota (wild and aquacultured) and the physical-planktonic environment: insights from a new 3-D end-to-end modelling framework <i>Supervisors:</i> Dr. John J. Cullen and Dr. Katja Fennel <i>External Examiner:</i> Dr. Cedric Bacher (IFREMER, France) 	2003 - 2011 Thesis defence: Dec 2011 Halifax, NS CANADA
<ul style="list-style-type: none"> • Masters of Science in Oceanography DEPARTMENT OF OCEANOGRAPHY – DALHOUSIE UNIVERSITY <i>Focus:</i> Mussel aquaculture and bio-optics <i>Thesis title:</i> Estimation of seston depletion by cultured mussels (<i>Mytilus</i> spp.) using measurements of diffuse attenuation of solar irradiance from optical moorings <i>Supervisors:</i> Dr. Allan Cembella and Dr. Jon Grant 	2000 - 2003 Halifax, NS CANADA
<ul style="list-style-type: none"> • Diploma in Remote Sensing and Geographic Information Systems UNITED NATIONS ENVIRONMENT PROGRAM UNIVERSIDAD AUTONOMA METROPOLITANA (METROPOLITAN UNIVERSITY) <i>Focus:</i> Remote sensing of bivalve farms (mapping and phytoplankton assessment) 	Oct - Dec 1998 Iztapalapa, DF MEXICO
<ul style="list-style-type: none"> • Advanced Diploma in Aquaculture FISHERIES AND MARINE INSTITUTE OF MEMORIAL UNIVERSITY OF NEWFOUNDLAND <i>Focus:</i> Bivalve culture and processing <i>Supervisor:</i> Cyr Couturier, MSc 	1997 - 1998 St. John's, NF CANADA
<ul style="list-style-type: none"> • Bachelor of Engineering Biochemical Engineering in Utilization of Aquatic Resources INSTITUTO TECNOLOGICO Y DE ESTUDIOS SUPERIORES DE MONTERREY - CAMPUS GUAYMAS (TECHNOLOGICAL AND HIGHER STUDIES INSTITUTE OF MONTERREY - CAMPUS GUAYMAS) <i>Major:</i> Aquaculture <i>Minor:</i> Resources and environment conservation GPA: 90.4/100 	1993 - 1997 Guaymas, Son. MEXICO

FUNDED RESEARCH PROPOSALS

- **Low-cost optical moorings for continuous assessment of food depletion: a tool for monitoring shellfish feeding activity, forecasting growth and quantifying environmental impact**

Funded by: AQUANET, CANADA'S NETWORK OF CENTRES OF EXCELLENCE IN AQUACULTURE

Award amount: \$119,368 / 2 years

Project design and partner coordination: Diego Ibarra

Proposal writing: Diego Ibarra and Dr. John Cullen

Principal Investigator: Dr. John Cullen

Network Partners:

- Dr. Penny Barnes, Centre for Shellfish Research | Vancouver Island University
- Dr. Toby Balch, Nova Scotia Dept. of Agriculture and Fisheries

Network Industrial Partners:

- Satlantic Incorporated (manufacturer of bio-optical and oceanographic instruments)
- AquaPrime Mussel Ranch Limited (mussel farm)

Initially funded for
2005 and 2006

Later extended to
2007

Halifax, NS, CANADA

SCHOLARSHIPS

<ul style="list-style-type: none"> • Dalhousie Graduate Fellowship (PhD) - [~\$151,000 USD] DEPARTMENT OF OCEANOGRAPHY – DALHOUSIE UNIVERSITY 	2003 - 2011
<ul style="list-style-type: none"> • Dalhousie Graduate Fellowship (Masters) - [~\$29,000 USD] DEPARTMENT OF OCEANOGRAPHY – DALHOUSIE UNIVERSITY 	2002 - 2003
<ul style="list-style-type: none"> • Government of Canada Award - [~\$74,000 USD] DEPARTMENT OF OCEANOGRAPHY – DALHOUSIE UNIVERSITY 	2000 - 2001
<ul style="list-style-type: none"> • North American Partnership in Marine Policy and Coastal Zone Management Education Fellowship INSTITUTO TECNOLOGICO Y DE ESTUDIOS SUPERIORES DE MONTERREY - CAMPUS GUAYMAS FISHERIES AND MARINE INSTITUTE OF MEMORIAL UNIVERSITY OF NEWFOUNDLAND 	Jan - Dec 1997
<ul style="list-style-type: none"> • ITESM - Campus Guaymas Scholarship - [45% of tuition, ~\$8,000 USD] INSTITUTO TECNOLOGICO Y DE ESTUDIOS SUPERIORES DE MONTERREY - CAMPUS GUAYMAS 	1995 - 1997
<ul style="list-style-type: none"> • ITESM - Campus Guaymas Credit Scholarship - [45% of tuition, ~\$16,000 USD] INSTITUTO TECNOLOGICO Y DE ESTUDIOS SUPERIORES DE MONTERREY - CAMPUS GUAYMAS 	1993 - 1997
<ul style="list-style-type: none"> • Centro Universitario Hispanoamericano Scholarship - [50% of tuition, ~\$800 USD] CENTRO UNIVERSITARIO HISPANOAMERICANO (HISPANIC-AMERICAN COLLEGIATE CENTRE) 	1990 - 1993
<ul style="list-style-type: none"> • Federal Commission of Electricity Scholarship - [supplement, ~\$100 USD] ESCUELA SECUNDARIA FEDERAL No. 17 "BENEMERITO DE LAS AMERICAS". 	1987 - 1990

AWARDS

<ul style="list-style-type: none"> • Industrial partnership award: 1st Place Oral Presentation AQUANET V, CANADA'S NETWORK OF CENTRES OF EXCELLENCE IN AQUACULTURE 	Oct 2005 Victoria, BC, CANADA
<ul style="list-style-type: none"> • HabWatch student award WORKSHOP: "Real-time coastal observing systems for ecosystems dynamics and harmful algal blooms" EUROPEAN COMMISSION, SCIENTIFIC COMMITTEE ON OCEANIC RESEARCH, NATIONAL SCIENCE FOUNDATION, INTERGOVERNMENTAL OCEANIC COMMISSION, NOAA and others. 	Jun 2003 Villefranche FRANCE
<ul style="list-style-type: none"> • Student excellence award SCOTIAN PRIDE (AQUACULTURE ASSOCIATION OF NOVA SCOTIA) 	Jan 2003 Halifax, NS, CANADA
<ul style="list-style-type: none"> • Best poster award AQUANET I (CANADA'S NETWORK OF CENTRES OF EXCELLENCE IN AQUACULTURE) 	Sep 2001 Halifax, NS, CANADA
<ul style="list-style-type: none"> • AquaNET travel award WORKSHOP: "Remote sensing and resource management in near-shore and inland waters" 	Oct 2001 Wolfeville, NS, CANADA
<ul style="list-style-type: none"> • Best logo award INSTITUTO TECNOLOGICO Y DE ESTUDIOS SUPERIORES DE MONTERREY - CAMPUS GUAYMAS 	Jan 1996 Guaymas, Son., MEXICO

PUBLICATIONS

Submitted manuscripts

Ibarra DA, Cembella AD, Grant J (submitted) Attenuation of sunlight measured from moored radiometers to assess depletion of suspended particles caused by bivalve aquaculture. *Limnology & Oceanography: Methods*.

In preparation - These are manuscripts arising from my graduate work that will be submitted to peer-reviewed journals shortly after PhD defense.

Ibarra DA, Fennel K, Cullen JJ (in preparation) Impacts of bivalve aquaculture on the spatial distribution of phytoplankton. *Ecological Modelling*.

Ibarra DA, Fennel K, Cullen JJ (in preparation) Coupling 3-D Eulerian bio-physics (ROMS) with individual-based shellfish ecophysiology (SHELL-E): A hybrid model for carrying capacity and environmental impacts of bivalve aquaculture. *Ecological Modelling*.

Ibarra DA, Fennel K, Cullen JJ (in preparation) Two-way coupling of macrobiota and planktonic dynamics in shallow embayments using a hybrid (IBM/Eulerian) end-to-end model. *Marine Ecology Progress Series*.

Ibarra DA, Cembella AD, Grant J, Cullen JJ (in preparation) Seston depletion attributed to mussel (*Mytilus edulis*) long-line aquaculture: Models vs measurements of sunlight attenuation. *Marine Ecology Progress Series*.

Peer-reviewed publications

Cembella AD, **Ibarra DA**, Diogène J, Dahl E (2005) Harmful Algal Blooms and their assessment in fjords and coastal embayments. *Oceanography*. 18(2):158-171.

Grant J, Cranford P, Hargrave B, Carreau M, Schofield B, Armsworthy S, Burdett-Coutts V, **Ibarra DA** (2005) A model of aquaculture biodeposition for multiple estuaries and field verification at blue mussel (*Mytilus edulis*) culture sites in eastern Canada. *Canadian Journal of Fisheries and Aquatic Science*. 62:1271-1285.

Other (non-refereed) primary publications

Ibarra DA, Couturier C, Mills T (2000) Chapter 19: Calculation of meat yields by mussel growers in Newfoundland. In: Shahidi F (ed) Seafood in health and nutrition. Science Tech. USA. 552 pp.

Ibarra DA, Couturier C (1998) Factors influencing culture mussel meat yields and recommendations for a standard method. *Bulletin of the Aquaculture Association of Canada*, 98(2).

Other (non-refereed) publications for public outreach

Ibarra DA, Couturier C (1998) Cultivo de mejillón en Terranova: un ejemplo de acuicultura familiar con tecnología de punta. *Panorama Acuícola*. 3(7).

Ibarra DA (1996) Atlantes de Bacoçhibampo. *Coriolis*, 32:1-7.

Ibarra DA (1995) De la recolección a la producción existe una evolución. *Coriolis*, 29:5.

Ibarra DA (1995) Operativo robustus. *Coriolis*, 26:1-5.

ORAL & POSTER PRESENTATIONS (only showing those presented by Ibarra DA)

<ul style="list-style-type: none">• Joint Oceanography / Biology Seminar Series Ibarra DA. Ecological impacts of bivalve aquaculture: Coupling hydrodynamics, planktonic dynamics and eco-physiology of larger organisms using a new 3-D Eulerian/Individual-Based modelling framework	Jan 2012 Halifax, NS, CANADA
<ul style="list-style-type: none">• Canadian Meteorological and Oceanographic Society (CMOS) Ibarra DA, Fennel K, Cullen JJ. 3-D physical-biological coupled model to assess water-column impacts of bivalve aquaculture in a mussel farm in Ship Harbour, Nova Scotia	May 2009 Halifax, NS, CANADA
<ul style="list-style-type: none">• Conference of the Department of Oceanography Graduate Students (CDOGS) Ibarra DA, Fennel K, Cullen JJ. A 3-D physical-biological model to assess the effect of mussel aquaculture on water-column dynamics in Ship Harbour, Nova Scotia	Mar 2009 Halifax, NS, CANADA
<ul style="list-style-type: none">• American Society of Limnology and Oceanography (ASLO) Ibarra DA, Hasegawa D, Fennel K, Cullen JJ. Water-Column Impacts of Bivalve Aquaculture: Assessment and 3-D Modeling in a Mussel Farm in Ship Harbour, Nova Scotia	Jun 2008 St. John's, NF, CANADA

<ul style="list-style-type: none"> • Centre for Marine Environmental Prediction Public Outreach (Poster presentation) Ibarra DA. Eyes and ears for the undersea 	<p>Sep 2007 Lunenburg, NS, CANADA</p>
<ul style="list-style-type: none"> • Ocean Day - Public Outreach Ibarra DA. How to save the Oceans (talk for high-school students) 	<p>Jun 2006 Halifax, NS, CANADA</p>
<ul style="list-style-type: none"> • Scotian Pride (Aquaculture Association of Nova Scotia) Ibarra DA, Barnes P, Cullen JJ. Monitoring shellfish feeding activity, forecasting growth and quantifying environmental impact using low-cost optical moorings 	<p>Jan 2006 Halifax, NS, CANADA</p>
<ul style="list-style-type: none"> • AquaNET V (Poster presentation) Ibarra DA, Barnes P, Cullen JJ. Low-cost optical moorings for continuous assessment of food depletion: a tool for monitoring shellfish feeding activity, forecasting growth and quantifying environmental impact 	<p>Oct 2005 Victoria, BC, CANADA</p>
<ul style="list-style-type: none"> • AquaNET V (Oral presentation) Ibarra DA, Barnes P, Cullen JJ. Low-cost optical moorings for continuous assessment of food depletion: a tool for monitoring shellfish feeding activity, forecasting growth and quantifying environmental impact 	<p>Oct 2005 Victoria, BC, CANADA</p>
<ul style="list-style-type: none"> • Conference of the Department of Oceanography Graduate Students (CDOGS) Ibarra DA, Cullen JJ. Monitoring feeding activity, forecasting growth and quantifying environmental impact in shellfish farms using low-cost bio-optical moorings 	<p>Mar 2005 Halifax, NS, CANADA</p>
<ul style="list-style-type: none"> • Seminar Series CENTER D'AQUÍCULTURA - INSTITUT DE RECERCA I TECNOLOGIA AGROLIMENTÀRIES Ibarra DA. Optimización del cultivo de bivalvos usando instrumentos bio-ópticos 	<p>Jan 2005 Terragona, SPAIN</p>
<ul style="list-style-type: none"> • Seminar Series IRISH MARINE INSTITUTE Ibarra DA. Narrowing the gap between bio-optics and shellfish aquaculture 	<p>Oct 2004 Galway, IRELAND</p>
<ul style="list-style-type: none"> • Phytoplankton Seminar Series DEPT. OCEANOGRAPHY - DALHOUSIE UNIVERSITY Ibarra DA, Towards an autonomous bio-optical system for coral reef "health" monitoring 	<p>Mar 2004 Halifax, NS, CANADA</p>
<ul style="list-style-type: none"> • Scotian Pride (Aquaculture Association of Nova Scotia) Ibarra DA, Cullen JJ. Bio-optical systems for the assessment and monitoring of resource usage in shellfish farms: A tool for early warning of environmental impact and impairment of bivalve growth 	<p>Jan 2004 Halifax, NS, CANADA</p>
<ul style="list-style-type: none"> • Bio-optics and phytoplankton symposium DEPT. OCEANOGRAPHY - DALHOUSIE UNIVERSITY Ibarra DA. A voyage from the Mexican desert to the Canadian permafrost 	<p>Nov 2003 Halifax, NS, CANADA</p>
<ul style="list-style-type: none"> • HabWatch (Poster presentation) Real-time coastal observing systems for ecosystems dynamics and harmful algal blooms Ibarra DA, Cembella AD, Grant J, Cullen JJ. Diffuse attenuation (490 nm) from multiple optical moorings to quantify chlorophyll depletion by mussels in a coastal aquaculture operation 	<p>Jun 2003 Villefranche, FRANCE</p>
<ul style="list-style-type: none"> • Seminar Series GLOBAL VISION INTERNATIONAL Ibarra DA, Using measurements of sunlight attenuation to quantify seston depletion by coral reefs 	<p>Feb 2003 Pez Maya, QRoo, MEXICO</p>
<ul style="list-style-type: none"> • Scotian Pride (Aquaculture Association of Nova Scotia) Ibarra DA, Cembella AD, Grant J, Cullen JJ. Seston depletion by mussel long-line aquaculture: models and measurements using sunlight penetration 	<p>Jan 2003 Halifax, NS, CANADA</p>
<ul style="list-style-type: none"> • Benthic Ecology Workshop Ibarra DA, Cembella AD, Grant J, Cullen JJ. Seston depletion attributed to mussel (<i>Mytilus edulis</i>) long-line aquaculture: Models vs measurements of sunlight attenuation 	<p>Nov 2002 St. Andrews, NB, CANADA</p>
<ul style="list-style-type: none"> • American Society of Limnology and Oceanography (ASLO) Ibarra DA, Grant J, Cembella AD, Cullen JJ. Optical Moorings as a tool to quantify seston removal by farmed mussels 	<p>Jun 2002 Victoria, BC, CANADA</p>
<ul style="list-style-type: none"> • AquaNET I (Poster presentation) Ibarra DA, Cembella AD, Cullen JJ. Diffuse attenuation (490 nm) from multiple Tethered Attenuation Coefficient Chain System (TACCS) to quantify chlorophyll depletion in a mussel farm in Ship Harbour, Nova Scotia 	<p>Sep 2001 Halifax, NS, CANADA</p>

<ul style="list-style-type: none"> • Aquaculture Association of Canada (2001 meeting) Ibarra DA, Grant J, Cembella AD. Applications of Remote Sensing on bivalve farms: A preliminary study on the impact of suspended culture on the concentration and distribution of seston 	<p>May 2001 Halifax, NS, CANADA</p>
<ul style="list-style-type: none"> • AquaNet Workshop Ibarra DA, Cembella AD. Observing seston depletion from the sky: A preliminary study of the use of remote sensing on bivalve farms 	<p>Mar 2001 St. John's, NF, CANADA</p>
<ul style="list-style-type: none"> • Marine Benthic Ecology Meeting (30th meeting) Ibarra DA, Grant J, Cembella AD. Observing seston depletion from the sky: A preliminary study of the use of remote sensing on bivalve farms 	<p>Mar 2001 Durham, NH, USA</p>
<ul style="list-style-type: none"> • Biology Seminar Series BIOLOGY DEPARTMENT - DALHOUSIE UNIVERSITY Ibarra DA. From La Baja to Yucatán: A voyage through the heart of Mexico's Wildlife 	<p>Mar 2001 Halifax, NS, CANADA</p>
<ul style="list-style-type: none"> • Benthic Ecology Workshop Ibarra DA. Remote sensing on bivalve farms: Observing seston depletion 	<p>Oct 2000 St. Andrews, NB, CANADA</p>
<ul style="list-style-type: none"> • Biological Oceanography Seminar Series DEPT OCEANOGRAPHY - DALHOUSIE UNIVERSITY Ibarra DA. Newfoundland Mussel Aquaculture: An overview of the industry with emphasis in condition indices assessment 	<p>Feb 2000 Halifax, NS, CANADA</p>
<ul style="list-style-type: none"> • Atlantic Fisheries Technology Conference (43rd meeting) Ibarra DA, Couturier C. A comparison of methods to determine condition indices in mussels in Newfoundland 	<p>Jul 1998 St. John's, NF, CANADA</p>
<ul style="list-style-type: none"> • Aquaculture Association of Canada (1998 meeting) Ibarra DA, Couturier C. Comparison of methods to determine meat yields in mussels in Newfoundland 	<p>Jun 1998 St. John's, NF, CANADA</p>
<ul style="list-style-type: none"> • Aquaculture Seminar Series of the Advance Diploma in Aquaculture FISHERIES AND MARINE INSTITUTE OF MEMORIAL UNIVERSITY OF NEWFOUNDLAND Ibarra DA. Estimation of condition indices in mussels in Thimble Bay Farms, Botwood 	<p>Nov 1997 St. John's, NF, CANADA</p>
<ul style="list-style-type: none"> • Marine Mammals Seminar Series MEMORIAL UNIVERSITY OF NEWFOUNDLAND Ibarra DA. Marine mammals of the Gulf of California, Mexico 	<p>Apr 1997 St. John's, NF, CANADA</p>

TEACHING EXPERIENCE

<ul style="list-style-type: none"> • Professor (part-time Academic) Intertidal Ecology and Diversity (BIOL 3664.03) BIOLOGY DEPARTMENT - DALHOUSIE UNIVERSITY 	<p>May 2004, 2005 (scheduled: May 2012) Halifax, NS, CANADA</p>
<ul style="list-style-type: none"> • Teaching Assistant Principles of general biology (BIOL 1000) BIOLOGY DEPARTMENT - DALHOUSIE UNIVERSITY 	<p>2002 - 2003 Halifax, NS CANADA</p>
<ul style="list-style-type: none"> • Teaching Assistant Introduction to Oceanography (OCEA 2850) DEPARTMENT OF OCEANOGRAPHY - DALHOUSIE UNIVERSITY Professor: Robert Fournier, PhD 	<p>2001 - 2002 Halifax, NS CANADA</p>
<ul style="list-style-type: none"> • Part time teacher EXECUTIVE ENGLISH SERVICES Subject: English 	<p>Apr - Dec 1999 Atizapán, Edo de Mex. MEXICO</p>
<ul style="list-style-type: none"> • Part time teacher MULTILINGUAL CORPORATE CENTER S.C. Subjects: English and TOEFL 	<p>May - Aug 1999 Atizapán, Edo de Mex. MEXICO</p>
<ul style="list-style-type: none"> • Full time teacher WALL STREET INSTITUTE - ARBOLEDAS Courses: English Responsibilities: Academic planning of the centre Development of progress statistics of the centre 	<p>Mar - Aug 1999 Atizapán, Edo de Mex. MEXICO</p>

Guest Lectures

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| <ul style="list-style-type: none"> • Tides: Mechanics and Predictions (for course: Intertidal Ecology and Diversity)
BIOLOGY DEPARTMENT - DALHOUSIE UNIVERSITY | <p>May 2006, 08, 09
Halifax, NS, CANADA</p> |
| <ul style="list-style-type: none"> • Measuring physical and biogeochemical variability in the coastal ocean
(for course: Methods in Scientific Diving)
BIOLOGY DEPARTMENT - DALHOUSIE UNIVERSITY | <p>Aug 2006
Halifax, NS, CANADA</p> |
| <ul style="list-style-type: none"> • Intertidal Ecology and Diversity Field Trip (for course: Grade 7 science class)
ARMBRAE ACADEMY | <p>Oct 2004, 05, 06
Peggy's Cove, NS, CANADA</p> |
| <ul style="list-style-type: none"> • ABC of Interpolation (for course: Marine Modelling)
DEPARTMENT OF OCEANOGRAPHY - DALHOUSIE UNIVERSITY | <p>Mar 2005
Halifax, NS, CANADA</p> |
| <ul style="list-style-type: none"> • Potential applications of bio-optical instruments in aquaculture (invited lecture)
SATLANTIC, INC. | <p>Nov 2001
Halifax, NS, CANADA</p> |
| <ul style="list-style-type: none"> • Modelling seston depletion in bivalve farms (for course: Shellfish Aquaculture)
FISHERIES AND MARINE INSTITUTE OF MEMORIAL UNIVERSITY OF NEWFOUNDLAND | <p>Mar 2001
St. John's, NF, CANADA</p> |
| <ul style="list-style-type: none"> • Deep Ocean Floor (for course: Introduction of Oceanography)
DEPARTMENT OF OCEANOGRAPHY - DALHOUSIE UNIVERSITY | <p>Oct 2000
Halifax, NS, CANADA</p> |

RESEARCH EXPERIENCE

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| <ul style="list-style-type: none"> • Post-Doc in Fisheries Oceanography
DEPARTMENT OF OCEANOGRAPHY - DALHOUSIE UNIVERSITY
Remarks: Determination of risk of coalition between whales and vessels in Atlantic Canada.
Supervisor: C.T. Taggart, PhD | <p>Jan 2012 - present
Halifax, NS
CANADA</p> |
| <ul style="list-style-type: none"> • Modelling research for PhD (3-D physical-biological modelling of a mussel farm)
DEPARTMENT OF OCEANOGRAPHY - DALHOUSIE UNIVERSITY
Remarks: Use of the Regional Ocean Modeling System (ROMS)
Supervisors: Katja Fennel, PhD and John Cullen, PhD | <p>2007 - 2011
Ship Harbour, NS
CANADA</p> |
| <ul style="list-style-type: none"> • Field research for PhD (Bio-optical monitoring in a mussel farm)
DEPARTMENT OF OCEANOGRAPHY - DALHOUSIE UNIVERSITY
AQUAPRIME MUSSEL RANCH LIMITED
Remarks: Field coordinator (crew of 13), boat operator, use of oceanographic and optical instruments (radiometer-profiler, VSF, pH, hydroscat, ac-s, ac-9, CTD, chlorophyll blue/red fluorometer, chlorophyll red/far red fluorometer, CDOM fluorometer, backscatter meter)
Supervisors: John Cullen, PhD and Katja Fennel, PhD | <p>2003 - 2006
Ship Harbour, NS
CANADA</p> |
| <ul style="list-style-type: none"> • Field research (Ecology of rockweed and seagrass meadows)
DEPARTMENT OF BIOLOGY - DALHOUSIE UNIVERSITY
Supervisors: A. Schmidt, MSc and H. Lotze, PhD | <p>Summer 2006-2007
NS and NB
CANADA</p> |
| <ul style="list-style-type: none"> • Field research (Bio-optical monitoring in a mussel farm)
DEPARTMENT OF OCEANOGRAPHY - DALHOUSIE UNIVERSITY
ALFRED WEGENER INSTITUTE FOR POLAR AND MARINE RESEARCH
CENTER D' AQUICULTURA - INSTITUT DE RECERCA I TECNOLOGIA AGROLIMENTÀRIES
INSTITUT DE CIÈNCIES DEL MAR - CONSEJO SUPERIOR DE INVESTIGACIONES CIENTÍFICAS
Remarks: Bio-optical technology-transfer and training (Canada→Spain)
Supervisors: Allan Cembella, PhD and Jorge Diogene, PhD | <p>2005
Alfacs, Cataluña
SPAIN</p> |
| <ul style="list-style-type: none"> • Field research for MSc (Bio-optical monitoring in a mussel farm)
DEPARTMENT OF OCEANOGRAPHY - DALHOUSIE UNIVERSITY
INSTITUTE OF MARINE BIOSCIENCES – NATIONAL RESEARCH COUNCIL
AQUAPRIME MUSSEL RANCH LIMITED
Remarks: Boat operator, use of oceanographic and optical instruments (TACCS, radiometer-profiler, hydroscat, ac-9, CTD/fluorometer, etc.) | <p>2001 - 2003
Ship Harbour, NS
CANADA</p> |

<ul style="list-style-type: none"> • Field research (Bio-optical and oceanographic monitoring) DEPARTMENT OF OCEANOGRAPHY - DALHOUSIE UNIVERSITY CENTRE FOR MARINE ENVIRONMENTAL PREDICTION (CMEP) 	<p>2001 - 2005 Lunenburg, NS CANADA</p>
<ul style="list-style-type: none"> • Field research (Ecological dynamics of macroalgae <i>Laminaria</i> and <i>Codium</i>) DEPARTMENT OF BIOLOGY - DALHOUSIE UNIVERSITY Supervisor: A. Schmidt and R. Scheibling. PhD 	<p>Summer 2004 Cranberry Cove, NS CANADA</p>
<ul style="list-style-type: none"> • Field research (Transplant experiment of sea urchin, <i>S. droebachiensis</i>) DEPARTMENT OF BIOLOGY - DALHOUSIE UNIVERSITY Supervisor: R. Scheibling. PhD 	<p>Summer 2004 St. Margarets Bay, NS CANADA</p>
<ul style="list-style-type: none"> • Field research (Groundtruthing of CASI images over a mussel farm) DEPARTMENT OF OCEANOGRAPHY - DALHOUSIE UNIVERSITY FISHERIES AND OCEANS – BEDFORD INSTITUTE OF OCEANOGRAPHY 	<p>Aug 2000 Tracadie Bay, PEI CANADA</p>
<ul style="list-style-type: none"> • Field research (Assessment of bivalve aquaculture environmental impact) DEPARTMENT OF OCEANOGRAPHY - DALHOUSIE UNIVERSITY FISHERIES AND OCEANS – BEDFORD INSTITUTE OF OCEANOGRAPHY 	<p>Jul - Aug 2000 Tracadie Bay. / Savage H., PEI, CANADA</p>
<ul style="list-style-type: none"> • Field research (Groundtruthing of CASI images over a bivalve farm) DEPARTMENT OF OCEANOGRAPHY - DALHOUSIE UNIVERSITY ACADIA ESTUARINE CENTRE FOR RESEARCH CENTRE OF GEOGRAPHIC SCIENCES 	<p>Jul 2000 Annapolis Basin, NS CANADA</p>
<ul style="list-style-type: none"> • Independent Research Option – Advanced Diploma in Aquaculture Report Title: “Factors Influencing Culture Mussel Meat Yields and Recommendations for a Standard Method” St. John’s, NF, Canada, 63 pp. FISHERIES AND MARINE INSTITUTE OF MEMORIAL UNIVERSITY OF NEWFOUNDLAND Supervisor: Cyr Couturier, MSc. 	<p>Jan - Apr 1998 St. John’s, NF CANADA</p>
<ul style="list-style-type: none"> • Field work experience with the project “By-catch of the Mexican Porpoise ‘Vaquita’ (<i>Phocoena sinus</i>) in the Upper Gulf of California” INSTITUTO TECNOLÓGICO Y DE ESTUDIOS SUPERIORES DE MONTERREY - CAMPUS GUAYMAS Remarks: Fieldwork with artisan fishermen and collection and cleaning of marine mammal bones 	<p>Mar - Apr 1995 G. Sta. Clara, Son. MEXICO</p>
<ul style="list-style-type: none"> • Volunteer in the ITESM- Campus Guaymas Marine Finfish Culture Project INSTITUTO TECNOLÓGICO Y DE ESTUDIOS SUPERIORES DE MONTERREY - CAMPUS GUAYMAS Supervisor: Guillermo Soberon, PhD. Remarks: Collection of wild organisms. Finfish culturing duties. 	<p>Jan - May 1994 Guaymas, Son. MEXICO</p>
<ul style="list-style-type: none"> • Volunteer in the “Native Bivalves of the Gulf of California Culture” Project INSTITUTO TECNOLÓGICO Y DE ESTUDIOS SUPERIORES DE MONTERREY - CAMPUS GUAYMAS Supervisor: Sergio Farel, M.Sc. Remarks: Bivalve research and culture duties 	<p>Jan - May 1993 Guaymas, Son. MEXICO</p>

RESEARCH CRUISES

<ul style="list-style-type: none"> • Vessel: CCGS Martha Black Groundtruthing of SeaWiFS, MOSS and CASI images FISHERIES AND OCEANS - MAURICE LAMONTAGNE INSTITUTE INSTITUT DES SCIENCES DE LA MER (ISMER) DEPT. OF OCEANOGRAPHY - DALHOUSIE UNIVERSITY UNIVERSITY OF SHERBROOKE YORK UNIVERSITY Supervisors: Dr. Barbara Nieke and Pierre Larouche, MSc. Remarks: Spectrophotometer operator (<i>in-vivo</i>, CDOM and particulate (QFT) absorption) 	<p>May 2000 Gulf and Estuary of St. Lawrence, Quebec CANADA</p>
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- **Vessel: El Duque**
Marine mammals research
Academic and Science Training Exchange International Program
CENTRO DE INVESTIGACION EN ALIMENTACION Y DESARROLLO - UNIDAD GUAYMAS
UNIVERSITY OF CALIFORNIA IN SANTA CRUZ
THE MINORITY INTERNATIONAL RESEARCH TRAINING
CONSERVATION INTERNATIONAL - MEXICO (GULF OF CALIFORNIA PROGRAM)
INSTITUTO TECNOLOGICO Y DE ESTUDIOS SUPERIORES DE MONTERREY - CAMPUS GUAYMAS
Supervisors: Dr. Juan Pablo Gallo and Ana Luisa Figueroa, M.Sc.

Jun - Aug 1995
Midriff Islands,
Gulf of California
MEXICO

OTHER WORK EXPERIENCE

- **Founder and CEO**
ecoLiveRock.org
Not-for profit producer of **Aquacultured Live Rock** for marine ornamental aquaria.
- **Manager of Production**
MAREA AQUARIUM
Responsibilities: Operation of the aquarium
Maintenance of all live organisms of the aquarium | Personnel training
- **Aquaculture Technician with the Scallop Remote Setting Project**
THIMBLE BAY FARMS LIMITED
FISHERIES AND MARINE INSTITUTE OF MEMORIAL UNIVERSITY OF NEWFOUNDLAND
Species: *Placopecten magellanicus* and *Mytilus edulis*
Remarks: Experience with remote setting of hatchery reared scallops spat
Responsible for the mussel spat monitoring program of the farm
Experience on biological and oceanographic data collection using a “Seabird” profiler
- **Aquaculture Technician (Work Term in a Bivalve Commercial Farm)**
THIMBLE BAY FARMS LIMITED
FISHERIES AND MARINE INSTITUTE OF MEMORIAL UNIVERSITY OF NEWFOUNDLAND
Remarks: Responsible for the mussel spat monitoring program of the farm
Experience in mussel and scallop primary process and farming activities
- **Social Work on Fisheries Research**
“Artisan and Industrial Fisheries of the Gulf of California Research Project”
CONSERVATION INTERNATIONAL - MEXICO
INSTITUTO TECNOLOGICO Y DE ESTUDIOS SUPERIORES DE MONTERREY - CAMPUS GUAYMAS
Remarks: Fieldwork with artisan and industrial fishermen.
Knowledge about turtle and fish exclusion devices
- **Social Work as auxiliary of Curator in the Ichthyology and Marine Mammals Museum of the ITESM Campus Guaymas**
INSTITUTO TECNOLOGICO Y DE ESTUDIOS SUPERIORES DE MONTERREY - CAMPUS GUAYMAS
- **Social Work in Children Environmental Education**
Program of Community Participation for Wetlands Conservation
PRONATURA - CAPITULO SONORA | XEDR RADIO
INSTITUTO TECNOLOGICO Y DE ESTUDIOS SUPERIORES DE MONTERREY - CAMPUS GUAYMAS
Remarks: Designer and head of the “Ecological Section” of the XEDR children radio program
- **Volunteer as Collaborator in the publication of “Boletín Humedales de México”.**
WETLANDS INTERNATIONAL
INSTITUTO TECNOLOGICO Y DE ESTUDIOS SUPERIORES DE MONTERREY - CAMPUS GUAYMAS
Remarks: Focus on the “Celestum Biosphere Reserve”.

2009 - present
Halifax, NS
CANADA

Nov 98 - Mar 1999
Alvaro Obregón, DF
MEXICO

Jun - Jul 1998
Botwood, NF
CANADA

May - Jul 1997
Botwood, NF
CANADA

Jun - Dec 1996
Guaymas, Son.
MEXICO

Sep - Nov 1996
Guaymas, Son.
MEXICO

Mar - Apr 1996
Guaymas, Son.
MEXICO

Aug - Dec 1995
Guaymas, Son.
MEXICO

OPEN SOURCE CONTRIBUTIONS

- **EASYGRID**

Software to create staggered Arakawa-C grids to be used with the Regional Ocean Modeling System (ROMS) | Language: Matlab
 Download and tutorial: <https://www.myroms.org/wiki/index.php/easygrid>
 Downloads up to Mar 2012: 875

Apr 2008

OTHER SKILLS

- **REGIONAL OCEAN MODELING SYSTEM (ROMS)**

Specialized in the coupling of lower-trophic levels (planktonic dynamics) with higher-trophic levels (macrobiota dynamics) using a new Eulerian/Individual-based framework developed during my PhD research

Since 2007

- **SMALL BOAT OPERATOR**

Small Boat Operator Course
Marine VHF Radio Operator Course
 CANADIAN POWER & SAIL SQUADRON
 CANADIAN COAST GUARD

Jul 2002

Jul 2002

Halifax, NS, CANADA

- **SCUBA SCIENTIFIC AND RESCUE DIVER**

Scientific SCUBA Course
 CANADIAN ASSOCIATION OF UNDERWATER SCIENTISTS
 DALHOUSIE UNIVERSITY
Diving Accident Response Techniques SCUBA Course
 NATIONAL ASSOCIATION OF UNDERWATER INSTRUCTORS (NAUI)
Open Water I SCUBA Course
 NATIONAL ASSOCIATION OF UNDERWATER INSTRUCTORS (NAUI)

Aug 2004

Halifax, NS CANADA

Dec 1994

Guaymas, Son, MEXICO

Aug 1993

Guaymas, Son, MEXICO

- **FIRST AID**

DAN 0₂ - Oxygen First Aid for Scuba Diving Injuries
 DIVERS ALERT NETWORK
 DALHOUSIE UNIVERSITY
First Aid and CPR Course
 CANADIAN RED CROSS
First Responder Course (American Heart Association protocol)
 RESCATE SN. CARLOS (SAN CARLOS RESCUE STATION)
 INSTITUTO TECNOLOGICO Y DE ESTUDIOS SUPERIORES DE MONTERREY - CAMPUS GUAYMAS

Jun 2004

Halifax, NS CANADA

Apr 2004

Halifax, NS, CANADA

Sep - Nov 1994

Guaymas, Son.
 MEXICO

- **PHOTOGRAPHY**

Photography experience with over 2,500 slides in catalogue
Photography Course and Workshop
 INSTITUTO TECNOLOGICO Y DE ESTUDIOS SUPERIORES DE MONTERREY - CAMPUS GUAYMAS
Photography work for academic purposes
 FISHERIES AND MARINE INSTITUTE OF MEMORIAL UNIVERSITY OF NEWFOUNDLAND
Photography work for environmental education purposes
 CONSERVATION INTERNATIONAL - MEXICO

1995 -1996

Guaymas, Son. MEXICO

May - Jul 1997

Botwood, NF, CANADA

May - Jul 1997

Guaymas, Son. MEXICO

- **ELECTRONIC TECHNICIAN**

Technological Education Training in Electronics
 ESCUELA SECUNDARIA FEDERAL NO. 17 "BENEMERITO DE LAS AMERICAS"

1988 - 1990

Satelite, Edo de Mex.
 MEXICO

- **ILLUSTRATION AND DESIGN**

Technical Drawing Course
 CENTRO UNIVERSITARIO HISPANOAMERICANO
Artistic Drawing and Painting Course
 ESCUELA PREPARATORIA ABIERTA SIAC

1990 - 1993

1985 - 1988

Satelite, MEXICO