MEOPAR

ANNUAL TRAINING MEETING
JUNE 19-20, 2017

PROGRAM

Montreal, Quebec

Agenda

All sessions held at Le Westin, Montreal (unless otherwise noted).

Some sessions have limited seating. Please attend the sessions for which you have registered to avoid seating shortages.

MONDAY, JUNE 19

8:00-8:30	Registration and Breakfast (Grande Place, 8th floor)
8:30-8:45	**Welcome, Introductions, Overview of the Day's Program** Laura Avery (Fortifications Room, 9th floor)
8:45-10:00	**Keynote: Science and Technology on the Coastal Margin** Eric Peterson (Fortifications Room, 9th floor)
10:00-10:30	Morning Break and Poster Set-Up (Grande Place, 8th floor)

10:30-12:00	**From PhD to Life: Rethinking Success after Graduate School** Jennifer Polk (Fortifications Room, 9th floor)	**Panel: What's it like to be a Post-Doc?** MEOPAR Post-Docs (Beaver Hall, 8th floor)
12:00-1:00	Lunch and MEOPeer Group Photo (Grande Place, 8th floor)	
1:00-2:30	**From PhD to Life: Rethinking Success after Graduate School** Jennifer Polk (Fortifications Room, 9th floor)	**Building a Research Data Management Plan** Lee Wilson (Beaver Hall, 8th floor)
2:30-3:00	Afternoon Break (Grande Place, 8th floor)	
3:00-4:30	**Risk Analysis in the Marine Environment** Ronald Pelot (Fortifications Room, 9th floor)	**MEOPAR DemoFest: Best Practices** MEOPAR HQP (Beaver Hall, 8th floor)
4:30-7:30	Dinner/Free Time (Dinner not provided)	
7:30 PM	**MEOPAR & ArcTrain Canada Student Pub Night** (Pub Le Sainte-Élisabeth, 1412 Sainte-Élisabeth, Montreal)	

Agenda

TUESDAY, JUNE 20

Time	Session
8:00-8:30	Breakfast (Grande Place, 8th floor)
8:30-9:00	**Welcome to MEOPAR Cycle II** Douglas Wallace (Fortifications Room, 9th floor)
9:00-10:00	**Keynote: Knowledge Mobilization** Anneliese Poetz (Fortifications Room, 9th floor)
10:00-10:30	Morning Break (Grande Place, 8th floor)

Time		
10:30-12:00	**Leading High Impact Teams/Conducting Difficult Conversations to Prevent and Resolve Conflict** Corry Robertson (Fortifications Room, 9th floor)	**Python Tutorial** Diego Ibarra (Palais Room, 8th floor)
12:00-1:00pm	Lunch (Grande Place, 8th floor)	Lunch (Grande Place, 8th floor)
1:00-2:00	**My Path to Becoming a PI: Early-Career Researchers Share Their Stories** Brent Else and Natalie Ban (Fortifications Room, 9th floor)	12:30-3:00 PM **Tour of Environment and Climate Change Canada (ECCC)** Pre-registered students only (Meet in hotel lobby at 12:25 for bus to ECCC offices)
2:00-3:00	**Python in the Ocean Sciences** Diego Ibarra (Fortifications Room, 9th floor)	
3:00-3:15	Afternoon Break (Grande Place, 8th floor)	
3:15-4:45	**Patents 101** Glen Deleavey (Fortifications Room, 9th floor)	
5:00-7:00	**Evening Reception with Researchers and Partners** Poster Competition (Grande Place, 8th floor)	

Keynotes

ERIC PETERSON

Eric originally trained as a scientist (Biology PhD), but his main career was spent as a technology entrepreneur, most notably as the founder and president of Mitra, which in the 1990's helped create and implement international standards for medical imaging, thereby taking hospitals from X-ray film libraries and light boxes to big data and diagnostic workstations. Upon the sale of Mitra in 2002 Eric created the B.C.-based Tula Foundation, which for the last decade has had the Hakai Institute as one of its core programs.

Hakai is just the latest manifestation of the activity Eric has been pursuing for over thirty years: building dynamic, flexible organizations that tackle socially important tasks.

Hakai develops the tools, systems, people and insights we need to understand our coastal ecosystems in the context of climate change, and to deal with the consequences that are coming. Most notably, Hakai operates ecological observatories at remote locations on the British Columbia coast. Hakai has its own scientific staff plus a large network that includes university researchers, government scientists and First Nations.

Eric will talk about the interplay of science, technology and social purpose at Hakai, and in particular the biogeochemistry of the coastal margin.

ANNELIESE POETZ

Anneliese completed her PhD in Social Science at McMaster University. She completed a concurrent diploma programme in Health Services and Policy Research through the Ontario Training Centre. Anneliese's PhD research generated a systems-based model, grounded in the realities of decision-making in organizations that must incorporate different types of academic and non-academic sources of information (e.g. financial, environmental, technical, risk analysis and perceptions) as well as stakeholder input. This project generated practical recommendations for industry, some of which have been adopted by at least one of the study sites. Anneliese has focused her career on the practical application of research to improve society. As a project manager for the National Collaborating Centre for Infectious Diseases, she facilitated several national stakeholder consultations, and designed and developed stakeholder- and evidence-informed products (such as web-based tools) in response, to improve public health practice. In her current role as Knowledge Translation (KT) Manager for Kids Brain Health Network NCE, Anneliese continues to provide services toward the practical application of research such as: advice on stakeholder consultation, KT planning for grant applications, KT products, training opportunities, and the design and development of innovative tools to guide researchers in doing KT for their projects. Anneliese continues to advance her knowledge in topics relevant to KT such as requirements gathering for systems design (product and process development and improvement) and is a member of the International Institute of Business Analysts (IIBA).

This interactive presentation will begin with a brief hands-on exercise, followed by three stories highlighting successes and failures in Knowledge Translation from Anneliese's personal experiences.

Participation will be encouraged throughout the presentation. The aim is to provide attendees with practical information and considerations for informing their KT approaches and activities.

Abstracts

From PhD to Life: Rethinking Success after Graduate School (Jennifer Polk)

Most people hate their jobs. Why? Their work doesn't align with what matters to them or how they do their best work. Making good career decisions depends on understanding our own values, priorities, and strengths. Knowing what we each find fun, engaging, meaningful, and rewarding is crucial to identifying jobs that work for us. Yet when it comes to thinking about next career steps, we tend to gloss over this stuff. We jump into skill assessments, industry research, and resume writing. Networking may feel inauthentic and applying for jobs a chore. So we get stuck or wind up in jobs we dislike. This interactive workshop will focus on deeper considerations. Participants will identity what's important to them in their personal and professional lives, and what they offer that others might not. From this base, participants will be able to better and more confidently make decisions that make sense for them.

Panel: What's it like to be a Post-Doc? (MEOPAR Post-Docs)

You're a grad student and you're thinking about what happens next. You've heard that it's possible you may need to do a post-doc, but what does that mean? Come hear from four MEOPeers about their post-doc experiences and learn about some of the joys and challenges that go with this phase of academia. We hope to address: how do you get a post-doc, stability, the two-body problem, work/life balance, starting a family, moving beyond a post-doc. It will be as informal as possible so come ready with questions! Presented by Dr. Barbara Paterson (Saint Mary's University), Dr. Jonathan Kellogg (InFORM), Dr. Lauren McWhinnie (University of Victoria), and Dr. Marion Bandet (UQAR).

Building a Research Data Management Plan (Lee Wilson)

This workshop will provide a brief overview of Research Data Management, with a focus on the development of Data Management Plans (DMPs). Last year's release of the Tri-Agency Statement of Principles on Digital Data Management signaled a shift in Canadian funder expectations for data management. Recognizing the many benefits of open data, including avoiding duplication of research, encouraging data reuse, and increased replicability of results, the principles state that efforts must be made to ensure that data collected through publicly funded research is made as accessible as possible. DMPs are a key component of the data management process that touch on all aspects of RDM, describing how data are collected, formatted, preserved, and shared. Importantly, they also promote the consideration of the costs and challenges associated with managing research data.

Risk Analysis in the Marine Environment (Ron Pelot)

MEOPAR exists to network, leverage and enhance our national expertise to build the observational framework, predictive tools and response structure necessary for managing risks and taking advantage of opportunities in the changing marine environment. This extract from our Cycle II plan highlights the fundamental role of risk in our Network's research objectives, and yet few project proposals explicitly involve risk management elements. This is to be expected as many research contributions serve to indirectly support various risk management strategies. This session will introduce basic risk concepts and definitions, explain the risk onion, present some of the key risk frameworks that pertain to ocean and coastal studies, and illustrate how MEOPAR projects fit into the greater jigsaw of understanding and managing risks in the marine environment.

MEOPAR DemoFest: Best Practices in Modeling and Data Analysis (MEOPAR HQP)

Join Aikaterini Tavri (University of Victoria), Dr. Michael Dunphy (University of British Columbia), Emily Gray (University of British Columbia), and Dr. Brennan Vogel (MEOPAR Response Core) as they share best practices from their research and work. Topics include "Use of Synthetic Aperture Radar Remote Sensing in Marine Sciences," "Best Practices in Reproducible Modelling," "Best Practices in Document Analysis and Text Data Collection in the Social Sciences," and "Demonstration of MEOPAR's Response Directory."

Abstracts

Leading High Impact Teams/Conducting Difficult Conversations to Prevent and Resolve Conflict (Corry Robertson)

A business team must work together to achieve a common goal and success is dependent on factors such as individual commitment, skilled communication, clear vision and, of course, strong leadership. This topic introduces leaders to coaching skills and tools for developing high performance teams.

Perception, feedback and conducting difficult conversations to prevent and resolve conflict: Participants will gain insight into the roots of conflict and conflict dynamics. We will also introduce the concept of how to not only resolve conflict but also how to lead a harmonious team so that unproductive conflict is kept at bay by managing difficult conversations in a healthy and productive way. Ideas explored include self-awareness and personal responsibility, receiving messages effectively, listening, perception, giving and receiving feedback.

Python Tutorial (Diego Ibarra)

This tutorial is aimed to anyone wishing to get a taste of Python, and to learn some "recipes" to do graphs, maps, simple data filtering, data wrangling, ecosystem modelling, and other tools related to Ocean Sciences. The tutorial is useful to a wide audience ranging from people familiar with MATLAB and R, to people new to programming simply wanting to get a feeling of what "coding" is all about. You can just come for the show, but if you want to follow along using your own laptop, you need to pre-install Python on your computer and download some data BEFORE the tutorial begins. The data and installation instructions can be found here: https://bitbucket.org/Diego_Ibarra/meopar-python-tutorial

My Path to Becoming a PI: Early-Career Researchers Share Their Stories (Brent Else and Natalie Ban)

Two MEOPAR Principal Investigators (PIs) will talk about their paths through academia, from graduate studies and completing their dissertations to finding a position in academia and becoming Principal Investigators on MEOPAR research projects. They will share advice and potential pitfalls and answer questions based on their experiences on the transition from student to PI.

Python in Ocean Sciences (Diego Ibarra)

Python is a powerful programming language that is easy-to-learn, highly efficient and most importantly, free. It is a general purpose language used in virtually every realm where programming is needed. Notable companies using Python include Google, Facebook, YouTube, Dropbox, NASA, Mozilla, etc. In Ocean Sciences, the community has predominately used MATLAB as their default programming language, which is proprietary software with a hefty price (approx. $2000/licence). Therefore, a growing number of research groups are developing Python libraries for an assortment of Ocean Science applications. In this talk I will review some of these libraries and show examples of what can be done with Python in this field. I will also comment on the disadvantages of Python and the challenges ahead in the path of open-source programming in Ocean Sciences.

Patents 101 (Glen Deleavey)

Patents play a key role in protecting and commercializing technology; however, many scientists have limited exposure to the patenting system. This presentation will outline the basics of patenting an invention and what to expect from the patenting process, as viewed from the perspective of a scientific researcher. Topics will include an overview of what constitutes a patentable invention, when to consider filing for a patent application, and what to expect from the patenting process.

Speakers

NATALIE BAN

Natalie joined the School of Environmental Studies in January 2013. Trained in geography, resource management and environmental studies (PhD from UBC in 2008; MA from McGill 1999), Natalie Ban draws upon many disciplines from natural and social sciences in her work. Her research interests span ethnoecology, conservation biology, marine spatial planning, conservation planning and implementation, and evaluation and mapping of cumulative impacts, all mainly in marine and coastal systems. Natalie's current research focuses on identifying options for management and conservation of biodiversity whilst respecting people's needs and uses of resources.

GLEN DELEAVEY

Dr. Glen Deleavey is a patent agent in training and technical consultant with Gowling WLG's Intellectual Property Group, based in the firm's Ottawa office. With his broad scientific background, Glen provides technical consulting, patent drafting, and patent prosecution services in a wide variety of scientific disciplines. He is also a member of Gowling WLG's Life Sciences Group. Glen has an extensive background in chemistry and biochemistry. He obtained his PhD from the Department of Chemistry at McGill University. His graduate studies focused on the development of chemically modified nucleic acids and nucleoside analogues as potential therapeutics. Prior to his graduate studies, he completed his honours B.Sc. in biology-chemistry at the University of New Brunswick.

BRENT ELSE

Dr. Brent Else has been an Assistant Professor in the Department of Geography, University of Calgary since 2014. He rejoined the department where he received his BSc (2005) and MSc (2007) degrees after completing a PhD (2012) and Postdoctoral Fellowship at the University of Manitoba. Dr. Else's primary field of expertise is in air-sea exchanges of CO_2 in the Arctic, but in studying that topic he has also developed expertise in marine carbon cycles, meteorology, sea ice biogeochemistry, and remote sensing. More recently Dr. Else has been investigating ways to make his research more relevant to the people of the North, and he now leads a project that has set up real-time weather stations along travel routes and at important resource gathering sites identified by community Hunter & Trapper Organizations. He is also developing a training program that will connect his research activities with northern college students to build environmental monitoring skills.

DIEGO IBARRA

Diego is a Research Associate at Dalhousie University, where he is the lead developer of OceanViewer.org, a MEOPAR-funded, Python-based, one-stop-shop website to enable easy access to real-time ocean data from a variety of sources, including satellites, buoys, gliders, models, citizens, etc. He is also the creator of OceanPython.org, an online community to share Python code for ocean science applications, and he teaches the Python-based course "Ecosystem Modelling for Aquaculture". Diego did his PhD and MSc at Dalhousie University working with what he calls "big-ish data", including 3D hydrodynamic-biological coupled models, hyper-spectral bio-optical instruments and AIS ship traffic data. Diego's early training was in Aquaculture and not at all in Computer Science or Computer Engineering. He had to pick up programming out of shear necessity, and thus he understands the hurdles of self-learning a computer language. Diego strongly believes in the democratization of ocean data, and he is an advocate for the use of free and open-source resources, like Python.

RON PELOT

Ronald Pelot has been a Professor in the Department of Industrial Engineering at Dalhousie University since 1994. In 2012, he became the Associate Scientific Director of MEOPAR. In 1997, he founded the Maritime Activity and Risk Investigation Network (MARIN) at Dalhousie. Since then his team has developed new software tools and analysis methods applied to maritime safety (accidents), coastal zone security, and marine spills. Research methods encompass

spatial risk analysis, vessel traffic modelling, data processing and pattern analysis, location models for resource allocation, and safety analyses. Current projects include developing an improved risk model of ship oil spills to determine zones of greatest risk depending on the degree of exposure, and the effects of extreme weather on fishing safety, and optimal resource allocation for Search & Rescue. Another study concerns shipping in the arctic, including a network model of feasible routes accounting for ice, land and bathymetry and a forecast of northern traffic in the future based on a wide range of drivers. Dr. Pelot has published over 50 journal articles and produced more than 100 technical reports.

JENNIFER POLK

Jennifer Polk works as an academic, career, and life coach. Her clients – graduate students and PhDs – are a diverse group of individuals based all around the world, from Canada, the US, the UK, Europe, Australia, and elsewhere. Jen speaks on campuses and at conferences throughout North America on issues related to graduate education and career outcomes for PhDs, and her writing has appeared in the Globe and Mail, University Affairs, Vitae, and Academic Matters. Find Jen online at FromPhDtoLife.com, which features resources for PhD career changers, and at her award-winning University Affairs blog. Check out Beyond the Professoriate for professional development programming for PhDs seeking non-faculty careers, and Self-Employed PhD, a new online community for freelancers, consultants, and entrepreneurs. For three years Jen hosted #withaPhD chat, a twice-monthly Twitter discussion. Dr. Polk earned her PhD in history from the University of Toronto in 2012.

CORRY ROBERTSON

Corry Robertson brings a rare and invaluable magic to the business world. She is a seasoned and highly credentialed executive mentor coach, a speaker, trainer, consultant and Reiki Master who is an expert in the alchemy of leadership development. Her career is dedicated to bringing the coaching culture to life within companies. Over the past 20 years she has worked across industries, has coached leaders in organizations of all sizes and leadership levels from new manager to c-suite. This extensive portfolio and her vast depth and breadth of experience enables her to coach with a rich corporate fluency to share overlooked perspectives. She cross pollinates insights, ideas and solutions from the entire leadership spectrum and the result for her clients is the sweet nectar of the elusive "AH HA" moment.

DOUG WALLACE

Douglas Wallace is a world leader in developing new technologies to measure changes to the world's oceans. Before becoming Canada Excellence Research Chair in Ocean Science and Technology, Wallace was professor of marine chemistry at the Leibniz Institute of Marine Sciences in Kiel, Germany. There, he also served as deputy director and head of the Marine Biogeochemistry Research Division. He holds a PhD in chemical oceanography from Dalhousie University and a bachelor's degree in environmental science from the University of East Anglia. Wallace spent more than a decade working as a scientist at the prestigious Brookhaven National Laboratory in the United States. He also made significant scientific contributions to his field through the Intergovernmental Panel on Climate Change, and the US Department of Energy, where he developed the first survey to measure the global distribution of fossil-fuel carbon in the oceans. As the scientific director of the two prominent research institutes hosted at Dalhousie University, the Institute for Ocean Research Enterprise (IORE) and MEOPAR, Wallace is playing a critical role in establishing a broad, long-term research agenda for the region and providing Canada with the best possible tools and scientific information available for making informed decisions about our oceans.

LEE WILSON

Lee joined ACENET in 2017 as a Research Consultant for data management, providing specialized training and consultation to help researchers at each stage of the Research Data Lifecycle: from the conceptualization of a project and initial data collection, to publicly sharing and preserving data for future use. Prior to taking on this role, Lee worked with the Marine Environmental Observation Prediction and Response (MEOPAR) network's Data Management Project, solving issues related to the storage, discovery, and accessibility of ocean data. Lee holds a BA (English) from Mount Allison University and a Master of Library and Information Studies from Dalhousie University.

RECEPTION SPONSOR: EXACTEARTH

Join us for an informal reception to meet industry partners, MEOPAR researchers, and staff. *(Cash bar, one complementary drink will be provided)*

Where: Grande Place, 8th floor, Le Westin

When: **5:00-7:00 PM, Tuesday, June 20**

TOUR SPONSOR: ENVIRONMENT AND CLIMATE CHANGE CANADA

NETWORK FUNDING

Established in 2012, the Marine Environmental Observation Prediction and Response (MEOPAR) Network is supported by the Government of Canada through the federal Networks of Centres of Excellence Program.

PUB NIGHT

Please join us Monday evening at 7:30 PM for a MEOPAR and ArcTrain Canada Student Pub Night.

Where: Pub Le Sainte-Élisabeth, 1412 Sainte-Élisabeth, Montreal

When: **7:30 PM, Monday, June 19**.

Visit **ste-elisabeth.com** for more information about Pub Le Sainte-Élisabeth.