



**FALL 2018**

# **TO EARTH AND BEYOND**

**Alumni Newsletter**



**Western**

**EARTH SCIENCES**

# A MESSAGE FROM THE CHAIR

**DR. PATRICIA CORCORAN**



It's been a busy time for the Department of Earth Sciences at Western! We are very pleased to welcome Professor Katsu Goda to the department (see Faculty Spotlight), as well as Post-Doctoral Fellow Natalie Pietrzak-Renault, Post-Doctoral Associates Ruijia Wang, Etienne Godin, Javad Kazemian, and Byung-Hun Choe, Research Technician Peter Christoffersen, and Adjunct Professors Melissa Battler and Bruce Hart.

The results from the Canadian Council of Chairs of Earth Science Departments (CCCESD) 2017-2018 survey show that our department currently ranks as #1 of 27 in number of PhD students, and #4 of 31 in number of MSc students! An important statistic: the female to male ratio of graduate students in our department is 59:41 compared with the Canadian average of 42:58 (27 departments). Undergraduate enrolments were down in most departments across the country, and we've already begun to implement strategies to address this issue. Examples include an updated and engaging website, streamlined undergraduate programs and a student survey. Outreach Director Dr. Cam Tsujita and his team of volunteers continue to lead tours through the department for primary school children, tirelessly work at our booth for open house events, and give engaging presentations to high school students visiting Western.

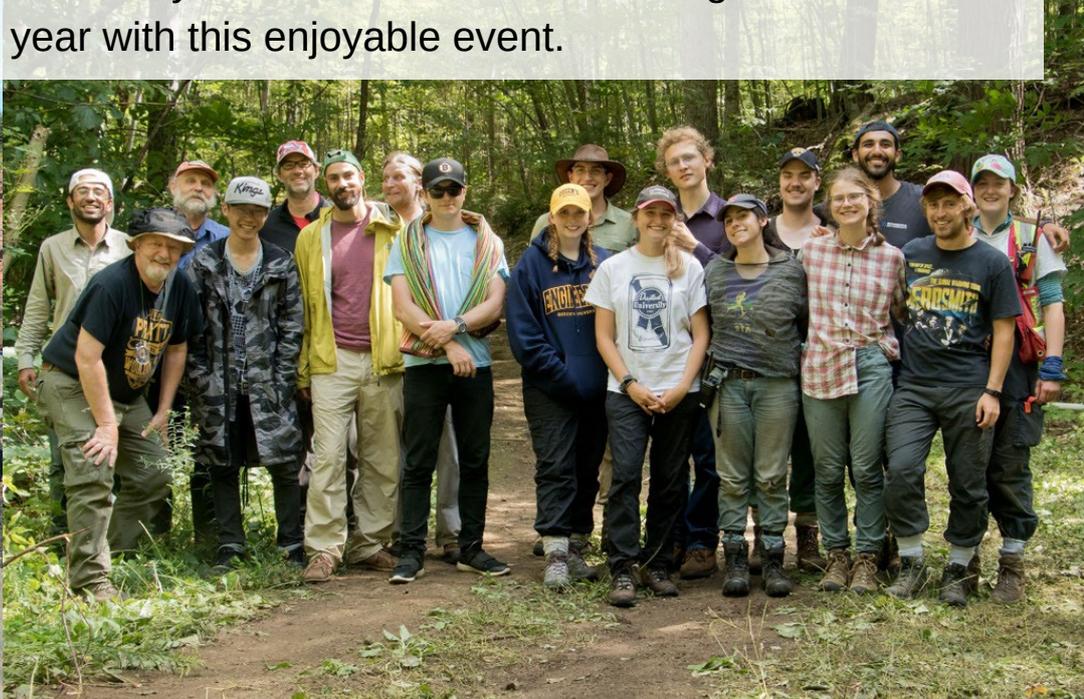
Our research excellence and amazing donor support continue to cement Earth Sciences as a critical commodity at Western. On that note, generous alumni support of our museum space has led to significance progress (see What's New in the Geoscience Collections Facility). We hope to showcase that progress in March, 2019 around the time of the PDAC meeting. We also greatly appreciate donations made to our field schools, laboratories, and endowed professorships.

Finally, I would like to thank my dedicated and irreplaceable administrative staff, Kristen Harris (Administrative Officer), Miyako Maekawa (Financial Assistant and Health & Safety Officer), Amy Wickham (Academic Program Coordinator), and Erika Gongora (Administrative Assistant). The department would not run as smoothly without their constant support!

# BACK FROM THE BUSH



Over 80 staff, faculty and students gathered this September to celebrate our annual “Back from the Bush” event, hosted by Gordon Osinski (Oz) at his family home. Food was enjoyed by all and even a dip in the pool by some. Many stories were shared from adventures in the field this past summer. Patricia Corcoran prepared a slide show-to-music, and students and faculty shared their experiences via the annual slideshow. Highlights included the geological and culinary tour of Japan by Audrey Bouvier and Tony Withers and an overview of geophysical fieldwork in Windsor and Vancouver by the “Good Vibrations and Excitations Research Group”, led by Sheri Molnar. MSc student Josh Laughton presented on behalf of Dr. Osinski’s group on their expedition to Devon Island, Nunavut, which included tales of encounters with 8 polar bears! Other students and faculty also shared slides of the Geophysics and the Planetary Surface Processes field schools. We always look forward to kick-starting each academic year with this enjoyable event.



# Field Notes!!



## Geophysical Field Techniques

During the week before fall classes began, Dr. Gerhard Pratt joined Dr. Alex Braun of Queen's University in Renfrew, Ontario, where they jointly led the annual Southern Ontario Geophysical Field School. Students at the school are expected to design and carry out a depth-to-bedrock geophysical site survey in the Champlain Sea Sediments of the Ottawa Valley, and a mineral prospecting survey in the shield rocks near the Calabogie Highlands. This field school has been running continuously at these sites since the early 1980s, and the school was joined this year by industry partners from Quantec Geophysical, Lamontagne Geophysical, and Sensors and Software. A large conference room at the Renfrew Days Inn is used as a field classroom and equipment staging room, and students use state-of-the-art software (including Oasis Montage from Geosoft, and VISTA from Gedco-Schlumberger) to download data, process the data, and deliver technical presentations and final reports on their findings.



## Regional Field Geology

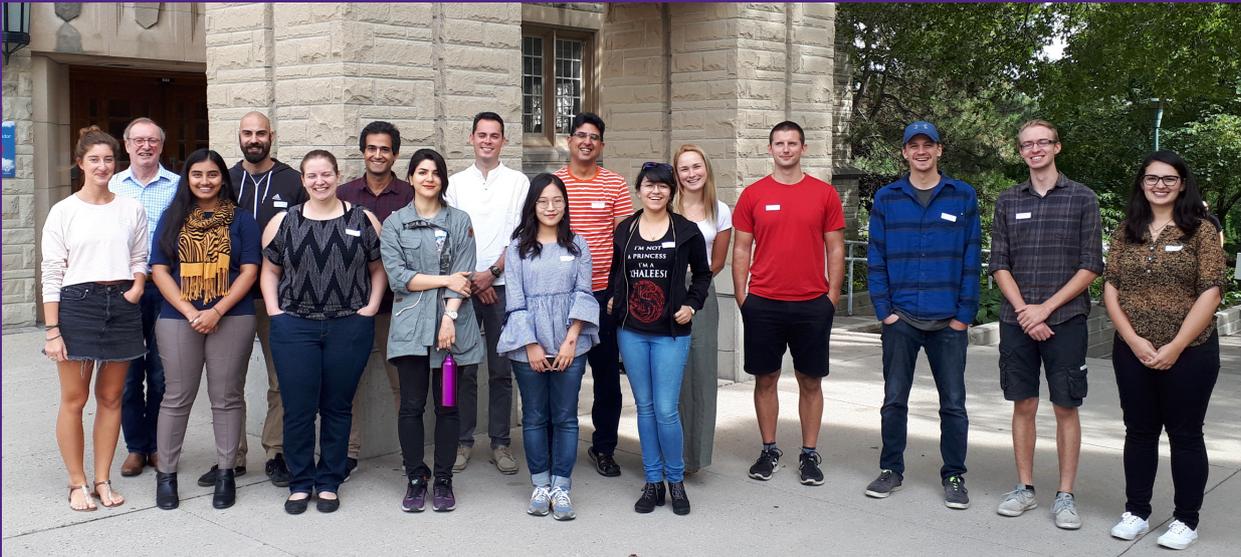
Ten UWO students and two guests from the University of Waterloo accompanied Guy Plint and TA Slavena Galić for a ten-day (September 1-10), field school around the Atlantic and Fundy coasts of Nova Scotia and New Brunswick. The theme of the trip, 'A Tale of Two Oceans' was designed to allow students to reconstruct the plate tectonic history of Maritime Canada by examining evidence for the migration of the Avalon and Meguma micro-continental fragments, from their early Paleozoic separation from Africa, migration across the ancient Iapetus Ocean, to their accretion against North America during the mid Paleozoic.

This field school exposed students to a wide variety of sedimentary, igneous, and metamorphic rocks formed in both extensional and compressional tectonic regimes, all of which could be related to changing plate tectonic settings. The pace of the trip was relentless, involving about 2100 km of travel around the Bay, moving between six different motels, and a timetable dictated by the huge Bay of Fundy tides. Despite the pace, the student group maintained good humor and a keen interest right up to the last stop, keeping the leaders busy with a continuous stream of questions.

# Welcome New Grad Students!

Sujan Raj Adhikari, Ph.D. Geophysics  
Chimira Andres, M.Sc. Geology  
Ian Arturo, M.Sc. Geology  
David Benn, M.Sc. Geology  
Chris Boucher, M.Sc. Geophysics  
Juliana Casali, M.Sc. Geology  
Meredith Fyfe, M.Sc. Geophysics  
Nicolas Garroni, Ph.D. Geology  
Zohreh Ghorbani, Ph.D. Geology  
Minger Guo, M.Sc. Geology  
Chunyi Hao, M.Sc. Geology

Joshua Hedgepeth, Ph.D. Geology  
Trevor Holness, M.Sc. Geology  
Alireza J. Samani, Ph.D. Geophysics  
Yaozhu Li, Ph.D. Geology  
Alexander Piatek, M.Sc. Geology  
Nikol Posnov, M.Sc. Geology  
Ricardo Rodriguez, M.Sc. Geophysics  
Leah Sacks, M.Sc. Geology  
Jahnvi Shah, M.Sc. Geophysics  
Aamna Sirohey, M.Sc. Geophysics  
Ramen Tolo, M.Sc. Geology  
Brian Villamizar, Ph.D. Geophysics  
Jason Wozniak, M.Sc. Geology  
Yusong Yang, M.Sc. Geophysics  
William Yingling, M.Sc. Geology



**Congratulations to our graduate students who successfully defended their theses this summer and graduated in this October's convocation**

## Geology

Mengmeng Qu, Ph.D.  
Joelle Langford, M.Sc.  
Kienan Marion, M.Sc.  
Omar Al Mufti, Ph.D.  
Jeffrey Daniels, M.Sc.

Mallory Metcalf, M.Sc.  
Victoria Houde, M.Sc.  
Yaozhu Li, M.Sc.  
Matea Drljipan, Ph.D.  
Arya Bina, M.Sc.

## Geophysics

Justin Rumney, M.Sc.  
Alyssa Werynski, M.Sc.  
Josh Hedgepeth, M.Sc.  
Bodi Zhao, M.Sc.

# Faculty Spotlight



## Dr. Katsu Goda

I am a new faculty, who joined the Department of Earth Sciences as an Associate Professor and a Canada Research Chair in Multi-Hazard Risk Assessment. My appointment is joint with the Department of Statistical & Actuarial Sciences. I am originally from Japan (BSc and MSc from Kyoto University in 2001 and 2003). I did my PhD in Civil Engineering at Western, and subsequently, I worked with Prof Gail Atkinson for my NSERC postdoctoral fellowship at Western Earth Science between 2008 and 2010. I left Western in 2010 to take up a faculty position (Lecturer/Senior Lecturer/Reader) in the Department of Civil Engineering at the University of Bristol (UK), and now I am back at Western to take up a new challenge in my career.

I have multiple 'hats' in describing what I do for my research – I am an earthquake engineer when I talk to earth scientists; I am a seismologist when I talk to engineers; I am a physical modeller when I talk to the insurance industry, etc. My research focus is on catastrophic earthquake-related multi-hazard risk management and necessarily, my research interest is broad, covering a wide range of academic fields, including engineering seismology, earthquake engineering, tsunami engineering, and decision-making under uncertainty. I am passionate about conducting earthquake damage reconnaissance work after major events – like geological/geophysical fieldwork, there is so much to learn. My recent fieldwork includes the 2011 Tohoku Japan, the 2015 Gorkha Nepal and the 2016 Kumamoto Japan earthquakes. I am very excited about the new position at Western because Western has a wide range of strong expertise over a spectrum of disciplines related to natural disasters – strong seismology-geophysics group in Earth Sciences, strong wildfire and risk financing groups in Statistical and Actuarial Sciences, and strong wind and flood groups in Civil Engineering. Over the next couple of years, I aim to create a multidisciplinary team at Western by working closely with other researchers.

# IN THE NEWS!

The induced seismicity group at Western joined with the Canadian Society for Unconventional Resources to host the Banff 2018 Induced Seismicity Workshop. It brought together 120 participants from around the world with the focus on bridging and integrating knowledge across sectors.



This fall **Gordon Osinski** started his cross-Canada Geological Association of Canada Hutchison Medal Tour presenting: "The Role of Meteorite Impacts in the Origin and Evolution of Life"

Neil Banerjee was featured in Canadian Mining Magazine for spearheading a work-integrated-learning initiative in collaboration with MiHR for 12 students enrolled in Western's Integrated Science program. Teams of students tackled challenges facing the Canadian mining industry through advanced research projects. Projects ranged from creating greenhouses to monitor plant growth in metal concentrations, to working with lithium pegmatites as a potential source for clean energy storage, to gold processing optimization, and a number of other innovative concepts.



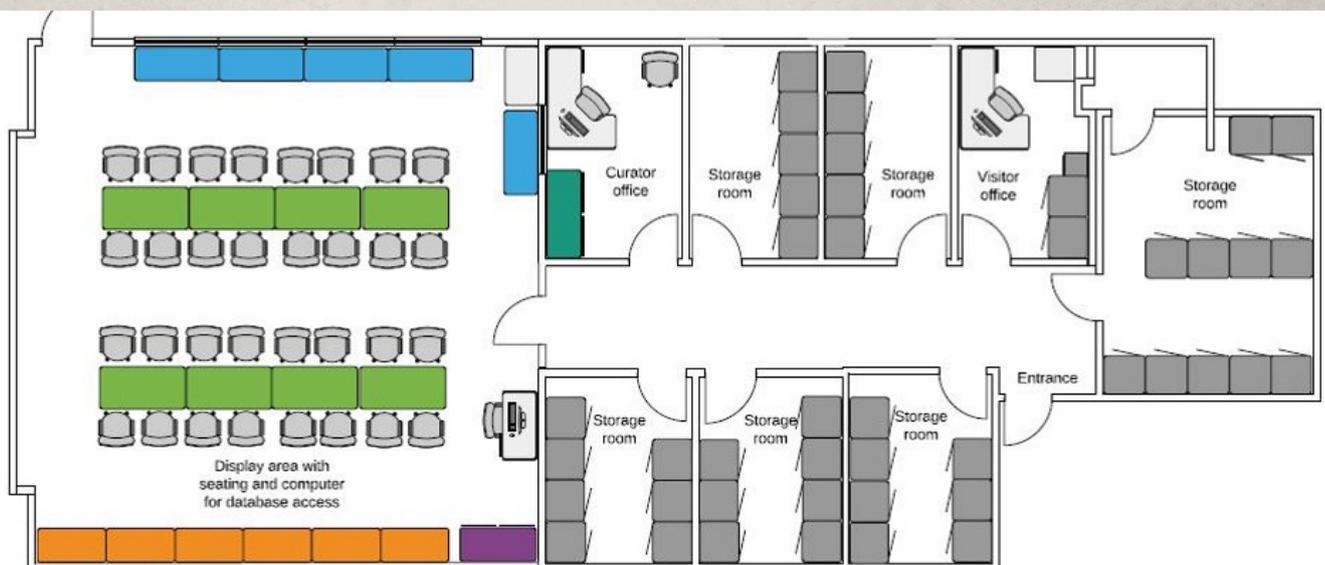
Patricia Corcoran was featured on the front page of the London Free Press in August. The article highlighted her research concerning microplastics in benthic sediment of the Thames River. She also gave a radio interview with CBC Radio One focusing on the project she and her collaborators undertook in October – a simultaneous sampling of plastic pellets on shorelines of all 5 Great Lakes.

# What's New in the Geoscience Collections Facility?

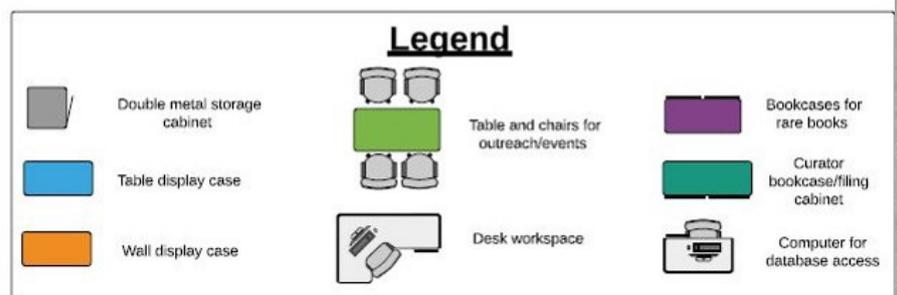
The Department of Earth Sciences was given control of the future Geoscience Collections Facility space in North Campus Building, NCB 120, on July 1st 2018. This suite of rooms will house both the Suffel and Dana Collections and will also contain an event space, where select specimens from the collections will be on display. This space will also be available for public events, outreach, and short courses.

Work study students under the supervision of our new Geoscience Collections Curator, Dr. Alysha McNeil, have been busy verifying the integrity of the Dana and Suffel Collection catalogues. The end goal is to have a complete and accurate catalogue of both Collections so that a database can be created with public access from our website. Students and researchers will be able to search our collections for specimens relevant to their research projects, and request a sample for loan through our website. As the combined quantity of samples between the Suffel and Dana Collections is upwards of 50,000, the endeavor to verify and complete the catalogues will take some time.

This project has been in the planning stages for many years now; it is exciting that we have finally gained access to our new space, and real progress has been made on building the Geoscience Collections Facility. From everyone in the Western Earth Sciences Department, we would like to thank everyone for their continued patience and support.



## DRAFT Floor Plan



# Alumni Relations & Development Update

I wish to provide you with an update on the G. Gordon Suffel Collection fundraising efforts. As noted in the inaugural newsletter, we are aiming for a target of \$350,000 to name the Geoscience Collections Facility after Richard Hutchinson. Thanks to our amazing alumni and their generosity, we are so very close! We are approximately \$7,000 away from our goal. Once we achieve that goal, we will continue the fundraising efforts so that the facility can be fully outfitted and equipped. This is important to ensure our students, faculty and members of the external earth sciences community can make full use of the collections for teaching and research purposes. Every donation counts.

## **Other funding priorities:**

Although we are focusing our efforts on the G. Gordon Suffel Collection/Geosciences facility just now, we are also fundraising for the following priorities in the Department:

Field Schools/Courses

The Robert Hodder Chair in Economic Geology

The Hutchinson Visiting Industrial Professorship

Chair in Petroleum Geology

## **Upcoming Events:**

### ***Homecoming 2018 Faculty of Science BBQ with Rick McGhie.***

Saturday October 20, 2018 at 11:00 a.m. - 1:00 p.m.

Grad Club, Middlesex College, Western University

Join Faculty of Science alumni, friends, family, faculty, staff and students at this popular annual event. Meet the new Dean of Science, Dr. Matt Davison.

### ***Earth Sciences Alumni Reception***

Mineral Exploration Roundup 2019

Tuesday January 29, 2019 at 5pm-7pm

Vancouver Convention Centre, Room 201

### ***Earth Sciences Alumni Reception***

Prospectors and Developers Association of Canada 2019

Monday March 4, 2019 at 5pm-8pm

Fairmont Royal York, Manitoba Room

For further information on other alumni activities, news or ways to support the Department, please contact me at your convenience.

Paula Luchak

Director of Alumni Relations and Development – Science

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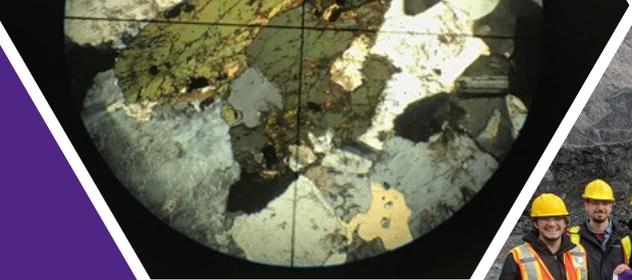
**Western  
Science**

# Alumni Corner



## ALUMNI FEATURE: LYNDSAY MOORE

Dr. Lyndsay Moore grew up in Brockville, Ontario and attended Western University as an Honors B.Sc. student from 2001 to 2005. She remained at Western for an additional 2 years to complete a Master's degree concerning the physical volcanology and geometry of a Tertiary volcanic edifice near Kakanui, New Zealand (supervised by Dr. Patricia Corcoran). In the years that followed, Lyndsay was employed by numerous exploration companies, including Alexis Mineral Resources, Northern Superior Resources, Agnico-Eagle Mines Ltd., Xstrata Zinc Canada, St. Andrews Goldfields Ltd., and Falco Resources Ltd. While employed, she undertook a PhD project at l'Université du Québec à Chicoutimi (UQÀC) with Drs. Wulf Mueller and Réal Daigneault as supervisors. Her topic involved the identification, organization and evolution of the intracaldera facies of the Rouyn-Pelletier Caldera Complex, Blake River Group, Abitibi greenstone belt. Lyndsay has a long list of fieldwork experience through employment, academics, and conference participation; example international locations of her field experience include Mexico, Greece, Spain, South Africa, Italy, Japan and Romania. She currently holds a permanent Project Geoscientist position with Rio Tinto Exploration Canada Inc., and is adapting to life in Thunder Bay, Ontario.



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