Teresa Rosales Ramirez won the Provost International Fellowship for Fall 2014.

Libby Griffin won the SFU Hakai Network for Coastal People, Ecosystems and Management for Fall 2014.

The President’s PhD Scholarship (PS) rewards PhD students who have made excellent progress in their degree, and who have demonstrated academic excellence, substantial scholarly output and leadership early in their PhD program.

Congratulations to:
Shannon Holding
(Allen)

Andrew LaCroix
(Dashtgard/MacEachern)

Kirsti Medig won the University Women’s Club Trust Fund Graduate Scholarship in Earth Sciences Award for Fall 2014.

The Mexican National Council for Science and Technology scholarship is awarded to students who wish to pursue graduate studies in science and technology, social and humanistic quality in an institution recognized overseas. Congratulations to Teresa Rosales Ramirez!

Oliver Friesen won the Petro Canada Graduate Scholarship in Earth Sciences for Fall 2014.
# Graduate Fellowship

<table>
<thead>
<tr>
<th>Spring 2014</th>
<th>Summer 2014</th>
<th>Fall 2014</th>
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<tbody>
<tr>
<td>Corinne Griffing</td>
<td>Flavien Beaud</td>
<td>Pooya Hamdi</td>
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<td>Pooya Hamdi</td>
<td>Sean Borchert</td>
<td>Sarah Makin</td>
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<td></td>
<td>Logan Brown</td>
<td>Eric Roots</td>
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<td>Anja Frank</td>
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<td>Simon Foster</td>
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<td>Sarah Hashmi</td>
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<td>Isabelle Larocque</td>
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<td>Kirstie Medig</td>
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<td>Kenneth Lupogo</td>
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<td>Kristyn Smith</td>
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<td></td>
<td>Oliver Friesen</td>
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<td></td>
<td>Lucia Theny</td>
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<td></td>
<td>Jaap Verbaas</td>
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</tbody>
</table>

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**Lucia Theny** is the recipient of the 2014 Geoscience BC Scholarship for her project: "Structural, Geochronological and Petrographic Analysis of the Ruddock Creek Zn-Pb deposit, Northern Monashee Mountains, BC.

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**Congratulations to the following students who received NSERC Scholarship for Fall 2014:**

- Oliver Friesen (Dashtgard)
- Kristyn Smith (Dashtgard)

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**Reid Staples** won the Geological Association of Canada’s (GAC) Dave Elliott Best Paper Prize in 2014 for his paper titled: "A window into the Early to mid-Cretaceous infrastructure of the Yukon-Tanana terrane recoded in multi-stage garnet of west-central Yukon, Canada"
Derek Turner defended his Thesis on “Pleistocene Stratigraphy, Glacial Limits and Paleoenvironments of the White River and Silver Creek, Southwest Yukon” on September 26, 2014.


Sarah Makin presented her Colloquium on “Fluorite and its potential as an indicator mineral for ore deposits” on June 3, 2014.

Lucia Theny presented her Colloquium on June 2, 2014. Title: “Structural, geochronological and petrographic analysis of the Ruddock Creek Pb-Zn deposit, Northern Monashee Mountains, BC”.


Eric Roots presented his Colloquium April 15, 2014. Title: “Application of Seismic Interferometry at Lalor Mine, Snow Lake, Manitoba”.

Jeanette Klassen presented her Colloquium on “A Spatial Risk Assessment Framework for Coastal Bedrock Aquifers” on April 7, 2014.

Kirstyn Smith presented her Colloquium on “Characterization of a freshwater tide-dominated delta, Pitt Delta, Canada” on March 18, 2014.

Oliver Friesen presented his Colloquium March 17, 2014. Title: “Resolving the Depositional Architecture of the Cardium Formation through Quantitative Analysis; Garrington Field, Alberta”.

Amy Hsieh presented her Colloquium on “Geostatistical modeling of biogenically-enhanced permeability in tight sandstones: Viking Fm, Provost Field, Alberta” on December 5, 2013.
<table>
<thead>
<tr>
<th>Student</th>
<th>Thesis Title</th>
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<tbody>
<tr>
<td>Margaret Anne Clayton (MSc)</td>
<td>Characterization and Analysis of the Mitchell Creek Landslide: A Large-scale Rock Slope Instability in northwestern British Columbia</td>
<td>August 13, 2014</td>
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<tr>
<td>Isabelle Larocque (MSc)</td>
<td>The Hydrogeology of Salt Spring Island, British Columbia</td>
<td>August 6, 2014</td>
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<tr>
<td>Martin Zaleski (MSc)</td>
<td>Earthquake Loss Estimates, Greater Victoria, British Columbia</td>
<td>August 5, 2014</td>
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<tr>
<td>Ryan Preston (MSc)</td>
<td>Application of photogrammetry to estimates of mine pillar damage and strength</td>
<td>July 24, 2014</td>
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<tr>
<td>Vincent Twomey (MSc)</td>
<td>Three Dimensional Strain Distribution and Deformation Temperature Interpreted from Quartz Microstructures and Petrofabrics in the Okanagan Valley Shearzone, Southern Canadian Cordillera</td>
<td>July 18, 2014</td>
</tr>
<tr>
<td>Janisse Vivas (MSc)</td>
<td>Groundwater Characterization and Modelling in Natural and Open Pit Rock Slopes</td>
<td>May 29, 2014</td>
</tr>
<tr>
<td>Andrea Wolter (PhD)</td>
<td>Characterisation of Large Catastrophic Landslides using an Integrated Field, Remote Sensing and Numerical Modelling Approach</td>
<td>April 9, 2014</td>
</tr>
<tr>
<td>Reid Staples (PhD)</td>
<td>Diachronous Deformation, Metamorphism and Exhumation in the Northern Canadian Cordillera Revealed from Pressure-Temperature-Time-Deformation Paths of Former Mid-Crustal Rocks</td>
<td>March 26, 2014</td>
</tr>
<tr>
<td>Yabing Zhang (PhD)</td>
<td>Modelling hard rock pillars using a Synthetic Rock Mass approach</td>
<td>March 20, 2014</td>
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<tr>
<td>Jared Fath (MSc)</td>
<td>Late Holocene history of Squamish River north of Brackendale, British Columbia</td>
<td>March 14, 2014</td>
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<tr>
<td>Adam Montgomery (MSc)</td>
<td>Paleoenvironmental Interpretation and Depositional Process Classification of Allomembers D and E, Lower Horseshoe Canyon Formation, Alberta, Canada</td>
<td>March 4, 2014</td>
</tr>
<tr>
<td>Korhan Ayranci (PhD)</td>
<td>Facies Modelling of a Tide-Influenced, River-Dominated Delta, Fraser River Delta, British Columbia, Canada</td>
<td>January 27, 2014</td>
</tr>
<tr>
<td>Luke Bickerton (MSc)</td>
<td>The northern Cache Creek terrane: record of Middle Triassic arc activity and Jurassic-Cretaceous terrane imbrication</td>
<td>January 24, 2014</td>
</tr>
<tr>
<td>Lara Loughrey (MSc)</td>
<td>Boiling as a mechanism for colour zonations observed at the Byrud emerald deposit, Eidsvoll, Norway</td>
<td>December 13, 2013</td>
</tr>
<tr>
<td>Jolene Hermanson (MSc)</td>
<td>Multiphase flow and reactive transport modelling of heterogeneities in CO2 storage reservoirs</td>
<td>December 6, 2013</td>
</tr>
<tr>
<td>Patricia MacQueen (MSc)</td>
<td>Geophysical Investigations of Magma Plumbing Systems at Cerro Negro Volcano, Nicaragua</td>
<td>November 27, 2013</td>
</tr>
<tr>
<td>Stephen Newman (MSc)</td>
<td>Deep-seated gravitational slope deformations near the Trans-Alaska Pipeline, east-central Alaska Range</td>
<td>September 3, 2013</td>
</tr>
</tbody>
</table>
STUDENTS

The following students convocated in Spring 2014
(Undergraduates)

<table>
<thead>
<tr>
<th>B.Sc.</th>
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<tbody>
<tr>
<td>Robert Allen</td>
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<tr>
<td>Jacqueline Brown</td>
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<td>Steven Bultitude</td>
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<td>Jin-Ju Chen</td>
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<td>Robyn Christian</td>
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<td>Daniel Curtis</td>
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<td>Cole Godfrey</td>
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<td>Kane Keating</td>
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<td>Kristen Maduik</td>
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<td>Jack Morton</td>
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<td>Jacob Nunn</td>
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<td>Justin Schick</td>
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<td>Cory Southam</td>
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<td>Lauren Tagg</td>
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<td>Stephanie Van Pelt</td>
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<td>Hazel Wong</td>
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<tr>
<th>B.Sc. Joint CHEM/EASC Major</th>
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<tr>
<td>Robert Greene (with Distinction)</td>
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<td>Jerome Tai</td>
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<tr>
<th>B.Sc. Honours</th>
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<tbody>
<tr>
<td>Jeremy Hanson (with Distinction)</td>
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<tr>
<td>Swetha Venugopal</td>
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</table>
CLEMENTS EARTH SCIENCES FIELD TRIP ENDOWMENT

Mr. Shaughn and Mrs. Sharon Clements have made a very generous donation to the Department of Earth Sciences for the purpose of defraying the costs of supplementary fees for students attending field schools.

Grants will be awarded each year to undergraduate Earth Sciences majors who fulfill the following criteria:

• Registration in an Earth Sciences (EASC) course, or a course applied to the Earth Sciences Major with a field trip in British Columbia; and,
• In good academic standing.

Preference will be given to applicants in the following order of priority:

• Canadian citizen or permanent resident of Canada.
• Registration in an Earth Sciences (EASC) course that includes a field trip or field school that is required by majors in the program.

INTERNATIONAL WORKSHOP

Five hundred students, academics and industry geologists, mainly from Turkey and neighboring countries, attended the meeting. Dr. Thorkelson opened the workshop with an overview of convergent plate margins, and gave a second talk on slab windows and ridge subduction. The invited speakers proudly wore home-town soccer jerseys on a post-conference field trip through the Eastern Pontide mountain range.

Professor Derek Thorkelson (left) was an invited speaker at the International Workshop on Convergent Margins that was held in Trabzon, Turkey from May 21-23, 2014 (http://www.convergentMargins.com/).
NEW FACES IN THE DEPARTMENT.....

Dr. Pierfrancesco Burrato
(Clague)
Researcher INGV

Dr. Dejan Milidragovic
(Thorkelson)
Alumni MSc Student

Dr. Luigi Perotti
(Clague/Stead)
University of Torino

Mirko Francioni
(Stead)
Post-doctoral Fellow

Adrien Gilbert
(Flowers)
Post-doctoral Fellow

The Department of Earth Sciences invites you to a reception
for SFU Earth Science Alumni and current Students

Monday, October 22nd 2014
7-10 pm

The Uber Lounge - Steamworks Brewing Company
(375 Water Street, Vancouver, BC)

Coinciding with the Geological Society of America annual meeting in Vancouver and sponsored by the Alumni Association and the Faculty of Applied Sciences, SFU, this networking event will bring together alumni with current students and faculty in a relaxed environment. We hope you will be able to join us!

Please contact Dr. Nathan Hayward Nathan.Hayward@NRCan-RNCan.gc.ca or Oliver Friesen ofjriesen@gmail.com for further information.
SFU Presenters

**Sunday, October 19th**

**Andrew LaCroix**  
TIDE-INDUCED GRAVITY FLOWS ON THE FRASER RIVER DELTA, BC, CANADA  
https://gsa.confex.com/gsa/2014AM/webprogram/Paper243289.html

**Kirsti Medig**  
RECONFIGURING SUPERCONTINENT COLUMBIA: PINNING NORTHEASTERN AUSTRALIA TO NORTHWESTERN LAURENTIA USING A NEAR-UNIMODAL DETRITAL ZIRCON POPULATION  
https://gsa.confex.com/gsa/2014AM/webprogram/Paper241561.html

**Nicholas Roberts**  
SLOPE STABILITY OF THE LA PAZ BASIN, BOLIVIA  
https://gsa.confex.com/gsa/2014AM/webprogram/Paper250514.html

**Ivanka Mitrovic**  
TECTONO-MAGMATIC EVOLUTION OF THE EASTERN HARRISON LAKE REGION, BRITISH COLUMBIA, REFLECTS MID-CRETACEOUS CHANGE IN PLATE KINEMATICS  
https://gsa.confex.com/gsa/2014AM/webprogram/Paper245476.html

Hung Chak Ho (Geography)  
ESTIMATING COMMUNITY HEALTH RISKS DURING EXTREME HOT WEATHER EVENTS  
https://gsa.confex.com/gsa/2014AM/webprogram/Paper243801.html

**John Clague**  
PROGRESS IN UNDERSTANDING THE GREAT EARTHQUAKE THREAT IN THE PACIFIC NORTHWEST  
https://gsa.confex.com/gsa/2014AM/webprogram/Paper245975.html

**Monday, October 20th**

**Andrew LaCroix**  
CHARACTERIZATION OF RAPIDLY DEPOSITED MUD: EXAMPLES FROM THE TIDALLY INFLUENCED FRASER RIVER, BC, CANADA  
https://gsa.confex.com/gsa/2014AM/webprogram/Paper244082.html

**Elise Harrington**  
THE PUZZLE OF RADAR-BRIGHT HIGHLANDS ON VENUS: A HIGH-SPATIAL RESOLUTION STUDY IN OVDA REGIO  
https://gsa.confex.com/gsa/2014AM/webprogram/Paper242125.html

Andrew Perkins (Geography)  
THE MISSING MORAINES OF THE SOUTHERN FRASER PLATEAU: GLACIODYNAMIC INFERENCES AND IMPLICATIONS FOR CORDILLERAN ICE SHEET RETREAT IN SOUTH-CENTRAL BRITISH COLUMBIA, CANADA  
https://gsa.confex.com/gsa/2014AM/webprogram/Paper244901.html

**Francesca Furlanetto**  
THE WERNECKE SUPERGROUP AND ITS ROLE IN RECONSTRUCTIONS OF NORTHWESTERN LAURENTIA, EAST AUSTRALIA AND SOUTH CHINA AS PART OF WESTERN COLUMBIA  
https://gsa.confex.com/gsa/2014AM/webprogram/Paper242383.html

**Nancy Calhoun**  
LANDSLIDE-INDUCED LIQUEFACTION DEPOSITS IN THE VORDERRHEIN RIVER VALLEY, EASTERN SWISS ALPS  
https://gsa.confex.com/gsa/2014AM/webprogram/Paper250583.html

**Jeffery Zurek**  
INSIGHTS ON VOLCANIC EVOLUTION OF LAS SIERRAS-MASAYA, NICARAGUA, VOLCANO BY MELT INCLUSIONS  
https://gsa.confex.com/gsa/2014AM/webprogram/Paper248735.html
Amy Hseih, Diana Allan, James MacEachern
STATISTICAL MODELING OF BIOGENICALLY ENHANCED PERMEABILITY IN TIGHT SANDSTONES
https://gsa.confex.com/gsa/2014AM/webprogram/Paper242854.html

Shahin Dashtgard
UNBIOTURBATED SEDIMENTS ON A MODERN MUD-DOMINATED SHELF: EVIDENCE OF HYPOXIA?
https://gsa.confex.com/gsa/2014AM/webprogram/Paper248535.html

Jonathan Cripps (Geography)
DEGLACIATION OF THE NICOLA BASIN, SOUTHERN BC: A WINDOW INTO THE DEGLACIAL STYLE AND PATTERN OF THE LAST CORDILLERAN ICE SHEET NEAR ITS GEOGRAPHIC CENTRE
https://gsa.confex.com/gsa/2014AM/webprogram/Paper245098.html

John Clague
DEPOSITION IN GLACIO-ISOSTATIC MOATS IN COASTAL ENVIRONMENTS
https://gsa.confex.com/gsa/2014AM/webprogram/Paper244642.html

Anja Frank, Dirk Kirste
INVESTIGATING THE GEOCHEMICAL IMPACT OF SO2 CO-INJECTION IN GEOLOGIC CO2 SEQUESTRATION: AN EXPERIMENTAL AND MODELLING APPROACH
https://gsa.confex.com/gsa/2014AM/webprogram/Paper247191.html

Jeff Crompton
THE ROLE OF BASAL FREEZE ON AND SECONDARY MINERAL PRECIPITATION IN GLACIER MELTWATER CHEMISTRY
https://gsa.confex.com/gsa/2014AM/webprogram/Paper249106.html

Andrew Calvert
A COMPARISON OF THE SEISMIC STRUCTURE OF MODERN ISLAND ARC CRUST AND LITHOPROBE RESULTS FROM ARCHEAN CONTINENTAL CRUST
https://gsa.confex.com/gsa/2014AM/webprogram/Paper246894.html

Lionel Jackson (EASC Adjunct Faculty)
PROGRESSIVE WESTWARD EXPANSION OF NORTH AMERICAN CONTINENTAL ICE SHEETS DURING THE QUATERNARY AND IMPLICATIONS FOR THE TIMING OF INITIAL HUMAN OVERLAND MIGRATION INTO THE AMERICAS
https://gsa.confex.com/gsa/2014AM/webprogram/Paper246494.html

Tuesday, October 21st

Peter Bobrowsky (EASC Adjunct Faculty)
LESSONS LEARNED FROM FIBER OPTIC MONITORING OF A LANDSLIDE
https://gsa.confex.com/gsa/2014AM/webprogram/Paper246923.html

Francesca Furlanetto, Derek Thorkelson
A DYNAMIC SWEAT CONFIGURATION FOR WESTERN COLUMBIA INFERRED FROM WERNECKE SUPERGROUP GEOCHRONOLOGY AND GEOCHEMISTRY
https://gsa.confex.com/gsa/2014AM/webprogram/Paper242380.html

Craig Miller
WIDESPREAD GRAVITY CHANGES AT LAGUNA DEL MAULE, CHILE, ACCOMPANYING RAPID UPLIFT
https://gsa.confex.com/gsa/2014AM/webprogram/Paper242605.html

Jeffery Zurek
IMAGING THE MAGMATIC SYSTEM OF LAS SIERRAS-MASAYA VOLCANO, NICARAGUA, USING GEOPHYSICAL TECHNIQUES
https://gsa.confex.com/gsa/2014AM/webprogram/Paper248680.html

Megan Dewit
THE GEOTHERMAL POTENTIAL OF NAZKO CONE, BRITISH COLUMBIA
https://gsa.confex.com/gsa/2014AM/webprogram/Paper247031.html

John Clague
MANIFESTATIONS OF EXTREME PARAGLACIAL SEDIMENTATION FOLLOWING TERMINAL PLEISTOCENE DEGLACIATION IN BRITISH COLUMBIA LAKES AND INLETS
https://gsa.confex.com/gsa/2014AM/webprogram/Paper243048.html
John Clague
THE UNDERAPPRECIATED RISK OF LANDSLIDE-TRIGGERED TSUNAMIS IN BRITISH COLUMBIA
https://gsa.confex.com/gsa/2014AM/webprogram/Paper247614.html

Simon Foster
GROUNDWATER-SURFACE WATER INTERACTIONS AT A WATERSHED SCALE
https://gsa.confex.com/gsa/2014AM/webprogram/Paper241851.html

Marco Jorge (Geography)
A NEW METHOD FOR THE SEMI-AUTOMATED MAPPING OF DRUMLINS AND MEGA-SCALE GLACIAL LINEATIONS
https://gsa.confex.com/gsa/2014AM/webprogram/Paper247527.html

Wednesday, October 22nd

Jeremy Venditti (Geography)
SUPPLY LIMITED BEDFORM PATTERNS AND SCALING THROUGH A GRAVEL-SAND TRANSITION
https://gsa.confex.com/gsa/2014AM/webprogram/Paper242015.html

Derek Thorkelson
EXOTIC VOLCANIC CLASTS IN WERNECKE BRECCIA, YUKON, RECORD CLOSURE OF A LAURENTIAN-AUSTRALIAN SEAWAY IN THE LATE PALEOPROTEROZOIC
https://gsa.confex.com/gsa/2014AM/webprogram/Paper245597.html

Kirsti Medig, Francesca Furlanetto
TECTONIC ACTIVITY ALONG THE WESTERN MARGIN OF LAURENTIA RECORDED IN PALEO- TO MESOPROTEROZOIC STRATA IN YUKON, CANADA
https://gsa.confex.com/gsa/2014AM/webprogram/Paper241559.html

Logan Brown
USING TERRESTRIAL COSMOGENIC NUCLIDES TO CONSTRAIN TIMING OF PENULTIMATE ICE ADVANCE IN THE OGILVIE MOUNTAINS, YUKON TERRITORY
https://gsa.confex.com/gsa/2014AM/webprogram/Paper250606.html

Lucia Theny
THE RUDDOCK CREEK ZN-PB DEPOSIT: CONSTRAINING THE TIMING OF DEPOSITION OF THE METALLIFEROUS WINDERMERE SUPERGROUP, NORTHERN MONASHEE MOUNTAINS, SOUTHERN BRITISH COLUMBIA
https://gsa.confex.com/gsa/2014AM/webprogram/Paper247554.html

Derek Turner
DO GLACIAL EXTENTS IN YUKON AND EASTERN ALASKA REFLECT EITHER PERSUASIVE TECTONIC OR SEA LEVEL INFLUENCE?
https://gsa.confex.com/gsa/2014AM/webprogram/Paper245815.html

Derek Thorkelson
THE INFLUENCE OF SLAB, RIDGE AND MANTLE ON LATE CENOZOIC ARC, ADAKITE AND INTRAPLATE MAGMATISM IN THE CANADIAN CORDILLERA
https://gsa.confex.com/gsa/2014AM/webprogram/Paper245611.html

Tracey Brennard (Geography)
DEGLACIAL STYLE AND PATTERN OF THE LAST CORDILLERAN ICE SHEET NEAR ITS GEOGRAPHIC CENTRE
https://gsa.confex.com/gsa/2014AM/webprogram/Paper244841.html

Ryan Bradley (Geography)
REEVALUATING DUNE DEPTH SCALING RELATIONS
https://gsa.confex.com/gsa/2014AM/webprogram/Paper249603.html

Brent Ward
THE CORDILLERAN ICE SHEET
https://gsa.confex.com/gsa/2014AM/webprogram/Paper250540.html

Lionel Jackson (EASC Adjunct Faculty)
PARAGLACIAL SEDIMENTATION IN VANCOUVER’S NEIGHBOURING FIODR, HOWE SOUND, AND ITS IMPLICATIONS FOR EVALUATING FIORD TSUNAMI HAZARD
https://gsa.confex.com/gsa/2014AM/webprogram/Paper246556.html