

## Djordje Grujic

Fellow of The Canadian Institute for Advanced Research (CIFAR) 2000-2010

**Associate Professor, 11 years**

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**Mailing Address:** Department of Earth Sciences, 1459 Oxford Street, Dalhousie University, Halifax

**Office Location:** LSC 3045

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**Homepage:** [http://earthsciences.dal.ca/people/grujic/grujic\\_d.html](http://earthsciences.dal.ca/people/grujic/grujic_d.html)

**Groups:** Structural Geology and Tectonics, Dalhousie Geochronology Centre

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**Education:** university degrees, where, when

1992 ETH Zürich, Geologisches Institut, *Switzerland*. Ph.D.

1988-1992 ETH Zürich, Geologisches Institut, *Switzerland*. Postgraduate studies

1983 University of Belgrade, *Belgrade, Yugoslavia*. B.Sc.

1978-1983 University of Belgrade, *Belgrade, Yugoslavia*. Undergraduate studies

**Teaching:** (2004-present)

ERTH 6400 Geochronology (20 %) (2010)

ERTH 4510 Directed Readings (2010)

ERTH 4400/5400 Advanced metamorphic petrology and microtectonics, 50% (2004, 2006)

ERTH 4000 Honours Field Trip, 50% (2009)

ERTH 3120 Structural Geology, WS, (since 2001)

ERTH 2002 Earth Materials Science II, WS, (since 2004)

**Research Interests:**

My long-term research program addresses how the tectonics and surface processes in active collision orogens interact to shape the physical evolution of the lithosphere at all spatial and temporal scales. I have selected several of these processes and a world-class field example to study the natural conditions. The goal of my investigations is twofold: (a) Determine how rocks from the base of the crust or from lithospheric mantle become rapidly exhumed in a convergent orogen without regional tectonic denudation. (b) Provide field tests for the numerical and analogue model predictions on the influence of climate on the tectonic evolution of mountain belts. Combined the findings of my research student over the past few years indicate that the metamorphic core of the Himalaya (at least in its eastern part) formed as a stack of units which experienced different exhumation histories following the attainment of a variety of peak temperature conditions. The youngest unit is the hottest and is derived from the base of the up to 80 km thick crust underneath southern Tibet. These units experienced a common cooling history after ca. 11–10 million years. The final exhumation of these rocks and the formation of the landscape in the eastern Himalaya were modulated by synoptic and local climate changes. Together these geological activities have shaped the recent earthquake activities in the area.

**Current and Recent Research Projects:** (2004-present)

1. **Syn-convergence exhumation of crustal eclogites:** combination of structural geology, metamorphic petrology, dating of zircon and monazite and trace element geochemistry on these minerals.

2. **Testing and further development of the channel flow hypothesis:** combination of structural geology, metamorphic petrology, dating of zircon and monazite and trace element geochemistry on these minerals.
3. **Spatiotemporal changes of precipitation, erosion, sedimentation and deformation in an orogenic foreland:** combination of structural geology, sedimentary petrology, low temperature thermochronology, stable isotope geochemistry.
4. **Development of trace element geothermometers (especially Ti-in-quartz geothermometry):** structural geology, microtectonics and trace element geochemistry of quartz mylonites
5. **Salt system dynamics:** scaled analogue experiments with layered brittle and ductile materials were used to simulate the development of structures during gravitational spreading of a passive margin sedimentary wedge detached on salt.

**Publications:** (2004-2011 inclusive)

**Peer-Reviewed Journal Articles** (\* student)

- Kellett, D. A.\* , **Grujic, D.** (in review) New insight into the South Tibetan detachment system: not a single progressive deformation. Submitted to *Tectonics*, June 2011
- Grujic, D.**, Warren, C.J.\* , Wooden, J. (in press) Syn-convergent exhumation of elusive Himalayan crustal eclogites. *Lithosphere*, August. 2011.
- Warren, C. J.\* , **Grujic, D.**, Cottle, J., Rogers, N. W. (in press) Constraining cooling histories: rutile and titanite chronology and diffusion modelling in NW Bhutan. *Journal of Metamorphic Geology*.
- Long, S.P., McQuarrie, N., Tobgay, T.\* , **Grujic, D.**, Hollister, L., Geologic Map of Bhutan, (in press) *Journal of Maps*.
- Long, S.P., McQuarrie, N., Tobgay, T.\* , Rose, C.V., Gehrels, G., and **Grujic, D.** (2011) Tectonostratigraphy of the Lesser Himalaya of Bhutan: Implications for the stratigraphic architecture of the northern Indian margin. *Geological Society of America Bulletin*, 123, 1406-1426, doi:10.1130/B30202.1  
<http://gsabulletin.gsapubs.org/content/123/7-8/1406.abstract?sid=8d9e9e77-a923-4bba-947c-148e2b9e2e88>
- Long, S.P., McQuarrie, N., Tobgay, T.\* and **Grujic, D.** (2011) Geometry and crustal shortening of the Himalayan fold-thrust belt in Bhutan: *Geological Society of America Bulletin*, 123, 1427-1447, doi:10.1130/B30203.1  
<http://gsabulletin.gsapubs.org/content/123/7-8/1427.abstract?sid=8d9e9e77-a923-4bba-947c-148e2b9e2e88>
- Frehner, M., Exner, U\* , Mancktelow, N.S., and **Grujic, D.**, 2011: The not-so-simple effects of boundary conditions on models of simple shear, *Geology*, 39, 717–722, doi:10.1130/G31957.1.  
<http://geology.gsapubs.org/content/39/8/719.abstract>
- Grujic, D.**, Stipp, M. and Wooden, J. L. 2011: Thermometry of Quartz Mylonites: Importance of dynamic recrystallization on Ti-in-quartz re-equilibration. *Geochemistry, Geophysics, Geosystems* (*G<sup>3</sup>*) 12, Q06012, doi:10.1029/2010GC003368.  
<http://www.agu.org/pubs/crossref/2011/2010GC003368.shtml>
- Warren, C. J.\* **Grujic, D.**, Kellett, D\* , Cottle, J., Jamieson, R. A., Ghalley. K.S. (2011) Probing the depths of the India-Asia collision: U-Th-Pb monazite chronology of granulites from NW Bhutan. *Tectonics*, 30, doi:10.1029/2010TC002738.  
<http://www.agu.org/pubs/crossref/2011/2010TC002738.shtml>

- Kellett, D. A\* , Grujic, D., Warren, C\* , Cottle, J., Jamieson, R. and Tenzin, T\* (2010) Metamorphic history of a syn-convergent orogen-parallel detachment: The outer South Tibetan detachment system, eastern Himalaya. *Journal of Metamorphic Geology*, doi:10.1111/j.1525-1314.2010.00893.x  
<http://onlinelibrary.wiley.com/doi/10.1111/j.1525-1314.2010.00893.x/abstract>
- Loiselet, C., J\* , Braun, L. Husson, C. Le Carlier de Veslud, C. Thieulot, P. Yamato, and **D. Grujic** (2010), Subducting slabs: Jellyfishes in the Earth's mantle, *Geochemistry, Geophysics, Geosystems* (*G<sup>3</sup>*) 11, Q08016, doi:10.1029/2010GC003172  
<http://www.agu.org/pubs/crossref/2010/2010GC003172.shtml>
- Chakungal, J.\*, Dostal, J., **Grujic, D.**, Duchêne, S. and Ghalley, K. S. (2010) Provenance of the Greater Himalayan Sequence: evidence from mafic granulites and amphibolites in NW Bhutan. *Tectonophysics*, 480, 198-212.  
<http://www.sciencedirect.com/science/article/pii/S0040195109005848>
- Kellett, D.\* , **Grujic, D.**, Erdman, S. (2009) Miocene structural reorganization of the South Tibetan detachment, eastern Himalaya: Implications for continental collision. *Lithosphere*, 1, 5, 259-281.  
<http://lithosphere.gsapubs.org/content/1/5/259.abstract?sid=a6967043-b2b3-47a5-ab45-b22f3ae63f1d>
- McQuarrie, N., Robinson, D., Long, S., Tobgay, T.\* , **Grujic, D.**, Gehrels, G. and Ducea, M.: (2008) Preliminary stratigraphic and structural architecture of Bhutan: Implications for the along strike architecture of the Himalayan system. *Earth and Planetary Science Letters*, 272, 105-117.  
<http://www.sciencedirect.com/science/article/pii/S0012821X08002689>
- Velasco, A. A., Gee, V. L., Rowe, C. **Grujic, D.**, Hollister, L.S., Hernandez, D., Miller, K.C., Tobgay, T.\* , Fort, M., and Harder, S. (2007): Using small, temporary seismic networks for investigating tectonic deformation: brittle deformation and evidence for strike-slip faulting in Bhutan. *Seismological Research Letters*, 78, 446-453.  
<http://srl.geoscienceworld.org/cgi/content/short/78/4/446>
- Krężsek, C.\* , Adam, J.\* , **Grujic, D.**, (2007) Mechanics of fault and expulsion rollover systems developed on passive margins detached on salt: insights from analogue modelling and optical strain monitoring. In: Jolley, S. J., Barr, D., Walsh, J. J. & Knipe, R. J. (eds) *Structurally Complex Reservoirs*. Geological Society, London, Special Publications, 292, 103–121. DOI: 10.1144/SP292.6.  
<http://specpubgsl.highwire.org/content/292/1/103.short>
- Biswas, S.\* , Coutand, I., **Grujic, D.**, Hager, C.\* , Stöckli, D. and Grasemann, B.: (2007) Exhumation and uplift of the Shillong plateau and its influence on the eastern Himalayas: New constraints from apatite and zircon (U-Th-[Sm])/He and apatite fission track analyses. *Tectonics*, 26, TC6013, doi:10.1029/2007TC002125.  
<http://www.agu.org/pubs/crossref/2007/2007TC002125.shtml>
- Grujic, D.** (2006) Channel flow and continental collision tectonics: an overview. In: Law, R. D., Searle, M. P. & Godin, L. (eds) *Channel Flow, Extrusion, and Exhumation in Continental Collision Zones*. Geological Society, London, Special Publications, 268, 25–37.  
<http://specpubgsl.highwire.org/content/268/1/25.abstract?sid=0340811c-f288-4414-87f9-15adca810cf7>

- Godin, L., **Grujic, D.**, Law, R. D. and Searle, M. P. (2006) Channel flow, extrusion, and exhumation in continental collision zones: an introduction. *In: Law, R. D., Searle, M. P. & Godin, L. (eds) Channel Flow, Extrusion, and Exhumation in Continental Collision Zones.* Geological Society, London, Special Publications, 268, 1-23.  
<http://specpubgsl.highwire.org/content/268/1/1.abstract?sid=0340811c-f288-4414-87f9-15adca810cf7>
- Hollister, L. S. and **Grujic, D.** (2006) Pulsed channel flow in Bhutan. *In: Law, R. D., Searle, M. P. & Godin, L. (eds) Channel Flow, Extrusion, and Exhumation in Continental Collision Zones.* Geological Society, London, Special Publications, 268, 415–423.  
<http://specpubgsl.highwire.org/content/268/1/415.abstract?sid=5eaa3316-7b66-4914-a894-9358fa6574e5>
- Jamieson, R.A., Beaumont, C., Nguyen M.H. & **Grujic, D.** (2006) Provenance of the Greater Himalayan Sequence and associated rocks: Predictions of channel flow models. *In: Law, R. D., Searle, M. P. & Godin, L. (eds) Channel Flow, Extrusion, and Exhumation in Continental Collision Zones.* Geological Society, London, Special Publications, 268, 165–182.  
<http://specpubgsl.highwire.org/content/268/1/165.abstract?sid=0340811c-f288-4414-87f9-15adca810cf7>
- Grujic, D.**, Coutand, I., Bookhagen, B., Bonnet, S., Blythe, A. and Duncan, C. (2006): Climatic forcing of erosion, landscape and tectonics in the Bhutan Himalayas. *Geology*, 34, 801–804; doi: 10.1130/G22648.1.  
<http://geology.gsapubs.org/content/34/10/801.abstract?sid=f6c7167e-a25d-4c89-9e6c-e5a2bc493a99>
- Seward, D., **Grujic, D.**, Schreurs, G. (2004) An insight into the breakup of Gondwana: Identifying events through low-temperature thermochronology from the basement rocks of Madagascar. *Tectonics*, 23, TC3007, doi:10.1029/2003TC001556.  
<http://www.agu.org/pubs/crossref/2004/2003TC001556.shtml>
- Timar-Geng, Z.\* , **Grujic, D.**, Rahn, M. (2004) Deformation at the Leventina-Simano nappe boundary, Central Alps, Switzerland. *Eclogae geologicae Helvetiae*, 97/2, 265-278.  
<http://www.springerlink.com/content/p4phvkv4ufmrw5h8/>

**Other Peer-Reviewed Articles** (book chapters, special volumes, conference proceedings etc.)

- Grujic, D.** (2006) Coupling between tectonics and surface processes: Linking mid-crustal channel flow and extrusion by focused surface erosion. *Comptes Rendus des Séances de la Société Serbe de Géologie*, Belgrade, pour les années 2004 et 2005, 41-50.

**Other:**

- Adam, J.\* Campbell, C.\*, Cribb, J.\*, MacDonald, C.\* , **Grujic, D.**, Nedimovic, M., Wach, G. (2008) 4D Physical Simulation of Basin-Scale Salt Tectonic Processes and Coupled Depositional Systems from the Rift Basin to Modern Continental Margin. Touch Briefings, *Exploration & Production - Oil & Gas Review*, 6(II): 94-97.

**Published Abstracts** (2009-11 inclusive);

- Kellett, D.\* , **Grujic, D.**, Cottle, J. and Coutand, I. (2011) South Tibetan detachment system in Sikkim: stuck between a massif and a cross-structure. Abstract volume and program, 26<sup>th</sup> Himalaya-Karakoram-Tibet Workshop, 2011 □ *Journal of Himalayan Earth Sciences*, 44 (1), 39.
- Stübner, K.\* , **Grujic, D.**, Lünsdorf, K., Parrish, P. and Ahmad, T. (2011) Himachal Himalaya: shallowest and oldest exposure of the *orogenic* metamorphic core. Abstract volume and program, 26<sup>th</sup> Himalaya-Karakoram-Tibet Workshop, 2011 □ *Journal of Himalayan Earth Sciences*, □ 44 (1), 81.

- Warren, C. J.\*, **Grujic, D.**, Cottle, J. M. and Rogers, N. W. (2011) Constraining the cooling history of the Greater Himalayan Sequence in NW Bhutan. Abstract volume and program, 26<sup>th</sup> Himalaya-Karakoram-Tibet Workshop, 2011 □ *Journal of Himalayan Earth Sciences*, □ 44 (1), 85.
- Grujic, D.** (2011) **Invited**: Lincoln Hollister's research in the Bhutan Himalaya "A Celebration of the Life and Work of Lincoln Hollister", Princeton University, 30 April 2011.
- Grujic, D.** (2010) **Invited**: Rapid syn-convergence exhumation of the lower crust: Insights from the elusive Himalayan eclogites. Workshop: *Strength and Composition of the Lower Continental Crust and Mantle Lithosphere*, Organized by the Institute for the Study of the Continents (INSTOC) and the Department of Earth and Atmospheric Sciences, Cornell University, Ithaca NY. September 25, 2010.
- Adam, J.\*, MacDonald, C.\*, Campbell, C.\*, Cribb, J.\*, Nedimovic, M., Krezsek, C. \*and **Grujic, D.** (2010) Basin-scale salt tectonic processes and post-rift basin history of the North-Central Scotian Slope and Deepwater Basin. *Salt Tectonics, sediments and prospectivity*, The Geological Society, London. Burlington House, London, UK. January 20-22, 2010.
- Exner U.,\* Frehner M., Mancktelow N. S. and **Grujic, D.** (2010) Why homogeneous boundary conditions lead to heterogeneous internal strain in analogue simple shear experiments – explained by numerical modeling. *Geophysical Research Abstracts*. Vol. 12, EGU2010-0, 2010 *EGU General Assembly* 2010.
- Adam, J.\*, MacDonald, C.,\* Campbell, C. \*, Cribb, J. \*, Nedimovic, M., Krezsek, C.\* and **Grujic, D.** (2010) Basin-scale salt tectonic processes and post-rift basin history of the North-Central Scotian Slope and Deepwater Basin. *AAPG Annual Conference & Exhibition*. New Orleans, USA. April 11-14, 2010.
- Campbell, C.\*, MacDonald, C.\*, Cribb, J.\*, Adam, J.\*, Nedimovic, M., Krezsek, C.\* and **Grujic, D.** (2010) The salt tectonic evolution of the North-Central Socian Margin: Insights from 2D regional seismic data and 4D physical experiments. *AAPG Annual Conference & Exhibition*. New Orleans, USA. April 11-14, 2010.
- Doon, M.\*, **Grujic, D.**, Coutand, I. and Whynot, N.\*, (2010) Detrital muscovite thermochronology of the Rangit Window, Sikkim Himalaya., *in* Leech, M.L., and others, eds., *Proceedings for the 25th Himalaya-Karakoram-Tibet Workshop*: U.S. Geological Survey, Open-File Report 2010-1099, 2 p. [<http://pubs.usgs.gov/of/2010/1099/doon/>].
- Grujic, D.**, Warren, C.\* and Wooden, J.L., 2010, Tertiary Eclogite Facies Metamorphism in the Greater Himalayan Sequence: Evidence from Zircon U-Pb Geochronology and Trace Element Geochemistry, *in* Leech, M.L., and others, eds., *Proceedings for the 25th Himalaya-Karakoram-Tibet Workshop*: U.S. Geological Survey, Open-File Report 2010-1099, 1 p. [<http://pubs.usgs.gov/of/2010/1099/grujic/>].
- Kellett, D.A.\*, **Grujic, D.**, Warren, C.\*, Cottle, J. and Jamieson, R., 2010, Pressure-temperature-time paths of tectonites from the South Tibetan Detachment System, Bhutan Himalaya, *in* Leech, M.L., and others, eds., *Proceedings for the 25<sup>th</sup> Himalaya-Karakoram-Tibet Workshop*: U.S. Geological Survey, Open-File Report 2010-1099, 1 p. [<http://pubs.usgs.gov/of/2010/1099/kellett/>].
- Whynot, N.\*, **Grujic, D.**, Long, S. and McQuarrie, N., 2010, Apparent Temperature Gradient across the Lesser Himalayan Sequence: Raman Spectroscopy on Carbonaceous Material in the Eastern Bhutan Himalaya, *in* Leech, M.L., and others, eds., *Proceedings for the 25th Himalaya-Karakoram-Tibet Workshop*: U.S. Geological Survey, Open-File Report 2010-1099, 1 p. [<http://pubs.usgs.gov/of/2010/1099/whynot/>].
- Grujic, D.**, **Key Note** (2010): Dating high-grade deformation: What is actually being dated? Goldschmidt™2010 - *Earth, Energy and the Environment*, June 13 - 18 in Knoxville, Tennessee, USA
- Grujic, D.** **Invited** (2010): Rapid syn-convergence exhumation of the lower crust: Insights from the elusive Himalayan eclogites *Strength and Composition of the Lower Continental Crust and Mantle Lithosphere*, September 25, 2010. Organized by the Institute for the Study of the Continents (INSTOC) and the Department of Earth and Atmospheric Sciences (EAS), Cornell University (Ithaca, USA).
- Grujic, D.**, Warren C. J.\*, Kellett D. A.\*, & Wooden J. L. **Invited** (2010): Syn-collisional exhumation of the continental lower crust 8<sup>th</sup> Swiss Geoscience Meeting, Fribourg (Switzerland), 19<sup>th</sup> – 20<sup>th</sup> November 2010.

- Loiselet, C., J\*. Braun, L. Husson, C. Le Carlier de Veslud, C. Thieulot, P. Yamato, and **D. Grujic** (2010), Subducting slabs: Jellyfishes in the Earth's mantle. Abstract DI31A-1952 presented at 2010 Fall Meeting, AGU, San Francisco, Calif., 13-17 Dec.
- Kellett, D. A.\* and **Grujic D.** (2010) Syn-convergent orogen-parallel low-angle normal-sense faults: one process or several? Abstract T53D-02 presented at 2010 Fall Meeting, AGU, San Francisco, Calif., 13-17 Dec.
- Long, S. P., McQuarrie, N., Tobgay, T.\*, **Grujic D.** and Hollister, L. S. A new 1:500,000-scale geologic map of Bhutan: a detailed view of eastern Himalayan stratigraphy and structural geometry. Abstract T43B-2176 presented at 2010 Fall Meeting, AGU, San Francisco, Calif., 13-17 Dec.
- Loiselet, C.,\* **Grujic D.**, Braun, J., Fullsack, P., C. Thieulot, C. and Yamato, P. (2009) The temporal evolution of a subducting plate in the lower mantle. EGU General Assembly 2009, Geophysical Research Abstracts, Vol. 11, EGU2009-7401-1, 2009.
- Grujic D.**, Stipp, M. and J. L. Wooden, J. L. (2009) Thermometry of Quartz Mylonites. Goldschmidt™2009 - "*Challenges to Our Volatile Planet*", Davos, June 21 - 26, 2009.
- Long, S. P., McQuarrie, N., Tobgay, T.\* and **Grujic D.** (2009) Crustal Shortening in the Himalayan Fold-Thrust Belt, Eastern and Central Bhutan. Eos Trans. AGU, 90 (52), Fall Meet. Suppl., Abstract T43C-2125.
- Grujic D.** Stipp; M., and Wooden J. (2009) Thermometry of Quartz Mylonites. Eos Trans. AGU, Fall Meet. Suppl., Abstract MR33A-1658.
- Grujic D. (Invited)** (2009) Eastern Himalaya; their oddities, geologic causes and implications. Eos Trans. AGU, 90 (52), Fall Meet. Suppl., Abstract T42A-01.
- Warren, C. J.\*, **Grujic, D.**, M. Cottle, J. M. and Kellett, D. A.\* (2009) Dating the depths of the India-Asia collision: U-(Th)-Pb chronology of amphibolite and granulite-grade rocks in NW Bhutan. Eos Trans. AGU, 90 (52), Fall Meet. Suppl., Abstract T42A-02.
- Kellett, D.A.\*, **Grujic, D.** and Warren, C. J.\* (2009) Geochronological constraints on Miocene structural reorganization of the South Tibetan Detachment, eastern Himalaya. Eos Trans. AGU, 90 (52), Fall Meet. Suppl., Abstract T43C-2127.

### **Supervision: (2004-2011)**

- Juergen Adam      Research Associate (2003-2006), Senior Researcher (2006-2007)  
*Analogue modelling on salt system dynamics*  
 Senior Lecturer  
 Geological Department, Royal Holloway University of London
- Konstanze Stübner, PDF (2007-2009)  
*Tectonics of the western Himalaya (Beas valley, India)*  
 Research fellow  
 Geoscience Center, University of Göttingen (Göttingen, Germany)
- Clare Warren      PDF (2006-2007)  
*Thermobarometry and monazite geochronology of granulite facies rocks in Bhutan*  
 NERC Advanced Postdoctoral Fellow  
 The Open University, MK7 6AA, Milton Keynes, UK
- Csaba Krézsek,      PDF (2005-2006)  
*Analogue modelling on salt system dynamics*
- Dawn Kellett,      PhD (2007-2010)  
*Tectonic evolution of the South Tibetan detachment system, Bhutan Himalaya.*  
 2011 "Jack Henderson Best PhD thesis award" by the Structural Geology & Tectonics Division of the Geological Association of Canada.  
 2009 Mineralogical Assoc. of Canada Student Research Grant \$ 1,200  
 2008 2011 Killam Predoctoral Scholarship \$25,000/yr

2008 EURISPET short course, Canberra, Australia expenses  
2007 2008 NSERC Canadian Graduate Scholarship (Ph.D.) \$35,000/yr  
2007 President's Award, Dalhousie University \$ 2,000  
2007 Geological Society of America Student Research Grant \$ 2,500  
2007 Mineralogical Assoc. of Canada Student Research Grant \$ 600

Research Scientist, Natural Resources Canada (Ottawa, Ontario)

- Joyia Chakungal, PhD (2002-2006)  
*Geochemistry and Metamorphism of Metabasites and Spatial Variation of P-T Paths across the Bhutan Himalaya: Implications for the Exhumation of the Greater Himalayan Sequence*  
2004 Geological Society of America Student Research Grant \$ 2,500  
Exploration Geologist. Ryan Gold Corp.
- Beth Cowan Summer research student (2011), Honours Student (2011-12)  
*Stratigraphy of the Siwaliks formation in the eastern Himalaya* (work in progress)
- Ella Goldberg Honours Student (2011-12)  
*Historic seismicity in Atlantic Canada* (work in progress)
- Nicolas Whynot Honours Student (2010)  
*Inverted metamorphic gradient across the Lesser Himalayan Sequence in eastern Bhutan: Raman spectroscopy on carbonaceous material*  
Project Geologist, Premier Gold Mines Ltd. (Ontario, Canada)
- Michael Doon Honours Student (2010)  
*Detrital thermochronology ( $^{40}\text{Ar}/^{39}\text{Ar}$ ) of the Rangit window, Sikkim Himalaya.*
- Conrad Koziol Honours Student (2010) (University British Columbia)  
*Strain localization and bulk strength variation in partially molten rocks: insight from analogue experiment of poliphase materials*  
KEGS (The Canadian Exploration Geophysical Society) Foundation Scholarship  
University British Columbia
- Tara Muth Honours Student (2008)  
*Geological Mapping in Northwest Bhutan Using ASTER Remote Sensing Data*  
Geologist. Territory Uranium Company (Winnellie, NT, Australia)
- Sheila Ballantyne Honours Student (2006)  
*Analogue Models of Salt Dynamics and Sedimentary Basin Evolution on Passive Margins: Implications for Offshore Nova Scotia Hydrocarbon Exploration*
- Laura Ritchie Honours Student (2004)  
*Tectonic history of the sole and roof of the Greater Himalayan Sequence: structural and metamorphic observations of garnet-staurolite schists from the Bhutan Himalaya*
- David Moyneham Summer research Student (2004)  
*Thermobarometry and microstructure of metapelites from Bhutan*  
PhD student, University of Calgary

### **Professional Activities:**

#### Administration:

- Editorial board, *Geology*, since 2008
- Editorial board, *Annales Géologiques de la Péninsule Balkanique* since 2006
- Review of research grant applications for: J. S. Guggenheim Memorial Foundation (USA), Rockefeller Foundation (USA), Fonds zur Förderung der wissenschaftlichen Forschung (Austria), National Science Foundation (USA), Swiss National Science Foundation, National Geographic Society (USA), Natural Sciences & Engineering Research Council of Canada (NSERC).

- Assessment of faculty positions: The University of Texas El Paso; Swiss National Science Foundation; Queen's University (Kingston, Canada).
- Co-convener of symposia at the: “The Himalayan-Tibetan Orogen: A Natural Earth Systems Laboratory” at the: *Earth System Processes 2*, 2005, Calgary, Canada; *16<sup>th</sup> DRT*, Milano, 2007; *AGU Fall Meeting*, 2007.

### Reviews

- Annales Géologiques de la Péninsule Balkanique
- Basin Research
- Eclogae geologicae Helvetiae
- Geochemistry, Geophysics, Geosystems (G<sup>3</sup>)
- Geological Society of America Bulletin
- Geological Magazine
- Geological Society of America Memoir
- Geological Society, London, Spec. Publication
- Geologische Jahrbuch
- Geosphere
- Geology
- Gondwana Research
- Journal of the Geological Society
- Journal of Geology
- Journal of Geophysical Research
- Journal of Metamorphic Petrology
- Journal of Nepal Geological Society
- Journal of Structural Geology
- Lithosphere
- Tectonics
- Tectonophysics

### Memberships

- AGS Atlantic Geoscience Society
- AGU American Geophysical Union
- GAC The Geological Association of Canada Atlantic
- GSA Geological Society of America
- IASTG International Association of Structural/Tectonic Geologists
- SGS Serbian Geological Society

### **Public Awareness / Outreach Activities:**

3 interviews at the CTV and CBC in 2010  
*Outfront* (Dalhousie University), v.1. 2006;  
*CBS News at Six* (27 April 2006).

### **Honours and Awards: (2004-present)**

2010 *GSA Fellow* Geological Society of America, Council  
 2006 *Blaustein Visiting Professor* Stanford University, Stanford, California  
 2005 *Jovan Zujovic medal* Commemorating 125 years of Geology in Yugoslavia.  
 University of Belgrade (Yugoslavia).