

Medals and Awards

National Awards

Logan Medal

Cees van Staal

The Logan Medal, the highest award of the Geological Association of Canada is presented to an individual for sustained distinguished achievement in Canadian earth science. The medal is awarded to **Cees van Staal** for achieving unprecedented resolution in orogenic analysis, through integrated structural, stratigraphic and metamorphic geology, mafic and felsic rock geochemistry, high-precision geochronology, seismic sounding, and comparison with active Circum-Pacific tectonics, as applied to the Canadian Appalachian orogen and its extensions.

Citation: Rooted in 36 years of geological mapping in the Appalachians of New Brunswick and Newfoundland, Cees van Staal has raised the spatial and temporal resolution of tectonic analysis to a level that is unprecedented in orogenic belts of comparable complexity, regardless of age. His plate tectonic history is a template applied in the U.S. Appalachians and the Irish-British Caledonides. It was developed through longstanding collaborative integration of micro-, macro and map-scale structural analysis, volcanic and granite geochemistry, metamorphic thermobarometry, high-precision geochronology, and comparison with active tectonics in the western Circum-Pacific.

Raised in the rich traditions of structural geology and geophysics at the Free University in Amsterdam, Cees followed Paul Williams to New Brunswick for his Ph.D., a structural analysis of the giant Brunswick deposit that predicted orebody geometry. Joining the GSC in 1985, Cees



extended his mapping in the Bathurst area, where he documented a plunging refolded nappe complex containing the only known blueschist belt in the northern Appalachians, and within which backarc volcanics are thrust beneath diverse arc-related rocks, Cees interpreted the nappe complex as the floor of an Ordovician marginal sea off the leading edge of Gondwana-derived Ganderia, which collapsed during Silurian accretion at the active margin of greater Laurentia.

In 1991, Cees began mapping the largely unknown south coast of central Newfoundland. With petrologist Joe Whalen, he documented island arc accretion, slab breakoff, subduction flip and arc reversal on the Ganderian margin prior to marginal sea opening, and on the Laurentian margin prior to Ganderia's arrival. His 'four-arc' model was applied

Cont'd on p. 4

GEOLOGICAL ASSOCIATION OF CANADA

The MISSION of the Geological Association of Canada is to facilitate the scientific well-being and professional development of its members, the learned discussion of geoscience in Canada, and the advancement, dissemination and wise use of geoscience in public, professional and academic life. The VISION of the GAC® is to be a multidisciplinary scientific society supportive of the entire scope of the geosciences in Canada. The GAC® aims to be a geoscience community that is knowledgeable, professionally competent and respected, whose input and advice is relevant, widely sought and utilized, and whose vital contribution to the economic prosperity and social well-being of the nation is widely acknowledged.

La MISSION de l'Association géologique du Canada est d'aider au développement scientifique et professionnel de ses membres, de favoriser les échanges géoscientifiques au Canada ainsi que de promouvoir et de diffuser l'utilisation éclairée des géosciences dans un contexte public, professionnel et académique. La VISION de l'AGC® est de faire connaître une communauté géoscientifique de grand savoir, dont les compétences professionnelles sont respectées, dont les suggestions et les avis sont pertinents, recherchés et utiles, et dont la contribution largement reconnue est considérée comme vitale pour la prospérité économique et le bien-être de la nation.

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Logan Medal

W. W. Hutchison Medal

E. R. Ward Neale Medal

J. Willis Ambrose Medal

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Middleton Medal

Marine Geosciences Division—

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Mineral Deposits Division—

Duncan R. Derry Medal

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Paleontology Division—

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Precambrian Division / Mineral Deposits Division —

Howard Street Robinson Medal

Canadian Tectonics Group—

Jack Henderson Prize for Best Thesis, Ph.D. and M.Sc.

Volcanology and Igneous Petrology Division—

Career Achievement Award

Léopold Gélinais Medal

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c/o Dept. of Earth Sciences, Memorial University of Newfoundland

St. John's, NL A1B 3X5

Tel: 709-737-7660

Fax: 709-737-2532

E-mail: gac@mun.ca

Web: www.gac.ca

Editor / Éditeur

ALWYNNE B. BEAUDOIN

c/o Royal Alberta Museum

9810-103A Avenue

Edmonton, AB T5J 0G2

E-mail: Alwynne.Beaudoin@gov.ab.ca

GEOLOG (ISSN 0227-3713; 1712-3747) is the quarterly news-magazine of the Geological Association of Canada, St. John's, Newfoundland and Labrador. *GEOLOG* is published for the benefit of GAC® members and its content reflects the diversity of the organization. News items and short articles on topics of potential interest to the membership including public geoscience awareness are encouraged. Also encouraged are communications promoting interaction among academic, industry and government sectors. *GEOLOG* accepts and publishes contributions in both of Canada's official languages. Opinions expressed herein are those of the writers and do not necessarily represent the official positions of the GAC®. *GEOLOG* is one of several forums provided by the GAC® for scientists worldwide.

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GEOLOG (ISSN 0227-3713; 1712-3747) est le bulletin trimestriel de l'Association Géologique du Canada, à St. Jean, Terre-Neuve-et-Labrador. *GEOLOG* s'adresse aux membres de l'AGC® et son contenu reflète le caractère polyvalent de cette organisation. Nous invitons la soumission de nouvelles et articles courts pouvant intéresser les membres, incluant les thèmes de sensibilisation du public aux sciences de la Terre. Les articles suscitant des échanges d'opinions et d'informations entre les secteurs académique, industriel et gouvernementaux sont également la bienvenue. *GEOLOG* accepte et publie les articles dans les deux langues officielles du Canada. Les idées sont celles des auteurs et ne représentent pas nécessairement la position officielle de l'AGC®. *GEOLOG* n'est qu'un des nombreux forums offerts par l'AGC® aux scientifiques à travers le monde.

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Contents / Table des matières

Medals and Awards.....	1
Milestones, Memories, and Tributes.....	16
Announcements.....	19

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Contributions for next issue

Please send items for the next issue of *GEOLOG* by e-mail to Alwynne.Beaudoin@gov.ab.ca on or before **September 1 2019**.



Chris White, lead author on the paper given the *CJES* Best Paper Award at the GAC-MAC-IAH meeting in Québec City. For more details, see pp. 8-9.

Cont'd from p. 1

to the Irish-British Caledonides by John Dewey and in New England by Paul Karabinos. Cees synthesized the lithospheric architecture and development of the entire Canadian Appalachians for LITHOPROBE with Sandra Barr, and with Brendan Murphy they used paleo-magnetic constraints and Cees' detailed tectonic chronology to estimate the widths and rates of opening and closing of the Iapetus and Rheic paleoceans. Cees was the principal Canadian contributor to the new *Lithotectonic Map of the Appalachian Orogen* (Canada—U.S.A.), a modern successor to Hank Williams' iconic original.

A career-long public servant, Cees' outlook is tempered by four predoctoral years as an exploration geophysicist and mine geologist, by adjunct professorships in four universities, and by the 3 B.Sc., 13 M.Sc., 10 Ph.D. and 5 Postdocs he has advised. Internationally, he is Canada's most influential Appalachian geologist; domestically, his standard of orogenic analysis is a subject of aspiration throughout the country.

Acceptance: Good afternoon, thanks very much for all the nice words. I am still recovering from the surprise of receiving the Logan Medal.

I had no indication that this award was in the works, hence my astonishment when Dène Tarkyth phoned me to inquire whether I was coming to Québec City to receive this medal. It is a great honour to receive this reward as the first (I think) Dutch-born Canadian.

Canada and the Geological Survey of Canada especially, have been very good to me and provided the platform for a wonderful, adventurous career. In their wisdom, the GSC left me alone most of the time to do what I wanted (I guess I am not an easy man to manage) and I think this paid off for both of us. I am especially pleased that in my case it is field-based geology that is rewarded with the Logan Medal. Canada used to be a giant in the production of field geologists, largely through provincial- or federal survey-supported summer jobs and graduate projects, but unfortunately, this aspect of education is in decline, which is a worrying aspect. Whatever you do in earth sciences, everything starts with field observations, the quality of which is highly dependable on experience and having a critical mind.

However, my departure to Canada and hence me being here, was not planned but was the result of a very serendipitous decision, because I had neither desired nor planned a scientific career in earth sciences—far from that. I went to university to find and secure an interesting job to support my life hobby: ocean sailing. Geology, and especially solid earth sciences, was a strange choice to start with for a Dutchman, because Holland is not known for its outcrops of old rocks (I think there are about 4 or 5; the oldest being Carboniferous). However, I had seen lots of rocks and mountains during my sailing trips along the shores of Western Europe (Norway to Spain) as a child and adolescent and was always fascinated by why they were there.

My proficiency with boats has a lot to do with me standing here. I started sailing as young child with my parents. My father was trained as master mariner and was a superb navigator in the days far before GPS was introduced, but abandoned this career after he came back as a soldier from Indonesia in 1949 and married my mother. He became a writer and advertising man instead. However, he loved the sea and as a family, we sailed the North Sea and later the Atlantic Ocean in all our spare times. At the age of 15, I was proficient in all forms of navigation and handling a boat by myself in any kind of weather. My father was a stern teacher who demanded perfection and could be very harsh if one made a mistake. By the age of 17, I was already delivering boats in northern Europe. I kept this up all my life and sailed two of the boats I owned from Europe to Canada and beyond into the South Pacific. After finishing high school, I went to university, but was not an outstanding B.Sc. student; there were other, more interesting activities—sailing—that kept me busy most of the time.

There was a project by the solid earth group at the Free University of Amsterdam in southern Finland. Its manager, Laszlo (Lacy) Westra, was looking for a M.Sc. student to work on the structure of a mantled gneiss dome—one of those made famous by Pentti Eskola. The problem was that the dome was exposed in a lot of little, isolated and uninhabited islands in the eastern Baltic. He needed somebody proficient with boats who could sail an open boat single handed over long distances (40-50 nautical miles daily over open ocean). Lacy knew about my sailing experience—he was an avid sailor himself—and hence offered this project to me, because there was nobody else available with these

qualities. This is where serendipity started, because my main M.Sc. supervisor proved to be Paul Williams, who before that I had never met. Paul taught me all I wanted to know about structural analysis of polyphase deformed metamorphic tectonites. Paul is a genius in geometry and structural analysis. He commented that I had an aptitude for these as well. At the time, I didn't think too much of that, but this point became important later.

I had also included geophysics in my education at the Delft University of Technology. I liked geophysics and was good at it in such a way that Otto Koefoed, my professor, promised me a job at the Shell, where he had been chief geophysicist in an earlier part of his life, after I had graduated. Hence, my job future seemed secure.

In 1980 I handed in my M.Sc. thesis to Paul Williams and he asked what I was going to do after graduating. I told him I wasn't sure, but sailing and possibly Shell were high on my list. He offered me a Ph.D. position in New Brunswick, where he was moving to become chair. I told him I would think about it, but this was more out of politeness than being serious. Two or three weeks later, I received a letter in the mail that I had to serve for nearly two years in the Dutch army. The die was cast and I immediately chose to go to Canada instead—serving in the army was not on my list of things to do!!

I arrived in New Brunswick on September 1 and started to work on my project on the structure of the Brunswick No. 12 and No. 6 mines. This project was another fortunate event, because 1) Unravelling the mine structures proved to be very important for understanding the regional structural evolution as well exploration and led to being hired by the GSC immediately after finishing my thesis, and 2) The geology of the Bathurst region proved to be a key area for understanding the Silurian evolution of the Northern Appalachians, because it was in sharp conflict with the existing paradigm of Appalachian tectonics—Taconic and Acadian orogenies separated by a period of Silurian quiescence.

At the GSC, I met another person who had an immense influence on my intellectual growth—Paul Hoffman. I had never met anybody with such a vast knowledge and insight in all aspects of geology before, but especially tectonics was what interested me. I learned

from him by a process of osmosis and many late night arguments fuelled by alcohol. Fridays, we went to the library to look at all the new journals and after we went to the purple seats—later the Rochester in Ottawa—to discuss and digest the new info. Paul needed an audience to test his ideas and I was a willing listener to fill that role. Another fortunate event was that I was working in the Appalachians just when new U-Pb TIMS geochronology and new mapping supported by the Mineral Development Agreement started to change the Appalachian scene in a major way. Old models and ideas were challenged by a new generation of geologists in Atlantic Canada. Hank Williams of MUN took an interest in my work, invited me to work in Newfoundland, subsequently mentored me on my quest to understand the tectonics of the Appalachian-Caledonide mountain belt until he retired.

A friend and colleague since my Ph.D. days, Jim Hibbard, and I dreamed up the idea to organize a special Appalachian session in honour of Hank's 60th birthday in 1994 one night at an annual GSA meeting. The subsequent Hank Williams meeting was a great success and here I met another important man in my career—John Dewey. John liked my work and invited me to come to Oxford—first as a replacement for John Platt who had recently moved to London, but after considering the abominable salary of a lecturer in the UK and my love of the GSC, it turned into a sabbatical. John and I field tripped all over the Caledonides and his great insight in tectonics became a focus point of our daily discussions. Here, I wrote my first influential correlation paper on the tectonic evolution of the Appalachian-Caledonide mountain belt.

In 2005, I moved office to Vancouver and started to work in the Canadian Cordillera, which was a daunting experience because I had to learn a completely new nomenclature and associated knowledge. However, the GSC's Cordilleran group was very welcoming and working in the gigantic ice fields of the southern Yukon around Mount Logan was an amazing experience I will never forget. Overall, the last 10 years of my working GSC career have been among my happiest.

I retired in 2015 and sailed in 33 days directly to French Polynesia from Victoria, but was persuaded back into work by Shoufa Lin and the University of Waterloo, where I am now a part-time prof and supervise graduate students in the Central Asian Orogenic Belt of western China.

However, the ocean is calling again and hopefully I will be on my way again in a few years.

Last, but not least, I would like to thank my graduate students, especially Alex Zagorevski and Neil Rogers, both now scientists at the GSC and hence had to suffer me for much longer than usual, who kept me honest and taught me much.

J. Willis Ambrose Medal Carolyn Anglin

The Ambrose medal, named after the first GAC® President, J. Willis Ambrose, is awarded to an individual for sustained dedicated service to the Canadian earth science community. The medal is awarded to **Dr. Carolyn Anglin** for her outstanding contributions to the scientific management of public- and private-sector geoscientific research and development, and for her long-term volunteer contributions to Canadian geoscientific organizations, including the Geological Association of Canada.



Citation: Dr. Carolyn ('Lyn) Anglin completed a B.Sc. (Hons) from Queen's University, M.Sc. from Memorial University, and a Ph.D. from Carleton University and has had a distinguished career at the Geological Survey of Canada (GSC), Geoscience BC, and now with Imperial Metals Corporation. Dr. Anglin's career at the Geological Survey of Canada resulted in both research on gold deposits and research management. Her leadership of the highly successful EXTECH II Yellowknife Gold Belt project resulted in the landmark GAC-MDD Special Publication #3, of which she was a co-editor, that represents a critical curation of geoscientific knowledge on the historically important gold belt. Her role as CEO of Geoscience BC resulted in \$48 million of directed geoscientific research spending in British Columbia that resulted in transformative,

integrated geoscientific datasets that answered (and answers) critical economic and fundamental geoscientific problems, and enhanced BC as a locale for resource exploration and development. More recently her work with Imperial Metals Corporation has resulted in the utilization of geoscientific information in the day-to-day research challenges in the Canadian mining industry.

Her professional record is mirrored by a long-term commitment to volunteer service in the Canadian geoscience community, across a variety of sectors, including NSERC, AMEBC, PDAC, and numerous other industry, non-profit, and community organizations. She has also contributed greatly to GAC®, serving previously as a councillor and as President in 2007-2008. She was also co-editor of one of GAC®'s best-selling publications: the GAC-MDD *Ore Mineral Atlas*. Throughout her career, Dr. Anglin's management of science has created a canvas for cutting edge Canadian- and globally-significant research to be undertaken, the transfer of new geoscientific information from the public to private sectors (and *vice-versa*), and the training and mentorship of numerous young geoscientists. Moreover, her management and volunteer service to various organizations has strengthened and improved Canadian geoscience and increased our discipline's visibility, and the Canadian geoscience community and general public has been the beneficiary of her work. Dr. Anglin's service to our community is admirable and she is most is a most deserving candidate of the GAC® J. Willis Ambrose Medal.

W. W. Hutchison Medal Brian Kendall

The W. W. Hutchison Medal is named after Dr. William W. Hutchison in recognition of his many contributions to the Geological Association of Canada and to Canadian and international geoscience. The medal is awarded to a young individual for recent exceptional advances in Canadian earth science research. The 2019 medal is awarded to **Dr. Brian Kendall**, University of Waterloo, for the application of unconventional geochemical and isotopic techniques to address questions related to interactions between atmospheric, oceanic, and biological systems, geochronology, and the geochemical evolution of Earth from the Proterozoic to the Cenozoic.

Citation: Dr. Kendall has set himself apart as one of Canada's young geoscientists and emerging leaders in the application of geochemical and isotopic techniques to address issues of atmospheric, oceanic and biological systems interactions, geochronology and chemical evolution throughout the history of planet Earth. He



has the unique ability to bring together a diversity of novel stable isotope systems (U, Mo), geochronology (Re-Os) tools, and trace element systematics to address fundamentals on the nature and composition of early systems on planet Earth beginning with the earliest stages in the Proterozoic through to Paleozoic, Mesozoic and even Cenozoic time. Further, he applies his techniques to address more practical questions of use to the mining and exploration industries as well as the environmental consulting sector.

He is a thinker and is not afraid to think outside the box. He sees the big picture which is unusual for someone at such an early stage. For example, he has proposed the occurrence of global transient atmosphere/ocean oxygenation conditions well before the Great Oxidation Event and advanced a new hypothesis advocating stratified ocean redox conditions in Middle Proterozoic time, stratified in ways not unlike modern oceans. Such ideas have contributed to and shed light on such phenomena only the most advanced researchers are able to grasp. Like his thinking, his communication is crisp and clear. He has shared the results of his work in the best scientific and geoscience journals, namely *Nature*, *Nature Geoscience*, *Science* and *Science Advances*. His work has attracted the attention of the media and popular press. He is an inspiring, caring and highly sought after teacher and mentor as well as a fine citizen and role model in our broader geoscience community. He supervises a large roster of students and ensures his students publish the results of their efforts, even undergraduate students, and does what he can to help them advance their careers.

For his deep commitment and passion and for positioning himself on a trajectory of ongoing new and impactful breakthroughs to come in his area of sedimentary geochronology and Earth system dynamics and evolution, Dr. Kendall is most deserving of recognition with the W. W. Hutchison Medal for a geoscientist in the early stages of their career.

E. R. Ward Neale Medal Beth McLarty Halfkenny

The Neale Medal is named after the legendary E. R. Ward Neale. The award recognizes outstanding efforts to communicate and explain geoscience to the public through one or more of the following vehicles: public lectures, print or electronic media articles, school visits, elementary and secondary school educational materials, field trips, science fairs, and other public communications. The 2019 Neale Medal is awarded to **Beth McLarty Halfkenny**, Carleton University.

Citation: Beth McLarty Halfkenny has contributed widely over her career to geoscience education and outreach efforts, reaching teachers, students and the public across Canada. Through service to the Earth Science community and in a professional capacity she has delivered teacher training workshops, school programs, developed education materials and written articles.



Beth assumed the role of National EdGEO Committee Chair in 2012 and continues in this volunteer position. EdGEO is a national program that helps educators teach Earth Science in the classroom through workshops and resources. As National Chair, she is responsible for promoting and coordinating the program, supporting applicants, fundraising, managing the budget, reporting to sponsors, managing the website, and publishing the annual newsletter. Between 2012 and 2016, 982 teachers participated in 41 EdGEO workshops across Canada—a significant

reach considering that each teacher returns to an average classroom of 25 students. One year out from their exposure to Earth Sciences at a workshop, the number of students reached by those 982 EdGEO trained teachers was 24,550. The numbers of students reached over the careers of those teachers are staggering.

Beth is an active and long serving member of the Canadian Geoscience Education Network, contributing to many of its outreach initiatives, including teacher training workshops and field trips, hands-on learning activities and articles. Since 2009, CGEN members from across the country have collaborated with local organizing committees to plan and deliver locally focused outreach events at Geological Association of Canada meetings. Beth has contributed to workshops and field trips at meetings held in Toronto, Calgary, Ottawa, St. John's, Winnipeg, Montréal, and Whitehorse, reaching approximately 140 teachers from locations across Canada.

Since 2009, Beth has been an active member of the Ottawa-Gatineau Geoheritage Project (OGGP) which promotes public interest in the region's geology and works to preserve geological sites under threat by development. An offshoot of her participation in the OGGP led Beth to develop and manage the "Explore Geoheritage Day" public education event, which has been hosted by Carleton University over the past nine years. This event offers the public an appreciation of the interesting geology in the National Capital Region and runs in conjunction with National Science and Technology Week each fall. Beth also led efforts to preserve and relocate rocks of special educational value to the Carleton University campus where they have become part of an outdoor display, used to engage the public and as a teaching tool.

In her professional capacity at Carleton University, Beth is responsible for coordinating the Outreach Program of the Department of Earth Sciences, including the development and delivery of events. These include the "Discovering Earth Sciences Teachers' Workshop and Field Trip" reaching 20-25 teachers annually and the Enrichment Mini-Course Program, "School of Rock", reaching Grades 8 to 12 students from Ontario and Québec. This outreach provides experiential learning opportunities to teachers and students and has resulted in increased enrolment in the Earth Sciences program at Carleton.

Beth McLarty Halfkenny has made a significant contribution to Earth Science education and outreach, involving long hours of volunteer effort. Throughout her career she has provided excellent educational outreach to teachers and students and served the Earth Science community through her involvement in local and national programs.

Eric Mountjoy Exchange Award Katie Maloney

The Eric Mountjoy Award encourages the exchange of young geoscientists between Québec and other parts of Canada. The award is named for Eric Mountjoy, a distinguished Canadian professor of geology at McGill University, explorer, Fellow of the Royal Society of Canada, and recipient of the Douglas Medal of the Canadian Society of Petroleum Geologists and the Pettijohn Medal of the Society for Sedimentary Geology. He was renowned for his contributions to the understanding of sedimentary carbonate rocks, particularly those of Devonian age, in his pioneering geological explorations and geological maps and cross-sections of the Canadian Rockies, particularly in the region of Jasper National Park and Mount Robson Provincial Park.

The 2019 award is given to **Katie Maloney**, University of Toronto—Mississauga. She plans to visit McGill University to analyze redox-sensitive trace elements in shale samples from the Wernecke Mountains to better constrain paleo-ocean oxygenation conditions during their deposition, which will inform the habitability of such environments for early eukaryotic life during the Tonian period.



CJES Best Paper Award

Given jointly by the NRC Research Press and the Geological Association of Canada, it is awarded to the authors of the "Best" paper published in the *Canadian*

Journal of Earth Sciences within a calendar year (volume year). This year, the award is given to **Chris E. White, Sandra M. Barr** and **Ulf Linnemann** for “U–Pb (zircon) ages and provenance of the White Rock Formation of the Rockville Notch Group, Meguma terrane, Nova Scotia, Canada: evidence for the ‘Sardian gap’ and West African origin”, published in *Canadian Journal of Earth Sciences* 55(6): 589–603, 2018.

Sections and Divisions Awards

Canadian Tectonics Group

Dave Elliott Best Paper Award

This award is presented each year to recognize an exceptional publication in the fields of tectonics and/or structural geology by a researcher at a Canadian institution (lead author) or investigating a Canadian field area. The 2019 award goes to **Renaud R. Soucy La Roche, Laurent Godin, John M. Cottle** and **Dawn A. Kellet** for their paper “Preservation of the early evolution of the Himalayan middle crust in foreland klippen: Insights from the Karnali klippe, west Nepal” *Tectonics* 37(5): 1161–1193, 2018.

Honourable mentions

Benjamin L. Melosh, Christie D. Rowe, Christopher Gerbi, Louis Smit, and Paul Macey for “Seismic cycle feedbacks in a mid-crustal shear zone” *Journal of Structural Geology* 112: 95–111, 2018.

Carl Guilmette, Matthijs A. Smit, Douwe J. J. van Hinsbergen, Derya Gürer, Fernando Corfu, Benoit

Charette, Marco Maffione, Olivier Rabeau, and Dany Savard for “Forced subduction initiation recorded in the sole and crust of the Semail Ophiolite of Oman” *Nature Geoscience* 11(9): 688–695, 2018.

Jack Henderson Prize for Best Ph.D. thesis

Awarded to **Morgann Perrot**, Ph.D., Université du Québec à Montréal, for *Évolution tectonique des bassins sédimentaires tardi-à post-Taconiens des Appalaches du sud du Québec et du nord du Vermont / Late-to post-Taconian tectonic evolution of sedimentary basins of southern Québec and northern Vermont Appalachians*, supervised by Alain Tremblay.

Jack Henderson Prize for Best M.Sc. thesis

Awarded to **Mark Ahenda**, M.Sc., Queen’s University, for *Protolith affiliation and tectonometamorphic evolution of the Gurla Mandhata core complex, NW Nepal Himalaya*, supervised by Laurent Godin.

Mineral Deposits Division

Duncan R. Derry Medallist

The Duncan R. Derry Medal is the highest award bestowed by the Mineral Deposits Division (MDD). It is awarded annually to an outstanding economic geologist who has made significant contributions to the science of economic geology in Canada. The 2019 award is given to **Dr. Jeremy Richards**, Laurentian University.



Renaud R. Soucy La Roche



Morgann Perrot



Mark Ahenda

Citation: Dr. Jeremy Richards is an internationally recognized scientist who has made outstanding contributions to research, mentoring, and service in Economic Geology, especially in Canada. He holds a B.Sc. Honours degree from University of Cambridge (1983), a M.Sc. degree from University of Toronto (1986), and a Ph.D. degree from Australian National University (1990), did post-doctoral work at University of Saskatchewan (1990-1992), and taught at University of Leicester (1992-1997) and University of Alberta (1997-2017) before joining the Harquail School of Earth Sciences at Laurentian University as Tier I Canada Research Chair in Metallogeny in 2017.



Jeremy is a world leader in the regional tectonics and metallogeny of hydrothermal ore deposits, particularly porphyry and epithermal deposits. He has obtained millions of dollars in funding for his research, has authored or co-authored more than 90 peer-reviewed journal articles in some of the top geoscience journals in the world, including *Nature Geoscience*, *Geology*, and *Geochimica et Cosmochimica Acta*, and has given over 120 invited presentations all over the world. He is currently an Associate Editor of *Economic Geology*, has previously served as Editor of *Exploration & Mining Geology* and an Associate Editor of *Mineralium Deposita*, and has served as Editor or Co-Editor of numerous special volumes, including the *Economic Geology 100th Anniversary Volume*. He has been previously awarded the Society of Economic Geologists Lindgren Award (1995), International Exchange Lectureship (2002-2003), Silver Medal (2015), and Thayer Lindsley Visiting Lectureship (2016). He has also received the Geological Association of Canada Hutchison Medal (2007) and the Canadian Institute of Mining and Metallurgy Julian Boldy Memorial Award (2007).

Professor Jeremy Richards is one of the top economic geologists in the world and a most worthy recipient of the 2019 Duncan R. Derry Medal.

[Editor's note: See also Dr. Richards' obituary, p.17]

William Harvey Gross Award

The William Harvey Gross Award is bestowed annually by the Mineral Deposits Division to a geoscientist less than 40 years of age who has made a significant contribution to the field of economic geology in a Canadian context. The contribution may relate to studies that include all aspects of what is generally referred to as economic geology, and which represents the broad spectrum of fields to which Bill Gross contributed. The 2019 award is given to **Dr. Michelle DeWolf**, Mount Royal University.

Citation: Dr. Michelle DeWolfe is one of Canada's up-and-coming young geoscientists. She is recognized for her detailed, field-based mapping that forms the basis, and is a hallmark of her research into the volcanology, petrogenesis and metallogeny of ancient volcanic successions in Canada and globally. She is arguably one of the best, if not the best detailed geological



mapper in volcanic environments of her generation, not just in Canada, but globally. She has made important contributions to the identification and understanding of the volcanic process responsible for the location and formation of volcanogenic massive sulfide (VMS) deposits as exemplified by her published research and maps of the Archean Kidd Creek deposit and world class Paleoproterozoic VMS deposits at Flin Flon, Manitoba. Through invitation, Michelle has expanded her research to include VMS deposits in the Slave Craton, NWT, Greenland, and on the modern seafloor.

Michelle has built a vibrant, externally funded research program that is clearly contributing to our understanding of VMS environments globally, while at the same time she is a devoted teacher at Mount Royal University, a primarily undergraduate university where she has a high-teaching load. Michelle has made a significant contribution to the education, training and mentoring of undergraduate students and is regarded

as an excellent teacher, both in lectures and in the field. Numerous undergraduate and graduate students benefit from Michelle's experience, patience, and participation in their research.

Michelle's contribution to the Canadian Geoscience community has been exemplary. She has served on committees within the Mineralogical Association of Canada and the Volcanology and Igneous Petrology Division of the Geological Association of Canada and Michelle is Mount Royal's liaison with professional societies such as the Prospectors and Developers Association of Canada and Association of Professional Engineers and Geoscientists of Alberta. Moreover, in addition to her contribution to research, to the education and training of Canada's next generation of geoscientists, and to the Canadian scientific community, Michelle (and Jerry) has raised a young family and has maintained a balanced personal life, making her an excellent role model for young geoscientists.

Howard Street Robinson Medal

The Howard Street Robinson Medal recognizes a respected and well-spoken geoscientist who will further the scientific study of Precambrian Geology or Metal Mining through presentation of a distinguished lecture across Canada. The medal is named in honour of Howard Street Robinson, a founding member of the GAC®, whose bequest to GAC® in 1977 of approximately \$100,000 makes the lecture tour possible. The bequest was "for the furtherance of scientific study of Precambrian Geology and Metal Mining". The GAC®'s Mineral Deposits Division and Precambrian Division award the medal in alternate years. In 2019, the Medal is presented by the Mineral Deposits Division to **JoAnne Nelson**, British Columbia Geological Survey.



Citation: JoAnne served a distinguished 31-year career as a project geologist with the BCGS. Her primary area

of expertise is the tectonics and metallogeny of the Cordillera of northern British Columbia, developed over thirty years of detailed field studies throughout the region, from the Rocky Mountains through the inner accreted terranes (Yukon-Tanana, Quesnellia, Stikinia) to the Insular terranes of the coast. She has also developed expertise in aspects of the tectonic evolution of the BC-Yukon-Alaskan Cordillera as a whole. Her most recent project (2013-2017) involved structural and geochronological studies of the Mesozoic porphyry belt of the Golden Triangle, northwestern British Columbia.

Julian Boldy Certificate Award

Julian Boldy Certificates are given for the most significant and creative papers presented at the Mineral Deposits Division session at the annual GAC-MAC meeting. The 2019 award is given to Dr. Tobias Schlegel.

Citation: Dr. Schlegel illustrated that first order vector to IOCG mineralization (i.e., hematite-sericite-quartz alteration) does not suffice to explain high-grade ores. In contrast, his tracing of major differences in Cu, U, and Fe contents of syn-mineralization Na- to Ca-dominated fluids (in ore-fluorite) shows for the first time that the essential oxidized, Cu + U + sulfate-rich ore fluid formed in a volcanic lake environment. Ore occurred by fluid mixing with a reduced, Fe-rich magmatic-hydrothermal brine and by fluid-rock reactions with pyrite-bearing breccias contributing sulfur to mineralization.



Dr. Schlegel currently works at the Institute of Applied Mineralogy and Economic Geology, RWTH Aachen University. He does research in Geochemistry and Geology with a focus on fluid-rock interaction. His most recent publication is "Hematite-breccia hosted iron oxide-copper-gold deposits require magmatic fluid components exposed to atmospheric oxidation: Evidence from Prominent Hill, Gawler craton, South Australia".

Paleontology Division Elkanah Billings Medal

The Billings Medal is named in honour of Elkanah Billings, who is regarded as the father of paleontology in Canada. This medal recognizes individuals who have made outstanding contributions to Canadian paleontology through a single or series of papers or monographs, or a long-term contribution to the paleontology of a specific taxonomic group, time interval, geographic area or discipline. The 2019 award is given to **Dr. Jisuo Jin**, Western University.

Citation: Dr. Jisuo Jin is an internationally recognized specialist in Ordovician-Silurian brachiopod systematics and paleobiodiversity associated with Late Ordovician mass extinctions. His monographs and articles are detailed observations and innovative interpretations of brachiopod taxonomy of different faunas from North America, China and Europe. His studies have enhanced biostratigraphic zonation and been foundational for broader research on rates of evolution and responses to paleoenvironmental changes. The resulting precision in geological ages and his integration of brachiopod zonations with other fossil groups, in combination with sedimentologic, stratigraphic, chemostratigraphic studies, has resulted in meaningful paleobiogeographic reconstructions.



Jin's early research career includes being a research associate or visiting scientist at universities, museums, and Geological Survey of Canada. Jin has established himself as an outstanding researcher over the past few decades at Western University. He has also earned numerous teaching awards—offering undergraduate and graduate courses in paleontology, sedimentary petrology, and field studies. Jin has supervised or co-supervised 8 Ph.D., 11 M.Sc., and B.Sc. students. Some of his graduate students have won provincial and national awards in sedimentology and stratigraphy of Silurian and Devonian reef petroleum plays in Canada.

Jin and colleagues have received over \$2.28 million in research grants and awards. These have been from NSERC, other Canadian government and industry sources, and from China and Denmark.

Jin has published 11 refereed monographs; 107 refereed articles; 12 other papers; 7 technical reports; 5 field guides, and more than 70 abstracts. Jin has contributed to the international scientific community as editor for national and international journals and special volumes, reviewer of over 100 manuscripts, and as a participant on the Silurian Subcommittee, and on various NSERC and Ontario Graduate Scholarship committees.

In summary, Dr. Jisuo Jin is an outstanding researcher, teacher, supervisor and mentor who has contributed substantially to Canadian and international Geology in subdisciplines of Paleontology, Biostratigraphy, Sedimentology and Paleobiogeography.

Volcanology and Igneous Petrology Division Career Achievement Award

The Career Achievement Award is made by the Volcanology and Igneous Petrology Division of the Geological Association of Canada in recognition of career achievements in the field of volcanology and/or igneous petrology. Candidates are judged on their lifetime scientific contribution.

The recipient of the 2019 award is **Dr. Donald Bruce Dingwell**, Ludwig Maximilian University of Munich, whose more than 430 publications formed a basis for many developments in the modern field of experimental volcanology. This award reflects his intellectual abilities and his



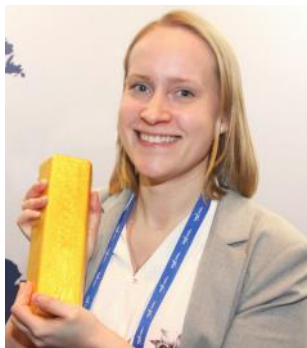
adaptability to explore widely contrasting questions in volcanology and igneous petrology.

Leopold Gélinas Medal

The Volcanology and Igneous Petrology Division of the Geological Association of Canada annually presents three medals for the most outstanding theses, written by Canadians or submitted to Canadian universities, which comprise material at least 50% related to volcanology and igneous petrology. A gold (plated) medal is awarded for the best Ph.D. thesis, a silver medal for the best M.Sc. thesis and an antique copper medal for the best B.Sc. thesis. Theses are evaluated on the basis of originality, validity of concepts, organization and presentation of data, understanding of volcanology, and depth of research.

Gélinas Award (Gold, Best Ph.D. Thesis)

Awarded to **Melissa Anderson**, Ph.D., University of Ottawa, for *Relationships between tectonics, volcanism, and hydro-thermal venting in the New Hebrides and Mariana back-arc basins, Western Pacific*.



Gélinas Award (Silver, Best M.Sc. Thesis)

Awarded to **Gabriel Sombini Dos Santos**, M.Sc., Acadia University, for *Petrology, geochemistry, age and tectonic setting of the Margaree pluton, Aspy terrane, Cape Breton Island, Nova Scotia*.



Gélinas Award (Bronze, Best B.Sc. Thesis)

Awarded to **Rebecca Canam**, B.Sc., University of British Columbia, for *Age, petrology and geochemistry of an appinitic lamprophyre, Hjalmar Lake, South Rae Craton, Northwest Territories*.

Service Awards

Voluntary Service Award

This award recognizes those members and non-members who have made a significant singular contribution through voluntary service to the Association or to the Association's Sections or Divisions.



Awards were given to **Dr. John Thompson** and **Anne Thompson**, for their continued and consistent volunteer efforts related to annual conferences. Awards were also given to **Dr. Stephen Morison** and **Dr. David Lentz** for their service to the Association.

Certificates of Appreciation

Certificates of Appreciation are given to recognize the efforts and contributions of individuals on the Local Organizing Committees for past annual conferences. Certificates were awarded to the members of the 2018 *Resources for Future Generations* Local Organizing Committee: **Catherine Hickson** (Earth theme Technical Session [TS]), **Dan Gibson** (Field Trips), **David Corrigan** (Earth theme TS), **Deanne van Rooyen** (Earth theme TS), **Elizabeth Stock** (Short Courses, Minerals and Earth theme TS), **Graham Young** (Earth theme TS), and **James Conliffe** (Earth theme TS).

50-year Member

This award is presented to those members who have consistently paid membership in the GAC® for 50 years. The first time the award was presented was in 1997, on GAC®'s 50th



Anniversary. Certificates and pins were awarded to **Anthony T. L'Orsa** (Smithers, British Columbia), **Murray A. Roed** (Kelowna, British Columbia), **Walfried M. Schwerdtner** (Scarborough, Ontario), and **Michael J. Skopos** (Orangeville, California, USA).

Student Awards

Mary-Claire Ward Geoscience Award

The award is given annually and honours the memory of Mary-Claire Ward who died in 2004. At the time of her death Mrs. Ward was the chair of the PDAC's geoscience committee, chairman of Watts Griffis McOuat Ltd., and a past president of the Geological Association of Canada. She was a passionate advocate for the geosciences in Canada.

The award's intent is to encourage and support a graduate student in Canada whose thesis contributes to our knowledge about the geological history of Canada. Mapping is a significant component of the winning thesis. The award is administered by the Geological Association of Canada (GAC®), the Prospectors & Developers Association of Canada (PDAC), the National Geological Surveys Committee, the Canadian Geological Foundation, and Watts, Griffis and McOuat Ltd.

The 2019 award recipient is **Andrew Steiner**, based at the University of British Columbia. Andrew's M.Sc. research aims to map auriferous fluid pathways, identify the salient geological controls on fluid flow, and assess the physiochemical evolution of ore fluids in the Carlin-type gold deposits of the Nadaleen trend, Yukon.



Jerôme H. Remick Poster Awards

The purpose of the Remick Poster Awards is to acknowledge the growing use of posters as a legitimate geoscience communication vehicle, and to encourage higher standards by recognizing the best posters at any given meeting. The following awards were presented at the 2019 GAC-MAC-IAH meeting in Québec City.

Gold (1st place)

James Greene (University of Windsor), "Cathodoluminescent and compositional heterogeneity in fluorite and its relationship to Sn and W-Mo mineralization from Mount Pleasant, New Brunswick".

Silver (2nd place)

Grant Hagedorn (University of Waterloo), "Ice-flow and deglacial history of the Laurentide Ice Sheet in the southwestern Great Slave Lake area".

Bronze (3rd place)

Ronan Abhervé (Institut National de la Recherche Scientifique), "Impact of topographic resolution on simulated regional groundwater flow and residence time".

Honourable mentions

Kara Vogler (Dalhousie University), "Thermal and exhumational history of the Labrador passive margin: insights from apatite and zircon (U-Th)/He thermochronology".

Benjamin Neil (University of Alberta), "U-Pb zircon chronology of basement gneisses and granitoids in the Nonacho Lake area, NT: Correlations to the Queen Maud block".

Elliot Wehrle (University of Windsor), "Archean gold mineralization in the Wawa Gold Corridor, Wawa, Ontario".

Joshua Laughton (Western University), "Preliminary in situ U-Th-Pb electron microprobe geochronology of monazites from the Rae Province on Devon Island, Nunavut, Canada".

Martin Viala (University of Ottawa), "Magmas associated with Au-Cu mineralization in the Hualgayoc mining district, Northern Peru".

CFES National Earth Science Mentorship Medal

The CFES mentorship award was created in 2008 to recognize the sustained and inspirational mentorship of colleagues and employees including peers, graduate students, undergraduate students and technicians. The award was set up in honour of Paul F. Williams, a geologist known for scientific and mentoring excellence, candour and integrity. Mentorship is recognized as a critical part of professional and academic development and is vital to the health of any

professional community. With this award, CFES recognizes an earth scientist from Canadian industry, academia or government. The sole criterion for the award is excellence in mentoring over a sustained period of time. The 2019 award is given to **Dr. Georgia Pe-Piper**, St. Mary's University.

Citation: Professor Georgia Pe-Piper of Saint Mary's University, Halifax, Nova Scotia, is the winner of the 2019 CFES Mentorship Medal. The award is made in recognition of her unwavering and selfless dedication to mentoring and her focus on creating research opportunities for undergraduate students. She has promoted the importance of research and experiential learning, particularly for under-graduates, while maintaining excellence in research, teaching, and administration.



Georgia holds a B.Sc. from the University of Athens (Greece) and a Ph.D. from the University of Cambridge (UK). She is internationally known for her work on shoshonitic volcanic rocks, shear zone granites, the petrographic recognition of the Montagnais impact crater, her book on *The Igneous Rocks of Greece*, and in the last decade the provenance and diagenesis of the Scotian Basin.

Maintaining a breadth of interests, spanning petroleum, mining, and environment, has made Georgia a versatile mentor, capable of offering students opportunities to work on many aspects of geology depending on their goals, strengths, and interests. It is her commitment to undergraduate research, her strategic approach and the permanent impact she has had as a mentor that makes Georgia truly deserving of this award.

Acceptance: I was very surprised when Shoufa called me, because I did not expect to get an award for what I regarded as part of the job I was paid to do. But let me say how much I appreciate the efforts of Kathleen Gould, Steve Ingram and many other former students and colleagues who thought it worth the considerable effort to prepare my nomination.

As a very shy child, much younger than my siblings, I learned to listen to people and to observe their character and abilities. As a university professor, I have valued those skills in working with students, and have tried to guide students in the most appropriate directions for their careers. When I started at Saint Mary's University, it was a small, undergraduate focussed university that seemed to regard research with suspicion, fearing that by having faculty do research it might detract from their attention to undergraduate teaching. This seemed like nonsense to me! I had become interested in research as an undergraduate at the University of Athens from the part-time jobs I had taken on in order to support myself. The observational and organizational skills, the problem-solving approach, and the ability to communicate results that are necessary in research do not suddenly appear when starting a graduate degree. They are life skills needed by most professional geologists. So I did involve undergraduates in research, through summer field and part time lab jobs, Directed Studies, honours theses, and by finding them appropriate coop jobs, through what is now known as experiential learning. And while they were learning, these students helped spread my load. I could not work in the rivers of the Cobequid Highlands or the mountains of Greece on my own, nor did I have time to do all my own electron microprobe and SEM work.

As other Mentorship Medal recipients have said, mentorship is developed by experience and is very different from both teaching on the one hand and human resource management on the other. It is a gradual and progressive activity. I had empathy from my own experience of both the financial challenges of being an undergraduate student and the occasional loneliness of being an international student. My own work experience as a student helped fill these needs and allowed me to gain valuable skills. Mentoring students has allowed me to pass on my experiences to a wide array of students over the years.

David and I had no relatives in Canada, so generations of students became our extended family. International students and post-docs would always have Christmas dinner with us. And as I do with our own children, I feel immense pride and satisfaction from seeing so many former students excel in an amazing range of geological jobs. I thank all of you for your continuing friendship and appreciation.

Milestones, Memories, and Tributes

Hugh M. French



The University of Ottawa is saddened to announce the sudden passing on May 11, 2019 in Victoria, B.C. of Dr. Hugh M. French, former Dean of the Faculty of Science and Professor Emeritus in the Department of Geography, Environment and Geomatics, and the Department of Earth Sciences. He was also adjunct professor at the University of Victoria.

Hugh is internationally recognized as a specialist on periglacial processes and permafrost science. In a career as a professor that started with his first visit to the Canadian Arctic in 1967 and spanned 36 years, plus a further 16 years post-retirement, he wrote or co-wrote more than 160 publications covering topics such as ground ice formation and distribution, slope processes, natural and anthropogenic thermokarst, and frozen ground engineering. He was a widely travelled geocryologist, publishing studies carried out in the Canadian High Arctic and Subarctic, the Tibet Plateau, Antarctica, and parts of Europe and the USA which experienced periglacial conditions during the Quaternary. He also supervised numerous graduate students, several of whom remain prominent in the field.

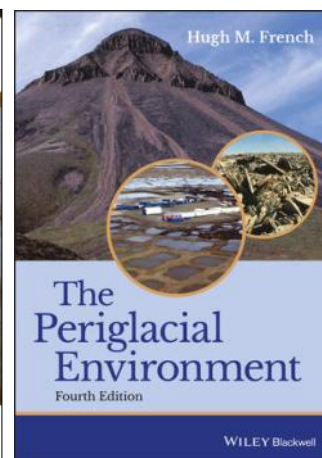
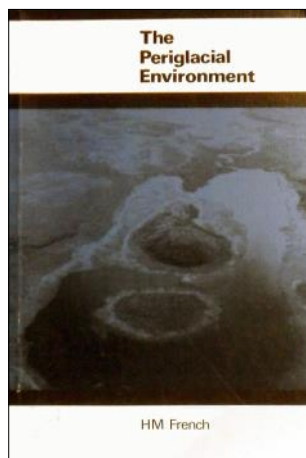
His many other accomplishments included founding the journal *Permafrost and Periglacial Processes* which he edited for 16 years, and writing four editions of his textbook *The Periglacial Environment* over nearly 40 years, the last of which was published in 2017. Hugh also played important roles in the International Permafrost Association helping found it in 1983 and subsequently as Vice-President (1993-1998) and President (1998-2003).

He received the Roger J.E. Brown Award of the Canadian Geotechnical Society for outstanding contributions to permafrost science and engineering, the Award for Scholarly Distinction in Geography from the Canadian Association of Geographers, and the International Permafrost Association's Lifetime Achievement Award.

The Hugh M. French Award for outstanding contributions to permafrost science and/or periglacial geomorphology, which had already been named in his honour, will be awarded for the first time by the Canadian Permafrost Association at the Eighth Canadian Permafrost Conference in Québec in August 2019. We offer sincere condolences to Hugh's wife Jill, and his many friends and colleagues in Canada and abroad. He will be missed.

Editor's notes: Hugh French's interest in periglacial processes started early. In 1967, he earned a Ph.D. in geomorphology at the University of Southampton, England, on the topic of *The asymmetrical nature of chalk dry valleys in southern England*. At the time, the origin and formation of these valleys was under debate and was thought to be due to differential freeze-thaw processes on slopes conditioned by aspect. He is also well-known, with co-editor Olav Slaymaker, for the informative survey of *Canada's Cold Environments*, published in 1993.

[Editor's note: Slightly edited from tribute posted on the Department of Geography, University of Ottawa website, May 14 2019]



Jeremy Peter Richards 1960-2019

On 7 June 2019, the Mineral Exploration Research Centre and Harquail School of Earth Sciences at Laurentian University and the greater geoscience community lost an esteemed colleague, friend, mentor, and award-winning scientist with the passing of Professor Jeremy Richards. Jeremy was a Tier I Canada Research Chair in the Harquail School and led a large and productive research program, including many graduate students, post-doctoral researchers, and visiting scholars who conducted research throughout the world.

Jeremy was born in 1960 in the UK and was awarded a B.A. Honours (1st Class) degree from the University of Cambridge in 1983 and 1987, a M.Sc. degree from the University of Toronto in 1986, and a Ph.D. degree from the Australian National University in 1990. He did post-doctoral work at the University of Saskatchewan between 1990 and 1992, and taught at the University of Leicester between 1992 and 1997, and at the

University of Alberta between 1997 and 2017 before joining the Mineral Exploration Research Centre and Harquail School of Earth Sciences at Laurentian University as Tier I Canada Research Chair in Metallogeny in 2017. He was a registered Professional Geologist in Alberta and Ontario.

Jeremy was a world leader in the regional tectonics and metallogeny of hydrothermal ore deposits, particularly porphyry and epithermal deposits, including post-subduction deposits in the Eastern Tethyan Orogenic Belt. He obtained millions of dollars in funding for his research from federal and industry sources, authored or co-authored more than 100 peer-reviewed journal articles in some of the top geoscience journals in the world, including *Nature Geoscience*, *Geology*, and *Geochimica et Cosmochimica Acta*, and gave over 140 invited presentations all over the world. He served as *Editor of Exploration and Mining Geology*, an Associate Editor of *Mineralium Deposita and Economic Geology*, and as Editor or Co-Editor of numerous special volumes, including the *Economic Geology 100th Anniversary Volume*.



Jeremy Richards on Lascar Volcano, Chile, in 2018

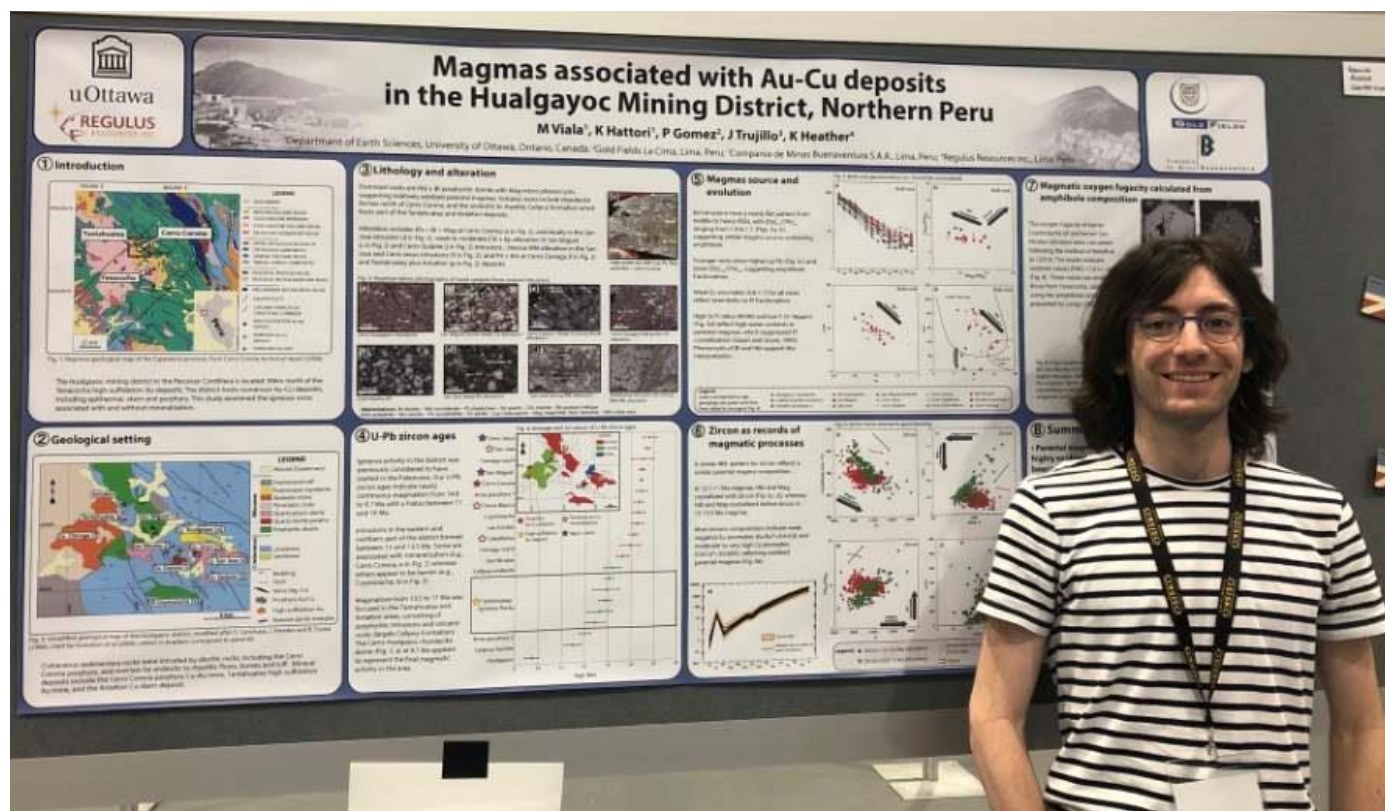
Jeremy was also an impassioned advocate for sustainable development, particularly as applied to the minerals industry. Several projects examining various aspects of the industry were initiated between 2001 and 2019, five involving Ph.D., M.Sc., and M.A. students, and in 2002–2003 he was Chair of the Canadian Geoscience Council Standing Committee on Sustainable Mineral Resources Development. He was a keynote speaker at several international conferences, and 2009 he edited and published a book entitled *Mining, Society, and a Sustainable World*.

Jeremy was a highly creative researcher who generated original interpretations and new ideas, some of which resulted in provocative papers that led to debate and further research. Similarly, he did not shy away from administrative and procedural issues in science and academia that appeared to run counter to the best interests of research and education. His outspoken commentary gained him many enthusiastic followers. His interests did not stop at science. He pursued other activities with the same passion that he gave to his science - he was an avid guitarist, hiker, scuba diver, and cat lover.

His students remember him for his beautiful and insightful geological figures and meticulous attention to writing style, grammar, and punctuation, and his generosity in supervising and hosting so many students, scientists, and industry professionals from “developing” countries, including China, Iran, Pakistan, and Turkey.

For these many accomplishments Jeremy was awarded the Society of Economic Geologists Lindgren Award in 1995, the International Exchange Lectureship in 2002–2003, the Silver Medal in 2015, and the Thayer Lindsley Visiting Lectureship in 2016. He was also awarded the Geological Association of Canada Hutchison Medal in 2007, the Canadian Institute of Mining and Metallurgy Julian Boldy Memorial Award in 2007, and the Geological Association of Canada Mineral Deposits Division William Harvey Gross Award in 2001 and, most recently, their prestigious Duncan R. Derry Medal in 2019.

Professor Jeremy Richards was one of the top economic geologists in the world and will be sorely missed by his family, friends, students, and the academic community as a whole.



Martin Viala's poster won an Honorable Mention at the recent GAC-MAC-IAH meeting in Québec City. For more about Student Poster Awards, see p. 14.

Announcements

Canadian Paleontology Conference

Organized by the Paleontology Division of the Geological Association of Canada



University of Toronto Mississauga, Ontario, August 23-25, 2019

We hope to target all facets of our exciting discipline, from biostratigraphy to taphonomy, functional morphology to systematics, and everything in between. Come join in the fun!

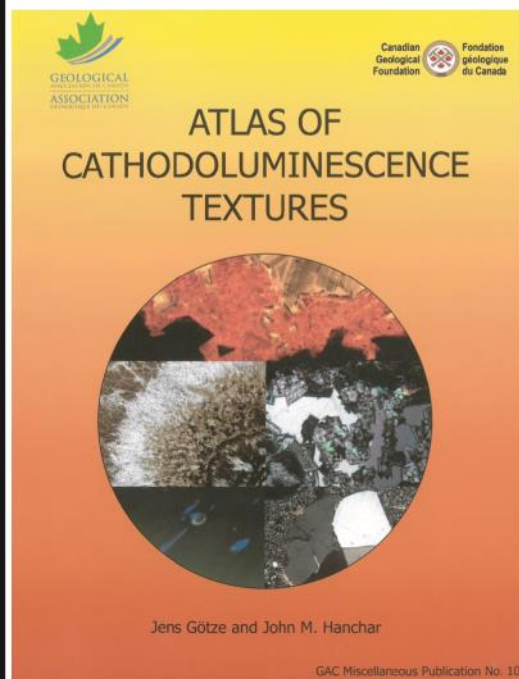
For more details, please see <https://www.utm.utoronto.ca/cpc2019/>

New Geological Association of Canada Publication!

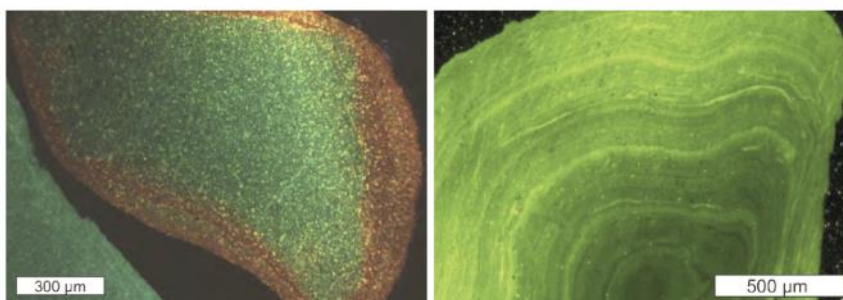
GAC Miscellaneous Publication No. 10: Atlas of Cathodoluminescence Textures

by

Jens Götze and John M. Hanchar



The authors have worked extensively with cathodoluminescence techniques for more than two decades. The material presented in this atlas should help both beginners and experts in the field of luminescence to understand the physical background and principles of cathodoluminescence.



The nine chapters of this atlas illustrate cathodoluminescence properties of selected minerals and rocks, the internal cathodoluminescence textures in minerals, rocks and synthetic materials, and their interpretation for different applications in the geosciences.

Price: \$75.00

GAC members: \$41.25

<https://gac.ca/publications/bookstore/>

ISBN: 978-1-897095-86-7
ISSN: 1706-936x

Howard Street Robinson Fund

The Robinson Fund was established in 1977 by the Geological Association of Canada, using a bequest from the estate of Howard Street Robinson. The fund is dedicated to the furtherance of scientific study of Precambrian Geology and Metal Mining by:

- sponsoring an annual Distinguished Lecturer Tour whose focus alternates between Precambrian research and economic geology (lecturer alternately chosen by the GAC®'s Precambrian and Mineral Deposits divisions)
- supporting Special Projects including publications, symposia and conferences.

Proposals for special projects on Precambrian Geology or Metal Mining should be submitted to the Robinson Fund Committee. Projects should be sponsored or organized through the GAC® or one of its Divisions or Sections. Proposals that have a wide appeal or degree of accessibility to the GAC® membership are preferred.

For further information and proposal submissions, please contact: Dr. Stephen Piercey, Chair, Robinson Fund, c/o Department of Earth Sciences, Memorial University of Newfoundland, St. John's, NL A1B 3X5 Canada, E-mail: spiercey@mun.ca



Sea caves, St Martins, New Brunswick, cut in sandstone of the Triassic Honeycomb Point Formation

Information for Contributors

Contributions should be submitted by e-mail to Alwynne.Beaudoin@gov.ab.ca, with GEOLOG in the subject line. Contributions are welcome in either of Canada's two official languages. MS Word (.doc or .docx) is the preferred format for contribution but generic word processing (.rtf or .txt) files are also fine. Please do not submit PDF files. Up to four hi-res images may be submitted per contribution: preferred format is .jpg, RGB colour, with a minimum 300 dpi resolution at 5" x 3" size. Please ensure that images are cropped and colour-corrected, and provide a caption for each image, and an image credit line if needed. Contributors are responsible for securing permission to publish for any third-party images or images of living recognizable people. Diagrams (vector graphics) may also be submitted. Preferred format for graphics is Adobe Illustrator (.ai); make sure that the file is saved with "save text as lines" option enabled to ensure no font substitutions. Additional information on other file formats can be obtained from the Editor. Please do not embed images or graphics in your text document; images or graphics should be submitted as separate files. In your text, use a call-out in parentheses to indicate the approximate placement of each image and graphic. If files are larger than 10 mb, please contact the Editor for alternate delivery arrangements. Your contribution will be copy-edited to ensure consistent spelling and orthography and to correct any obvious typos or errors. Contributions may also be edited for clarity and length. If the Editor has questions about specific information in the text, she will contact contributors for clarification. Contribution deadlines are March 1, June 1, September 1 and December 1.

Consignes aux auteurs

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