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“Athlone Fellowship Program and Canadian Geotechnique”

by CGS Heritage Committee

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ATHLONE FELLOWSHIP PROGRAM AND CANADIAN GEOTECHNIQUE

CGS Heritage Committee (September 2021)

The Athlone Fellowship program (called a “scheme” at the time) existed from 1951 to 1970, when the last fellowship was awarded, and ended in 1971, when the last fellowship was completed. This year, 2021, it has been 50 years since its existence.

The program was intended to offer “practical training of Canadian engineering graduates in the United Kingdom.” Practical training meant additional studies or industry experience, or a combination of both. It was named to honour Sir Alexander Cambridge (1874-1957), 1st Earl of Athlone and the 16th Governor General of Canada (1940-1946). The fellowships were funded by the Government of the United Kingdom but were awarded through the Engineering Institute of Canada. They included funding to travel to the UK, a travel grant within the UK, tuition fees, a textbook allowance and a modest weekly allowance.



*Sir Alexander Cambridge, 1st Earl of Athlone. Portrait as Governor General of Canada (1940-1946)
(Photo source Government of Canada)*

Over its 20-year history, 810 Athlone Fellowships were awarded, all but three going to male engineers. The Fellows were selected from 21 Canadian universities. Of the fellowships awarded, we have identified 36 Athlone Fellows (all male) who were involved in the geotechnical field (see following table). These individuals came from 14 universities across Canada and all but four attended Imperial College, then part of the University of London. The four other institutions were the University of Glasgow, the City University of London, the University of Cambridge and the University of Manchester.

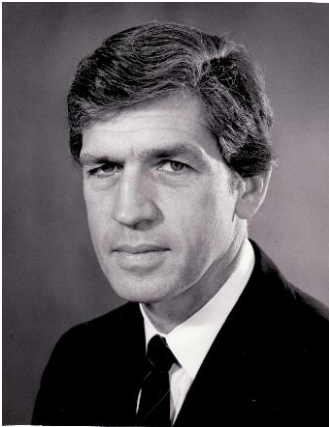
Year awarded	Name	from Canadian University	UK Institution attended
1967	R Anderson	É Polytechnique	Imperial College
1963	R Ares	É Polytechnique	Imperial College
1960	EM Aziz	U of W Ontario	Imperial College
1958	JD (John) Brown	Nova Scotia Tech	Imperial College
1966	AW (Wayne) Clifton	U of Saskatchewan	Imperial College
1970	BD (Brian) Constant	U of Alberta	Imperial College
1953	FA (Fred) DeLory	McGill U and U of T	Imperial College
1954	PJ Dowling	U of Toronto	Imperial College
1961	RG (Rémy) Dussault	Laval U	Imperial College
1960	C (Claude) Ferland	Laval U	Imperial College
1964	RMW (Bob) Frederking	U of Alberta	Imperial College
1966	WS (Bill) Freeman	McMaster U	U of Glasgow
1963	HG (Glen) Gilchrist	U of Saskatchewan	Imperial College
1957	FJP Heffernan	McGill U	Imperial College
1953	TC (Cam) Kenney	McGill U	Imperial College
1965	JM (Jim) Laing	Queen's U	Imperial College
1952	B (Bernard) Lamarre	É Polytechnique	Imperial College
1956	P (Pierre) LaRochelle	Laval U	Imperial College
1969	JWK Lye	Royal Military C	The City Univ
1951	DH (Don) MacDonald	U of Toronto	Imperial College
1964	DR (Dougal) McCreath	U of Manitoba	Imperial College
1967	EC (Ed) McRoberts	U of Alberta	Imperial College
1956	BW (Barry) Mickleborough	U of Saskatchewan	Imperial College
1964	RJ (Bob) Mitchell	U of Waterloo	U of Cambridge
1956	N (Norbert) Morgenstern	U of Toronto	Imperial College
1962	JL Normand	Laval U	Imperial College
1955	JJ (Jean-Jacques) Pare	Laval U	Imperial College
1955	KR (Ken) Peaker	U of Manitoba	Imperial College
1965	Y Pigeon	Laval U	Imperial College
1954	J (John) Seychuk	U of Manitoba	Imperial College
1955	DH (Don) Shields	U of Saskatchewan	Imperial College
1965	ELB Shipley	McMaster U	U of Manchester
1955	L (Larry) Soderman	U of Manitoba	Imperial College
1959	VA (Victor) Sowa	U of Alberta	Imperial College
1953	DL (David) Townsend	McGill U	Imperial College
1959	NH (Neil) Wade	U of New Brunswick	Imperial College

“Geotechnical” Athlone Fellows. Shading indicates little is known about their careers. The careers of the others are briefly summarized below

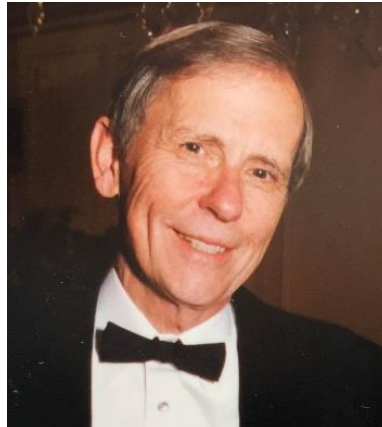
Most of those who graduated from Imperial College were awarded a Diploma of the Imperial College (DIC). At the time of the Athlone Fellowship program, a DIC was recognition of “satisfactory completion of a minimum of one year’s postgraduate work consisting of research and/or advanced study.” A thesis was not required. Starting in 1964, Imperial College introduced a research master’s program, and at least one of the later Fellows took that program.

We know something about the careers of 31 of the 36 “geotechnical” Fellows in the table—those whose names are not shaded in the table. They have contributed in a significant way to Canadian geotechnique; in the consulting field, government and/or academia. Some still are contributing. In addition, many have had an association with the Canadian Geotechnical Society in various ways:

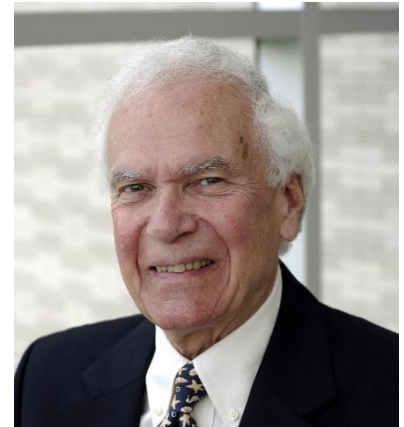
- **David Townsend** was instrumental in the early 1970s in the formation of the present-day CGS
- **Cam Kenney, Jim Laing, Norbert Morgenstern, John Seychuk and Don Shields** served as presidents of the CGS
- **Bob Mitchell** served as CGS Vice President Finance
- **Victor Sowa** served as CGS Secretary-General (a position now known as Executive Director)
- **Wayne Clifton, Pierre LaRochelle, Don MacDonald, Ed McRoberts, Norbert Morgenstern, John Seychuk and Don Shields** have received the CGS' Robert F. Legget Award (renamed Medal in 2000)
- **Fred DeLory, Pierre LaRochelle and Larry Soderman** helped establish the *Canadian Geotechnical Journal* in the early 1960s
- **Fred DeLory and Bob Mitchell** served as *Canadian Geotechnical Journal* Editors.
- **Norbert Morgenstern** served as President of the International Society of Soil Mechanics and Foundation Engineering (now International Society of Soil Mechanics and Geotechnical Engineering).



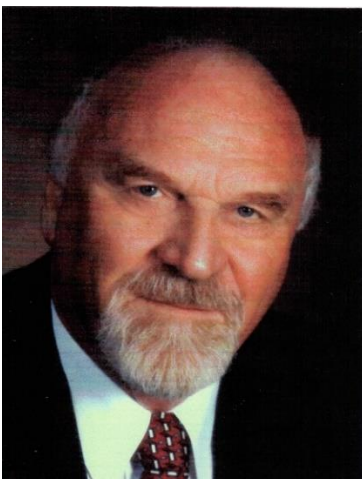
*Cam Kenney
(CGS President 1975-1976)*



*Don Shields
(CGS President 1977-1978)*



*Norbert Morgenstern
(CGS President 1989-1990
and ISSMFE President 1989-1994)*



*John Seychuk
(CGS President 1993-1994)*



*Jim Laing
(CGS President 1995-1996)*

Very little, or nothing, is known of the remaining five Fellows (shaded in the table): **E.M. Aziz, P.J. Dowling, J.W.K. Lye, J.L. Normand** and **E.L.B. Shipley**. If readers know more about these individuals, or know of other “geotechnical” Fellows not listed in the table, please contact the Heritage Committee at Heritage@cgs.ca.

Although there were only 36 “geotechnical” Athlone Fellows, they certainly left, and are still leaving, their mark on Canadian and international geotechnique.

Acknowledgements: In addition to members of the Heritage Committee, Judith Bouchard, Sharon Bunn, Bill Burwash, Bill Cavers, Marv Cherniawski, Lisa Coyne, Paul Dittrich, Vivian Giang, Jean Lafleur, Bill Roggensack and Jean-Pierre Tournier, and Athlone Fellows Brian Constant, Glen Gilchrist and Don Shields provided information on some of the Fellows. Bob Hemmings, author of “A Short History of the Athlone Fellowship” also assisted.

The following very briefly summarizes the careers of the “geotechnical” Athlone Fellows for whom we have been able to find information. An asterisk by an individual’s name indicates that a tribute is included in the “Lives Lived” section of the CGS’s Canadian Geotechnical Virtual Archives (https://www.cgs.ca/virtual_archives_lives_lived.php.)

R (Ron) Anderson had a successful career with Tecslut, a consulting firm based in Montreal (Tecslut was later bought by AECOM). Ron contributed his expertise to the design of several dams for Hydro-Québec.

R (Raymond) Arès had successful consulting career in Montreal, but with the consulting firm RSW. He was a noted dam designer and designed several dams for Hydro-Québec, including the Toulnostouc Dam, on the north shore of the Saint Lawrence River.

J.D. (John) Brown* (1933-2016) worked with Geocon as a consultant in the early 1960s before obtaining a PhD from Dalhousie University (1967). He worked as a post-doctoral fellow at the Norwegian Institute of Technology (1967-1969) then joined the faculty of Technical University of Nova Scotia. John left the university in 1980 and joined Jacques Whitford in Halifax where he consulted until he retired.

A.W. (Wayne) Clifton continued at the University of London and obtained an MSc (1967). He worked with the Saskatchewan Ministry of Highways before forming Clifton Associates, in Regina, in 1978. Throughout his career, Wayne has specialized in geotechnical and civil engineering and environmental management. He was the chair of the Local Organizing Committee for GeoRegina 2014. Still active in consulting and a strong supporter of the CGS, Wayne was the 51st CGS Robert F. Legget Medalist (2020).

B.D. (Brian) Constant consulted with Hardy Associates and BBT Geotechnical Consultants in Edmonton and Saskatoon for a number of years, before moving to southern California to continue his successful career in geotechnical consulting. In Canada, he worked on the field investigations for the Canadian Arctic Gas Pipeline and on studies for the initial phases of the Syncrude development in Fort McMurray. In the US he has worked on a variety of geotechnical projects, with focus on transportation.

F.A. (Fred) DeLory continued at the University of London for his PhD (1957). Based on his thesis, he and A.W. Skempton wrote their seminal paper “Stability of natural slopes in London Clay.” Fred then became a professor at the University of Toronto and was awarded a professor emeritus upon retiring. He was involved in the founding of the *Canadian Geotechnical Journal* (1963) and became its second editor (1969-1970).

R.G. (Rémy) Dussault has had a successful career in the hydroelectric power development field, having participated in the engineering and construction of several major hydroelectric projects in Québec and abroad. He has held several senior management positions with Québec -based consulting firms and with Hydro-Québec. He served as the 100th President of the Engineering Institute of Canada during its centennial year in 1986-1987. In 1997, he was awarded the Sir John Kennedy Medal, the EIC’s most distinguished award.

C. (Claude) Ferland worked with the Montreal-based geotechnical consulting firm Les Laboratoires d'Inspection et d'Essais. That firm has not been in business for many years, and it is not known where Claude worked after that. It is reported that he died approximately 20 years ago.

R.M.W. (Bob) Frederking has worked his entire career with the National Research Council in Ottawa. He started in the Division of Building Research’s Soil and Ice Section. He is currently in the Ocean, Coastal and River Engineering Section. Bob has specialized in engineering associated with challenges posed by, including building artificial islands as oil drilling platforms in the Beaufort Sea in the 1980s.

W.S. (Bill) Freeman continued at the University of Glasgow, obtaining his PhD in the late 1960s. Bill then joined Golder Associates’ Mississauga Office where he worked until his untimely death in the early 1990s.

H.G. (Glen) Gilchrist graduated from the University of Saskatchewan in agricultural engineering (BSc 1958) and civil engineering (MSc 1963). As an Athlone Fellow, Glen spent one year at the UK’s Department of Scientific and Industrial Research’s Hydraulic Research Station and a second year at Imperial College, in part working with A.W. Skempton. Returning to Canada, Glen joined Golder Associates in its relatively new Vancouver office and in the early 1970s he opened Golder’s Calgary office. During his career, Glen carried out a wide variety of geotechnical assignments in Canada and abroad, and became a member of Golder’s global corporate team.

F.J.P (Fin) Heffernan began his consulting career with Geocon, then joined Golder Associates in 1964, where he has spent more than 50 years maintaining the company’s reputation for geotechnical excellence and inspiring generations of engineers. Fin started Golder’s Ottawa office, then subsequently served as president of the Eastern Canada operations and then president of the Canadian operations. He has been involved in numerous national and international geotechnical investigations. He has spent a significant portion of his later career on work for Ontario’s Ministry of Transportation.

T. C. (Cam) Kenney* (1931-2008) consulted with H.G. Acres in the? late 1950s. He then became a distinguished scholar at the Norwegian Geotechnical Institute (NGI) for six years and obtained a PhD from the University of London based on his research at NGI. He joined the faculty at the University of

Toronto where he became Chair of the Civil Engineering Department (1968-1974) and where he worked until he retired. Cam also worked as a specialist geotechnical consultant. He served as a president of CGS (1975-1976).

J.M. (Jim) Laing continued at the University of London for his MSc and PhD. He worked with Golder Associates in the UK, Vancouver and Edmonton before joining Thurber Engineering in Edmonton in 1983. He was known for work on dams and tailings dams and later in his career a variety of geo-environmental projects. He served as a president of the CGS (1995-1996). Shortly after his presidency, Jim left the geotechnical field and is currently a fine arts painter in the Okanogan Valley, in BC.

B. (Bernard) Lamarre (1931-2016) continued at the University of London for his MSc (1955). He started his working career as a soil mechanics engineer with the consulting firm of Lalonde & Valois, which became known as Lavalin in 1972. Bernard served as President and CEO of Lavalin from 1972 to 1991, when it merged with SNC. He continued as a board adviser of SNC-Lavalin until he retired in 1999. His years at Lavalin saw the company participate in major hydroelectric, tunnelling, highway and building construction projects, all in Québec. Bernard was invested as an Officer of the Order of Canada in 1985.

P. (Pierre) LaRochelle* (1928-2019) continued at the University of London for his PhD (1960) under A. W. Skempton. He then became professor at Université Laval where he founded the Soil Mechanics Laboratory. Pierre's research and consulting focused on sensitive clays. Upon his retirement (1997), Pierre was appointed a professor emeritus. He was one of the founders of the *Canadian Geotechnical Journal* (1963) and an early associate editor. He was awarded the 8th CGS Robert F. Legget Award (1977).

D.H. (Don) MacDonald* (1922-2007) was a student of Robert Legget at the University of Toronto. After his Athlone Fellowship, he continued at the University of London for his PhD (1953), from which resulted a landmark paper, "The Allowable Settlements of Buildings." co-authored with A.W. Skempton. Early in his career he worked with Legget on the early phases of the Toronto subway project. In 1955, he joined H.G. Acres, eventually becoming its president. Don was one of the founding associate editors of the *Canadian Geotechnical Journal* (1963). He was awarded the 9th CGS Robert F. Legget Award (1978).

D.R. (Dougal) McCreath continued at the University of London for his PhD. He then consulted in rock mechanics with both H.G. Acres and Golder Associates on hydroelectric projects in Canada and extensively abroad. After consulting, Dougal became a professor at the School of Engineering at Laurentian University where he was also a director of the Elliot Lake Research Field Station. A professor emeritus, he has served on the Advisory Board of Laurentian University's Goodman School of Mines.

E.C. (Ed) McRoberts continued his education and obtained a PhD from the University of Alberta (1973) on the stability of permafrost-rich slopes. After a brief period as a Canadian Army Captain and as an assistant professor at the Royal Military College, in Kingston, he joined Hardy Associates and worked in the oil sands and Arctic pipelines. He currently works with Wood PLC as a specialist consultant. He has served as chair of the CGS Calgary and Edmonton sections. Ed has also been an

associate editor of the *Canadian Geotechnical Journal* and was awarded the 43rd CGS Robert F. Legget Medal (2012).

B.W. (Barry) Mickleborough continued his education and obtained a MSc from the University of Saskatchewan (1970). He worked with the Saskatchewan Ministry of Highways for most of his career, becoming the Principal Geotechnical Engineer. He was instrumental in incorporating modern geotechnical engineering into the design of roads, bridges and pavements. Later in his career, he worked as a geotechnical consultant on various projects including the New Brunswick-PEI Confederation Bridge.

R.J. (Bob) Mitchell did not attend Imperial College but instead attended the University of Cambridge and continued there for his PhD. After working in the late 1960s for the NRC's Division of Building Research, Bob joined the Department of Civil Engineering at Queen's University in Kingston, where he is now a Professor Emeritus. Among other contributions, he installed the first geotechnical centrifuge in Canada at Queen's in 1980. Bob served as CGS VP Finance (1988-1989) and Editor of the *Canadian Geotechnical Journal* (1993-1997)

N. (Norbert) Morgenstern continued at the University of London for his PhD (1964) and then held the position of lecturer at that university until 1968, the year he joined the faculty at the University of Alberta. He has had the distinction of being a professor, university professor, professor emeritus and distinguished university professor emeritus at that university. He was the 10th CGS Robert F. Legget Award winner (1979) and was awarded the EIC's Sir John Kennedy Medal (2003). Norbert (Nordie) has served as a president of the CGS (1989-1990) and president of the International Society of Soil Mechanics and Foundation Engineering (1989-1994). He was invested as a Member of the Order of Canada in 2001.

J.J. (Jean-Jacques) Paré became the manager of the soil mechanics department of Lavalin, in Montreal, before directing the geotechnical department at Société d'énergie de la Baie James (SEJB) and was very active during all the projects of the Baie-James Phase 1. Subsequently he has participated on several panel of experts for hydroelectric projects worldwide.

K.R. (Ken) Peaker* (1932-2010) continued his education at the University of Manchester for a PhD (1964) under P.W. Rowe. Throughout his professional career, Ken worked as a consultant based in Ontario. He worked with William Trow and Associates for most of his career. He went on to form two geotechnical consulting firms, Shaheen and Peaker and SPL Consultants. Ken also worked on projects in Singapore, the Caribbean and the Middle East. He was very involved with the Southern Ontario Section of the Canadian Geotechnical Society and served as chair of that section from 1992-1994 and received the SOS-CGS Award in 2008.

Y. (Yves) Pigeon continued at the University of London for a PhD (1969) under A.W. Bishop. He had a long and successful career at Tecsum, a consulting firm based in Montreal (now a part of AECOM). He was the designer for several Hydro-Québec dams: Outardes-2, Manic-3, La Grande-2 dam (the largest Hydro-Québec dam). Yves moved into management with Tecsum, from where he retired.

J. (John) Seychuk initially consulted with Geocon, then joined Golder Associates, shortly after it was formed in 1960, and has worked with Golder ever since. He has contributed to that company's high

standard of consulting services and the mentoring of many of today's top geotechnical practitioners. John was the 27th CGS Robert F. Legget Award winner (1996) and is a CGS past president (1994-1995).

D.H. (Don) Shields alternated his career between academia (universities of Ottawa and Manitoba) and consulting (both in Ontario and BC), with a period at Manchester University in the early 1960s to complete a PhD. In 1980, he became Head of Civil Engineering at the University of Manitoba and then Dean of Engineering. Among other honours, Don received an honorary degree from Carleton University and is the 31st CGS Robert F. Legget Medal recipient (2000). He was a president of the CGS (1977-1978).

L. (Larry) Soderman* (1928-1969) first consulted with Racy McCallum and then Trow-Soderman, both in Ontario. In 1959, he became Chief Geotechnical Engineer of the Ontario Department of Highways. In 1961, Larry was appointed to the faculty at the University of Western Ontario where he introduced and taught its first soil mechanics courses. He was involved in the founding of the *Canadian Geotechnical Journal* (1963) and became an early associate editor. He is credited with instigating the formation of Golder Associates in 1960.

V.A. (Victor) Sowa continued at the University of London for a PhD (1963) under A.W. Skempton. During his career, he worked as a consultant with firms in both Edmonton (Hardy Associates) and Vancouver (Klohn Crippen, URS Canada, SRK-Robertson and Jacques Whitford). He also worked in the US, Bangladesh, Ethiopia and St. Kitts. He has been an active CGS member, being both an Alberta and BC regional director and serving on local organizing committees for seven CGS conferences. Victor served as CGS Secretary General (now Executive Director) from 2007-2014.

D.L. (David) Townsend (1926-1999) taught in the Department of Civil Engineering, Queen's University, in Kingston, from the mid-1950s to the late 1960s. He later worked with Golder, in Ontario and Hardy Associates and Gulf Canada, in Calgary. David was very influential in the formation of the CGS in the late 1960s and early 1970s.

N.H. (Neil) Wade continued at the University of London for a PhD (1963). Most of Neil's career has been associated with hydroelectric projects. He worked with BC Hydro, based in Vancouver, in the 1970s, then with Monenco, based in Calgary, in the 1980s and early 1990s. Since 1994, Neil has worked as a sole practitioner on many large international hydroelectric projects and well as some Canadian projects.