



# LAR Life after retirement

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## Canadian Longitudinal Study on Aging

**David B. HOGAN, MD**

Professor  
Cumming School of Medicine  
Academic lead of the Brenda  
Strafford Centre on Aging  
University of Calgary



The first thing to know about the Canadian Longitudinal Study on Aging (CLSA) is that it is not a study in the usual sense of the word. It is a research infrastructure that supports a program of inquiry, that hopefully will lead to better health and quality of life for Canadians as they age. Design work for the CLSA began in the early 2000s, with data collection initiated in 2010. The plan was to recruit and follow every three years 50,000+ Canadians, aged 45-85 at baseline, for up to 20 years. In total 51,388 persons were recruited. We have completed two rounds of follow-up assessments and are just commencing our third. Retention of CLSA participants has been high with only 4.3% of those enrolled lost to date. The following report provides descriptive information on the baseline characteristics of CLSA participants: [www.clsa-elcv.ca/clsa-report](http://www.clsa-elcv.ca/clsa-report).

This major strategic initiative of Canadian

Institutes of Health Research (CIHR) involves more than 160 researchers in 26 post-secondary institutions across the country (including the University of Calgary where we host one of 11 CLSA data collection sites), and an equivalent number of research staff. A comprehensive, multidisciplinary approach is being taken to examine the various aspects of aging. It is the largest national research platform of its kind in both breadth and depth.

At this time (late summer of 2021) a total of 351 research projects involving ~1200

via phone, as in-person assessments were put on hold and have not yet restarted. The infrastructure was quickly redirected to supporting inquiries that addressed COVID-19. Over 28,000 of CLSA participants agreed to provide questionnaire data relevant to COVID-19, with ~19,000 of them also consenting to take part in an antibody seroprevalence study. For more information on this work visit: [www.clsa-elcv.ca/coronavirus](http://www.clsa-elcv.ca/coronavirus).

The real worth of the CLSA infrastructure

**The most interesting findings of the CLSA depend very much on individual personal perspective, as there is likely something salient for everyone. Visit the following site to see what projects have been approved: [www.clsa-elcv.ca/approved-projects](http://www.clsa-elcv.ca/approved-projects).**

researchers have been initiated using CLSA data, with 140 peer-reviewed papers published and indexed on PubMed. The most interesting findings of the CLSA depend very much on individual personal perspective, as there is likely something salient for everyone. Visit the following site to see what projects have been approved: [www.clsa-elcv.ca/approved-projects](http://www.clsa-elcv.ca/approved-projects).

The COVID-19 pandemic offered both challenges and opportunities. We had to migrate quickly in collecting information

and the program of research it supports will only become fully evident as we continue to collect comprehensive longitudinal data on our participants. These participants must be thanked for volunteering to take part in this important work. As well, our funders, who include the Alberta government, deserve acknowledgement for this investment to our collective future.

*Zoom presentation, 3 September 2021.*



# About the University of Calgary Brenda Strafford Centre on Aging: An overview

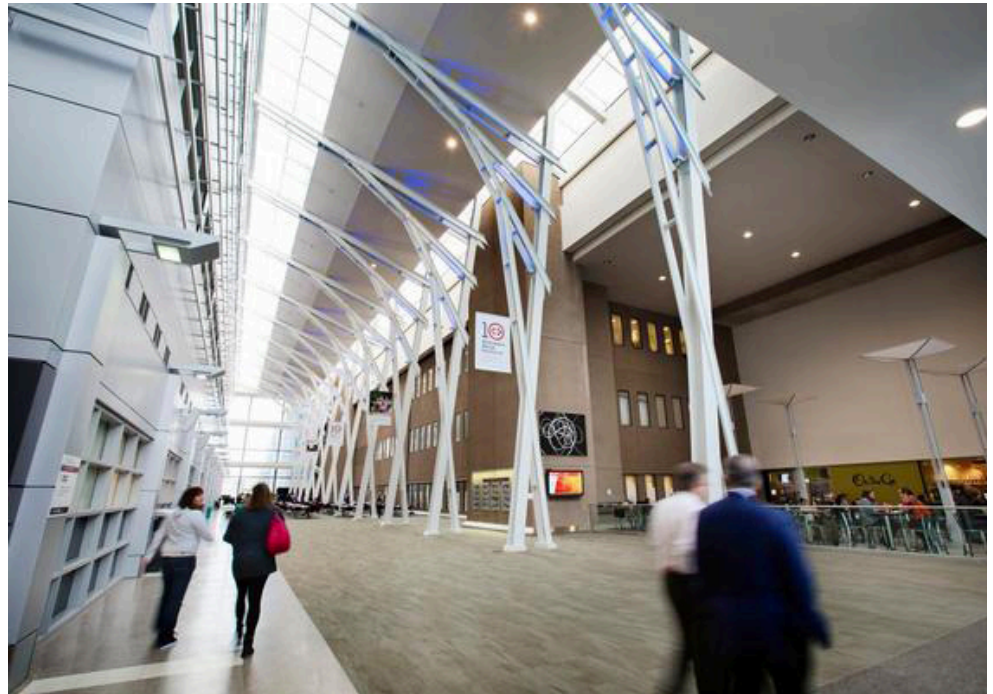


**Dr. Ann  
TOOHEY**

Adjunct Assistant Professor  
Cumming School of Medicine  
Brenda Strafford Centre for  
Aging  
University of Calgary

**D**r. Ann Toohey introduced the Emeriti to the University's Centre on Aging by giving a brief overview of its history and sharing highlights of its programs and initiatives. The Centre was established in 2011 through a \$5M philanthropic gift from the Brenda Strafford Foundation (BSF) to the University of Calgary. The terms of reference guiding its operations prioritize efforts to build capacity in inter-disciplinary research and training, support community outreach, and inform public policy, all with the goal of improving the lives of older people and the aging population. Initially the Centre was located in the Office of the Vice-President, Research, but in 2016 the Centre moved its operations under the Cumming School of Medicine's O'Brien Institute for Public Health, where it has benefitted from the Institute's infrastructure. At this time the Centre also hired a manager, which was a vital development.

Over the last five years the Centre has launched a range of programs to address its priorities. These have included catalyst funding



***One of the Centre's key activities has been championing age-friendliness in Calgary. The Centre has established an ongoing relationship with the City of Calgary to support the implementation of its Seniors Age-Friendly Strategy.***

for research projects, scholarships, and other funds for student enrichment in the study of aging. The Centre has also created numerous opportunities for student researchers to be involved in primary aging-related research, often involving community partners. To enrich

the student experience, the Centre organizes a program each summer to introduce students to inter-disciplinary approaches to aging research. Over the years, the Centre has also hosted a wide range of public knowledge mobilization events, featuring international,



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# Engaging government: University of Calgary's opportunities and challenges



**John ALHO, MBA, ICD.D**  
Associate Vice-President  
(Government and Community  
Engagement)  
*University of Calgary*

John Alho began thanking Emeriti. “Individually and collectively, Emeriti have made a big difference in positioning the University.” Thanks to the efforts of so many, the University is at an all time high, in sponsored research income and having the largest enrollment to date. Calgary is a big, small town. Emeriti, like other members of the broader University community, have relatively easy access to politicians and other influential leaders and can have a positive impact on the University.

Despite COVID, the University has continued to be fully engaged with the Alberta

and federal governments. There were over 374 engagements with government officials in the past year, faculty and staff submitted policy and budget documents, influenced the AB2030 policy and strategy, and constantly engaged on COVID-19 measures. UCalgary was one of four Canadian universities who worked collaboratively to advocate for a National Quantum Strategy funding in the 2021 Federal budget. The budget allocated \$385M in new funding that will be competitively available to researchers and industry; this will enable UCalgary Quantum research in a significant way.

UCalgary has a number of priorities for the year. These include: (1) Positioning Calgary effectively and as a problem solver for the government through continuous engagement and relationships, as well as by positioning academic experts in critical policy areas; (2) Securing new resources and impact policy development, including AB2030

implementation, impacting on differential funding to minimize the impact of budget cuts, Quantum City work, and infrastructure priorities (e.g., Olympic Oval, Engineering and Medical School buildings); and (3) Mobilizing UCalgary senior volunteers by leveraging connections strategically to advance core issues.

UCalgary is facing significant financial challenges. John presented budget figures for UCalgary in reference to UAlberta and other U15 Canadian universities. He noted that the operating grant for UCalgary was \$492.3M in 2019 but dropped to \$405.5M in 2021, a decrease of \$87M over 2 years. Provincial funding per ‘full equivalent load’ (FLE) for UCalgary for 2021 is \$14,734 for Calgary vs \$15,742 for UAlberta. This is important as the FLE is used to make comparable calculations across different institutions and across different programs. It is measured by taking the load of the student enrolled hours

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# Three researchers from the Graduate College

## Evaluating the adaptive capacity of multi-unit residential building designs



**Viraji  
BANDARA**

Doctoral Student  
School of Architecture Planning  
and Landscape  
University of Calgary

**Research Background:** Cities experience a continuous change in their population due to various factors, such as immigration, urbanization, and change in family structures. These changes in the population have a significant effect on the housing needs of a city, creating a mismatch between the current supply and demand for housing in Canadian cities. This problem is particularly true for the multi-unit residential buildings in Western Canadian cities, because these demographic changes have increased the spectrum of residents in need of affordable and appropriate housing. An extensive set of literature calls attention to this issue. Most, if not all, of this literature, highlights the need to design and construct houses to be adaptable to accommodate different social uses.

**Research Objective:** The main objective of my research is to contribute to developing a comprehensive model to evaluate the adaptability of multi-unit residential buildings in Western Canadian cities. I will focus on detailing and developing the evaluation criteria for assessing the adaptability of the building design.

**Research methodology:** For this research, I am employing a mixed method approach. I am currently in the middle of doing an extensive literature review, which includes reviewing different models and tools that have been proposed, and existing multi-unit residential building design documents. Consequently, I will develop multi-unit residential building design for a site in Western Canada, incorporating my findings to develop a design which will have a higher level of adaptability. I will also have two focus groups of architects and engineers at two stages of the design to discuss my design and findings. This method will help me to understand further the different design aspects and their parameters which influence adaptability of a building. In order to develop a model using these data, I will use system dynamic approach and optimization techniques to analyze my findings. Successfully, I will incorporate the above findings to develop a model to measure the overall level of adaptability of a given design.

Finally, I will integrate the developed model into BIM through Autodesk Revit that users can easily use to evaluate the adaptive capabilities of their designs.

**Research impact:** The proposed research outcomes will promote buildings to be built with adaptive capabilities as it will enable to easily evaluate the adaptive capabilities of buildings. Thus, my research will contribute to enhance the social environmental and economic sustainability of cities in Western Canada.

## A tailored exercise program for individuals with brain cancer



**Julia  
DAUN**

Doctoral Student  
Faculty of Kinesiology  
University of Calgary

**Background:** Individuals with brain cancer lack access to exercise oncology programming that can address their unique physical and psychological needs. To address this gap, we developed Alberta Cancer Exercise – Neuro-Oncology (ACE-Neuro) to assess a tailored neuro-oncology exercise program for individuals with brain cancer (i.e., neuro-oncology patients) across Alberta, Canada. The primary purpose is to assess the feasibility of ACE-Neuro. The secondary purpose is to examine the impact of ACE-Neuro on patients' physical and psychological well-being.

**Hypothesis:** We hypothesize that an exercise oncology program that is embedded into cancer care will support exercise as part of standard neuro-oncology clinical practice (systems level outcome). Further, we hypothesize that the exercise oncology program will result in improvements in patients' physical and psychological well-being (individual level outcomes).

**Methods:** This PhD project will occur in a series of studies to (1) build the exercise oncology program; (2) implement the program and assess its feasibility and effectiveness; and (3) gather feedback from patients and healthcare providers in the study to understand better patient and clinician needs across exercise oncology programming. Individuals with brain cancer, >18 years of age, able to consent in English, and being treated at either the Tom Baker Cancer Centre in Calgary or the Cross Cancer Institute in Edmonton will be eligible for the study. Patients will be directly referred by their clinical

team to a triage clinic in order to determine their appropriateness for ACE-Neuro, or to be referred to other rehabilitation services. Once in ACE-Neuro, participants complete a tailored 12-week exercise program that includes individual and group-based exercise sessions, health coaching support, and pre-post assessments of physical and psychological well-being, collected at baseline (i.e., prior to starting the program), 12 weeks (i.e., after the program), and at 6 and 12 months. After the program, both patients and healthcare providers will be invited for a qualitative interview to better understand their experiences with the ACE-Neuro study.

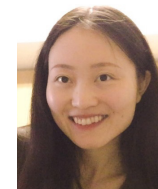
**Results:** ACE-Neuro began in Spring 2021 and is ongoing until Spring 2023.

**Significance:** This province-wide PhD project is advancing both research and clinical practice by (1) being the first exercise oncology study to be supported within the cancer care system in Alberta; (2) using a patient-oriented research approach and offering a tailored exercise program; and (3) using the patient voice to understand the impact of exercise to enhance wellness.

## Deciphering the mechanisms of ant behavior manipulation by *Dicrocoelium dendriticum*

**Chenhua  
LI**

Doctoral Student  
Dept. of Ecosystems and Public Health  
Faculty of Veterinary Medicine  
University of Calgary



**M**any parasites have complex life cycles, the completion of which requires the transmission of infective stages among a sequence of obligate hosts. To solve the problems of transmission among different hosts, some parasites modify their host's behavior and morphology. The 'zombification' of ant hosts by the lancet liver fluke, *Dicrocoelium dendriticum*, is an iconic example of parasitic manipulation. The infected ant uses its mandibles to fix itself firmly on the top of the flower or grass in the evening, where it stays overnight to increase the chance of being accidentally eaten by a passing ruminant, which is the next required host for

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# Global health experiences of three University of Calgary Bachelor of Nursing graduates



**Jacqueline  
WILSON**



**Arsheen  
DHALLA**



**Heather  
BENSLE**

support groups, and personal skill-building, to transition from dependent living in an orphanage, to interdependent living, to healthy, independent living. Their need for a transition plan was identified by asking the youth what they needed.

The third speaker, Heather Bensler (BN'1996) is an instructor and global health lead in the Faculty of Nursing at UCalgary. She talked about her experiences working with a multidisciplinary health team to develop a broad range of health programs with indigenous leaders in South America. Here again, the needs of the communities were identified by spending time in those communities, connecting with the people, and then discovering the nature of their needs. The programs they developed continue to be used in South America, Africa, and Southeast Asia.

Although the experiences of the three speakers were in different parts of the world, there were themes that were common across all three presentations. Basic nursing skills such as hygiene, health teaching, and illness intervention were part of their global practice and were important. However, other skills essential for success rose to the top. All of the speakers spoke about the importance of making connections, need for humility

(don't assume that, as nurses, we know best; that we are automatically the leaders), patience (seek to understand before being understood, learning the culture takes time), adaptability (try not to be entrenched in preconceived ideas, be open to new experiences), flexibility (be able to revise or create new plans that are a better fit with the needs and wishes of the community). They all emphasized the importance of knowing yourself: your beliefs, your biases, your heritage. The need for perseverance was evident in their descriptions of the processes in which they were engaged; they didn't give up; they believed in what they were doing.

They all spoke about "take home"; what they gained. They learned about other people and how to deal with the complexities of working within other cultures, in order to attain positive outcomes. They gained personal insight and self-development. Their ability to understand, to perceive, and to view the underpinnings of their home country, through a different lens, were enhanced. As a result of their global experiences, their nursing practice changed as did their scope of practice. Above all, they made a difference.

*Zoom presentation, 8 December 2021.  
Report courtesy of Elaine McKiel.*

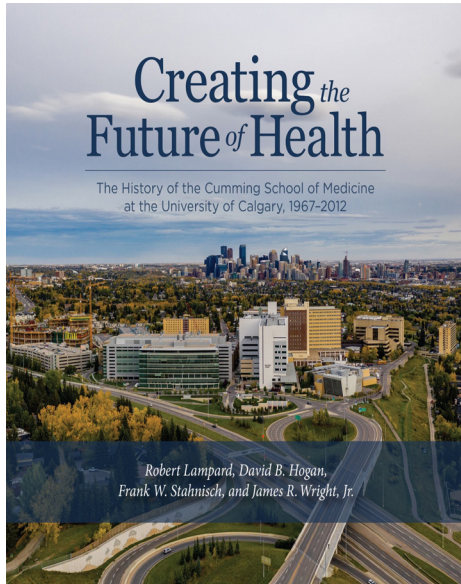
On 8 December, via zoom, members and guests of the Emeriti Association were privileged to hear three energizing presentations about global nursing, from graduates of the Bachelor of Nursing program at the University of Calgary.

The first speaker was Jacqueline Wilson (BN'2018). She is currently a doctoral candidate in the Faculty of Nursing at UCalgary. She spoke about her experience in Uganda as a 4th year nursing student, where she collaborated with a group of nursing students from the Aga Khan University School of Nursing and Midwifery. Their focus was perinatal health in a semi-rural community setting, for which a plan of action was developed on behalf of the community. However, after spending time there, it was apparent that something different was needed. Ultimately, a device that facilitated safe handwashing was created.

Arsheen Dhalla (BN'2010), the second speaker, connected with us from Zanzibar, Tanzania, where she is the founder and managing director of the Daraja Foundation. She spoke about the process of starting as an annual summertime volunteer in Zanzibar, when she was a newly graduated nurse, to establishing the Canadian-Zanzibar charitable foundation that empowers women and youth. Specific to youth, the foundation enables them, by means of education, mentorship,



## Creating the Future of Health: Book summary



Robert Lampard, David B. Hogan, Frank W. Stahnisch, and James R. Wright, Jr., *Creating the Future of Health: The History of the Cumming School of Medicine at the University of Calgary, 1967-2012* (Calgary: University of Calgary Press, 2021), 420 pp., 75 ill., paper and epub., paper C\$42.99, ISBN 13:9781773851648.



**Robert  
LAMPARD**



**David B.  
HOGAN**



**Frank W.  
STAHNISH**



**James R.  
WRIGHT, JR**

While there is commonality to medical school histories, each is unique in its own right. Though one of the youngest of Canada's seventeen medical schools, the Cumming School of Medicine (CSM) has a distinct culture influenced by its founding, the city and province it serves, and those who have worked and studied in it. We can only give you a taste of this.

The CSM was one of four schools established in response to the Hall Commission (1964). All initially embraced an interdisciplinary structure with a diminished role for traditional departments. From early on this approach marked research done in the CSM. The seven research institutes now within the School continue to foster this. Calgary and McMaster initially offered and remain the only Canadian schools with three-year medical curricula. Why this happened and how the shortened curricula were retained is a topic deserving

study. Within the post-graduate clinical arena, the founding dean of the CSM emphasized the key role played by family physicians and Calgary played an important role in trialing residency training for this specialty. The boom-and-bust cycles of the Alberta economy had a major influence on the School. Good times led to the establishment of the Alberta Heritage Foundation for Medical Research (and expansion of research enterprise within the CSM), while bust times like the early 1990s stressed the School.

The book is organized around chapters dealing with the six deans, who led the School over these 45 years. Throughout we have tried to highlight the contributions of students, staff, and faculty. We feel the book will interest both those who have a personal connection with the CSM and others curious about the history of academic medicine in our country.

*Book summary courtesy of  
David B. Hogan, MD*



# About the University of Calgary Brenda Strafford Centre on Aging: An overview

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regional, and local expertise, and that included the voices of older adults themselves.

One of the Centre's key activities has been championing age-friendliness in Calgary. The Centre has established an ongoing relationship with the City of Calgary to support the implementation of its Seniors Age-Friendly Strategy. This partnership has included several research projects designed to move the City's age-friendly agenda forward. The Centre also initiated the successful application of the University of Calgary to join the Age-Friendly

University (AFU) Global Network in 2019. We hope to bring together a Canadian network of Age-Friendly Universities (there are now eight of them) through our work with other university-based aging research centres. We are launching initiatives linked to the 10 AFU principles, beginning with a baseline evaluation of the current age-friendliness of the University of Calgary.

The Centre has also grown in size and capacity. In 2020 a project coordinator was hired, followed by a research coordinator

in 2021. This year the Centre has moved into Cambridge Manor, a BSF continuing care facility in Calgary's University District. Centre offices were equipped and furnished to support the vision of integrating research, training, and practice, through supporting University of Calgary researchers in projects taking place at Cambridge Manor and other BSF facilities. We are now embarking on a strategic planning exercise to guide our activities over the coming years.

*Zoom presentation, 3 September 2021.*

## Engaging government: University of Calgary's opportunities and challenges

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(instructional hours + practicum hours) and dividing by the full load of that program. Similarly, looking at the Campus Alberta Grant per FLE, UCalgary received \$16,335 in 2018-19 and estimates it will receive \$12,595 in 21-22. This is a problem, as half of projected post secondary enrollment in Alberta is anticipated to occur in the Calgary region (50.5%), compared with Edmonton (36.6%) and the rest of Alberta (12.9%).

**Looking at the Campus Alberta Grant per FLE, UCalgary received \$16,335 in 2018-19 and estimates it will receive \$12,595 in 21-22.**

Despite this, UCalgary is one of the most

administratively efficient universities with administrative costs at 4.1% vs. 4.7% (U Alberta). Administrative expense ratios for UCalgary are 7.1% vs 7.7% (UAlberta) vs the U15 average of 9.4%.

Through discussion on the zoom call, it was identified that the Emeriti can help UCalgary. These include:

- Advancing the information about differential funding and infrastructure and the consequences of not acting on this through phone call, or letters to Demetrios Nicolaides, Minister of Advanced Education, and engage one's local MLA to express concern about the extent of cuts to post-secondary education.
- UCalgary has engaged with municipal

candidates, many of whom have a relationship with the University as graduates, volunteers or past employees. While municipal politicians do not have a constitutional role in education, they understand the value of a strong post-secondary sector and often advocate for UCalgary with other levels of government. The University is a major employer and will provide the workforce and innovations for the future.

- John expressed his willingness to support any outreach efforts undertaken by Emeriti with background and coaching.

*Zoom presentation, 10 October 2021.*

*A report by Jocelyn Lockyer, Professor Emerita, Cumming School of Medicine.*

## Three researchers from the Graduate College

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the parasite. My PhD thesis research is trying to find out the molecular mechanism that underlies host behavior manipulation in the *Dicrocoelium*-ant interaction, through RNA-sequencing, neurotransmitter examination and behavior analysing.

*Dicrocoelium*-infected and uninfected ants were collected from Cypress Hills Interprovincial Park, and were brought back to the laboratory. Two growth chambers set at 10°C and 25°C were used to induce the altered

behavior. Ant brain samples were collected for four conditions for neurotransmitter examination: detach, post-detach, pre-attach, and attach. For ants sampled at 25°C (detach and post-detach), tyramine is significantly lower in infected ants compared to controls ( $F_{1,20} = 18.27, P < 0.001$ ), and post-detach condition has lower tyramine level compared to detach condition ( $F_{1,20} = 7.30, P = 0.014$ ). Serotonin had a similar trend with tyramine where infected ants had lower serotonin

level ( $F_{1,20} = 11.09, P < 0.001$ ), and post-detach condition has lower serotonin level ( $F_{1,20} = 4.53, P = 0.046$ ). Infection status changes ant brain tyramine and serotonin level, and it might contribute to the ending of this behavior manipulation. Hopefully RNA-sequencing data and behavior data would help with explaining the starting of this behavior manipulation.

*Three Zoom presentations, 10 November 2021.*



**N.B.** During the period of Corona virus pandemic, all presentations will be made via Zoom Video Communications.

**JANUARY 12** | Dr. Barry Sanders, Professor; Director, Institute for Quantum Science and Technology, Department of Physics and Astronomy, University of Calgary, and Dr. Paul Barclay, Associate Professor, Department Physics and Astronomy, University of Calgary: *Our Quantum Century: How 21<sup>st</sup>-century quantum technologies work, where they are at and where they will go.*

**FEBRUARY 9** | Aritha van Herk, MA., Professor, Department of English, University of Calgary: *Stampede and the Westness of West.*

**MARCH 9** | Annie Murray, MA, MLIS, Librarian, Archives and Special Collections, University of Calgary: *University of Calgary Archives.*

**APRIL 13** | Dr. Ian Gates, Professor, Schulich School of Engineering, University of Calgary: *On unconventional oil recovery.*

**MAY 11** | Dr. Thomas Keenan, Professor, School of Architecture, Planning and Landscape, University of Calgary, and Dr. Emily Laidlaw, Associate Professor, Faculty of Law, University of Calgary: *Computer security and privacy in a world of cyberconnectivity.*

**JUNE 8** | For more information, please check the Emeriti Association website (look at the bottom of this page). Details TBA.

For more information, please check the new Emeriti Association website: <https://live-ucalgary.ucalgary.ca/emeriti/emeriti>. You may also contact Carole-Lynne Le Navenec at [cllenave@ucalgary.ca](mailto:cllenave@ucalgary.ca) or Jocelyn Lockyer at [lockyer@ucalgary.ca](mailto:lockyer@ucalgary.ca)



### Executive Committee 2021 / 2022

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If any members have additional ideas about how to enhance the role of our Association, please don't hesitate to contact us at <https://live-ucalgary.ucalgary.ca/emeriti/emeriti>

#### THE EMERITI ASSOCIATION OF THE UNIVERSITY OF CALGARY

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