

# arch

THE UNIVERSITY OF CALGARY INSIDE AND OUT ISSUE NO. 2

FALL WINTER • 2021

## ABSOLUTE LEGEND

Sculptor **Katie Ohe** — along with equally fearless innovators and educators such as Métis scholar **Yvonne Poitras Pratt** and the late trailblazer **David Lertzman** — has long been shaping our campus, and the world, for the better.



+ Nenshi Has (Almost) Left the Building + Better Aging Through Pets + Nurse Training Gets Real



# Welcome



A publication for and about University of Calgary alumni, faculty, students, supporters and curious readers at large, **arch** reflects and amplifies the innovation, creativity and relevance of our researchers, big thinkers and storytellers. Enjoy our second biannual print issue (and its accompanying playlist; scan the QR code above) and read us online at [arch-magazine.ucalgary.ca](http://arch-magazine.ucalgary.ca).

*photographed by Jason Stang*

## Editor's Note

If you ever had any reason at all to engage with the late, great Dr. David Lertzman, PhD, you will likely know that he: a) lifted weights, ran, practised Qigong and/or meditated every day; b) he put his kids to bed with a nightly concert; and c) lived an energetic, deeply meaningful life filled with reflection, ingenuity, and a tireless drive to educate and inspire a generation of resilient and compassionate leaders.

Dr. Lertzman's untimely death this past spring moved us to look again at the Haskayne School of Business's extraordinary Wilderness Leadership Program, which he so passionately co-created and co-led, and which lives on with robust relevance (page 36). Driven by a similar passion to open up the world for students and for other artists, the irrepressible sculptor and teacher Katie Ohe, Hon. LLD'01, continues to preserve and develop contemporary art in Alberta and across the country (page 6).

Innovation and entrepreneurial thinking — both synonymous with the University of Calgary — are concepts and approaches often attributed solely to biomedical or tech inventions and startups. Indeed, UCalgary is fast becoming a sought-after global hub for everything from quantum science applications (page 12) to leading-edge wearable technology (page 22). But it goes further than that.

There's a growing culture of innovation on our campus that educates and supports our students, faculty and staff to think laterally, to be resourceful, and to seek out beneficial collaborations where you'd least expect them to — a community that doesn't stop challenging, debating, creating and inventing until change is made.

Our campus abounds with such extraordinary individuals, including Dr. Yvonne Poitras-Pratt, BA'02, MA'05, PhD'11, director of Indigenous Education at the Werklund School of Education, who is blazing a trail for teachers to teach with truth and strength (page 28). Dr. Anne Toohey, MSc'12, PhD'18, is working to transform the way our society looks at aging, loneliness and animal companionship — research that could open doors to improving mental and physical health for elderly Canadians (page 14). And this year's six Alumni Arch Award winners are stellar examples of how innovative thinking positively infuses our community and the wider world (page 8).

I hope you find something personally inspiring and emboldening here. Meanwhile, we dedicate this issue of **arch** to Dr. Lertzman, whose ambitious and radically optimistic approach to life and education defines UCalgary's spirit.

... a community that doesn't stop challenging, debating, creating and inventing until change is made.

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Thought and  
opinion from the  
UCalgary family

# Forward



## rowing up Indigenous in Canada, I did not know the names or faces of Indigenous heroes.

The only famous Indigenous woman I knew was Pocahontas and, boy, did Disney do a number on her. I'm a storyteller and I know that stories matter. As a graduate student in the Faculty of Social Work, I am trying to tell new stories through my research and scholarship. Stories of Indigenous people's extraordinary undauntedness in the face of oppression. Stories of our flourishing. Stories of Indigenous futurism. Stories of community and the power of Aunties. Stories of Indigenous women who change the world. So, here, I would like to introduce you to female Indigenous pathfinders, warriors, and resisters who you likely don't know, but you should.

• **Dr. Susan LaFlesche Picotte**, MD is widely acknowledged as the first Indigenous person to earn a medical degree. Jean Cuthand Goodwill, a Cree woman from the Little Pine First Nation, was the first Indigenous person in Saskatchewan and one of the first in Canada to become a registered nurse.

• **Elizabeth Wanamaker Peratrovich** petitioned the Governor of Alaska to introduce the Anti-Discrimination Act of 1945 to end the businesses practice of denying Indigenous people's access with "No dogs, no Natives" signs.

This law was the first Alaskan law that made it illegal to discriminate based on race.

• **Mary Golda Ross** was the first known Indigenous female engineer. She worked at Skunk Works, was one of the writers of NASA's Space Travel Handbook and designed the first fighter jet to break the sound barrier.

• **Anna Mae Pictou Aquash**, from Nova Scotia, was a Mi'kmaq activist who became famous in the 1970's Indigenous rights movement. Threatened by both the FBI and CIA for her advocacy, Anna was assassinated in South Dakota in 1975. Two men were convicted in her murder decades later.

• **Elsie Knott** of the Curve Lake First Nation was the first female Chief elected under the Indian Act in 1954. Ninety women have been elected Chief across Canada since then.

These stories are meant to spark your curiosity, as they did mine. I only found these women because, as an adult, I went looking for them. I felt their lack; felt the empty spaces in my Canadian education — the holes in my knowledge where my ancestors stood, invisible to me, but waiting.

I deserved to know these stories, just as my nibblings (a gender-neutral form of nephews and nieces) and all children deserve to know them today. Canada can show its dedication to Truth and Reconciliation by recognizing and teaching Indigenous excellence, history, resistance, and strength. Know our leaders' names, learn our faces, and share their stories. Consider this your invitation to get nerdy about Indigenous excellence with me, so that Canada and the world will know that Indigenous women have always been here kicking ass and taking names.

Witness us as we resist, we persist, we heal, and we thrive.

Miigwech.

**Keeta Gladue**, BA, BSW'19, RSW, MSW candidate,  
fulltime IndigeNerd  
Cree and Métis

Visit [arch-magazine.ucalgary.ca](http://arch-magazine.ucalgary.ca) to read more about these remarkable women.

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Cover photo: Jason Stang  
Above photo: Bryce Meyer

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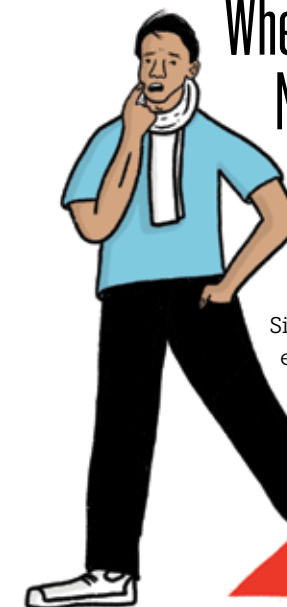


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A catalyzing force  
for more than  
60 years, artist  
Katie Ohe continues  
to shape the future  
of contemporary art  
in Alberta



written by **Jacquie Moore, BA'97**  
photographed by **Jason Stang**

**I**n the spring of 1975, **Bill Perks** — then dean of the university's fledgling Faculty of Environmental Design (now the School of Architecture, Planning and Landscape) — visited Katie Ohe in her studio on the western outskirts of Calgary. At the time, Ohe, who grew up in Peers, Alta., was one of the only artists in western Canada experimenting with abstract sculpture.

"When Bill arrived, I was working on a difficult piece, trying to resolve the whole concept of it," says Ohe, Hon. LLD'01, who, at 83, is as lithe and nimble as she must have been as a teen, but whose startlingly muscular hands show the effects of decades spent spinning metal into poetry.

contributions to how artists and art-lovers make and respond to art — from the diversity of the materials she uses to the idiosyncratic way she experiments with movement — Ohe's courage of creativity cannot be overstated. Trained in Edmonton, Montreal, New York and Verona, Ohe's recent solo retrospective at the Esker Foundation (for which the *Zipper* was removed from its campus home for nearly a year) traced her masterful journey from figures and abstraction to the large-scale forms she's best-known for.

One of Ohe's most pressing preoccupations these days is the creation of a legacy that captures her and Kiyooka's shared heart of generosity to elevate other artists and make contemporary visual culture accessible. The newly opened, 20-acre Kiyooka Ohe Arts Centre on the couple's Springbank property west of Calgary is a sustainable, art-in-nature destination. In addition to a planned interpretive gallery, the centre includes a Sculpture Park that includes large Canadian and European welded-steel works from the 1960s to present — a kind of sanctuary for monumental art retired from public urban life or donated by collectors' estates.

# Ohe to Watch

Perks was mesmerized. "He came back for a second look, and then convinced the university to buy the piece," Ohe says.

Ohe was delighted by Perks' visionary decision to place her chrome-plated steel loop in the middle of the Science Theatres foyer. "At that point in time, the idea was that people shouldn't stumble over art," she says.

Indeed, the now-iconic *Zipper*, which has had a home on campus for nearly 50 years, was intended to entice passers-by to touch, spin and otherwise engage with its kinetic energy; students have been known to extract good luck from its shiny, optical-illusory surface.

In 2001, Ohe, who is married to professor emeritus of art Harry Kiyooka, received an honorary doctorate from the University of Calgary for her influence over the development of the arts in Alberta. Through her

Despite having pieces in galleries, museums and private collections around the world, Ohe doesn't like to be made a fuss about; she refers to herself simply as a "worker." She still spends several hours a day in her studio, designing and building new pieces and, equally important to her, supporting other artists. (In a corner of her studio are pieces of a prototype worked on by artist Charles Boyce for his *Spire*, a.k.a. "the paper clip" that stands outside the Olympic Oval.)

Bold, playful and unrelentingly experimental, Ohe is a catalyst for artistic innovation and a rare treasure we're proud to be connected to. We can't wait to see what she'll do next. •

# Six for the Win

Superstars in health care, education and community leadership, these remarkable winners of the UCalgary Alumni Association's 37th annual Arch Awards make us proud

1 "At the root of a true entrepreneur is an impatient problem-solver who wants to achieve something — and often not by themselves. I believe that most successful entrepreneurial endeavours are never a solo journey. The things I find meaningful, that I want to be a part of, cannot be accomplished by one person."

— Rhodes Scholar and high-performance athlete **Dr. Bogdan Knezevic, BSc'15, PhD**, wins for **Early Career Achievement**.

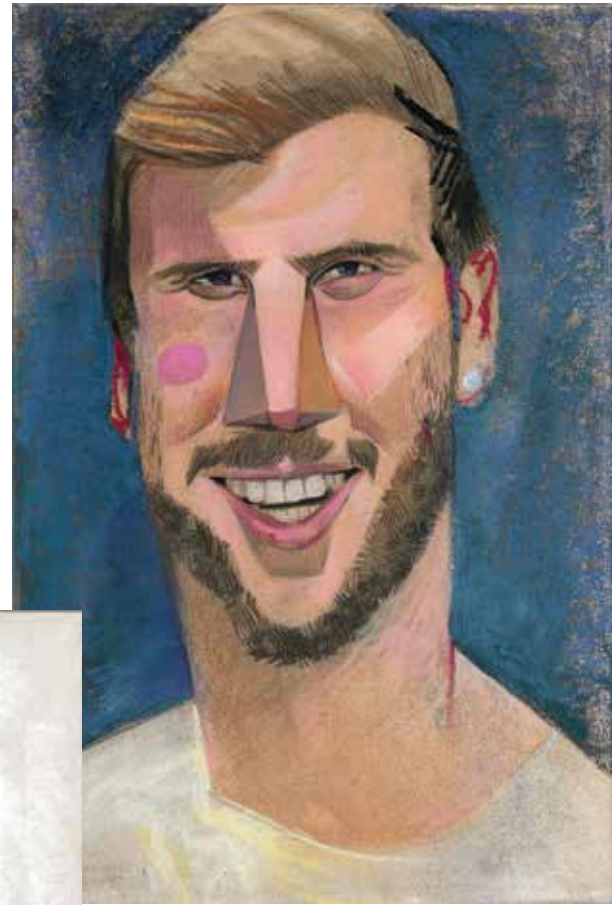
2 "If I had to sum up, in one word, how I feel about my career in South Africa, it would, undeniably, be 'gratitude.' It's a huge privilege to be present at a time when there's a great need and where your skills can truly make a difference. Working with HIV/AIDS patients in the '80s, which came with all the cultural complexities and clinical unknowns was, in the end, enormously gratifying."

— **Dr. Helga Holst, MD'75**, this year's **International Career Achievement Arch Award**, spent 19 years as medical superintendent of Durban's McCord Hospital.

3 "My advice for a new philanthropist or volunteer who wants to give back is to just go for it. Once, I heard someone say that giving back is like opening a treasure chest. You reach in and pull out a gem — it's a gift. People can think about helping others as a gift to yourself."

— **Dr. Janice Heard, MD'84**, a community leader, volunteer and donor who gives to empower medical students with financial need, is this year's recipient of the **Arch Award for Alumni Service**.

1. Dr. Bogdan Knezevic, BSc'15, PhD



4. Lourdes Juan, BGS'05, MEDes'10



2. Dr. Helga Holst, MD'75



3. Dr. Janice Heard, MD'84



5. Dr. Bryan Kolb, BSc'68, MSc'70, PhD



6. Dr. Sharon Friesen, BEd'86, MEd'91, PhD'00

illustrated by Maya Gohill, BFA'97

4 "In 2012, as a young entrepreneur without an office, I was working in coffee joints when I began asking shop owners if I could pick up their excess food at the end of the day — that's how Leftovers took off. Nine years later, I can proudly tell you that we rescue about 10,000 lbs of food per week in Manitoba and Alberta and employ about 40 people and give volunteer opportunities to hundreds more."

— **Lourdes Juan, BGS'05, MEDes'10**, is this year's recipient of the **Community Commitment Arch Award**.

5 "My research is trying to figure out the rules that guide how the brain changes in response to experience [whether it's] trauma, wonderful things or hormones — it could be anything. One of the neat things we've been able to show is how tactile experience, touch, has a profound impact on how the brain develops. Never in my wildest dreams did I think that tactile stimulation could have such a profound impact on the development of the brain."

— a world leader in the field of behavioural neuroscience, **Dr. Bryan Kolb, BSc'68, MSc'70, PhD**, receives the 2021 **Arch Award for Lifetime Achievement**.

6 "My grandmother, who went against the grain in absolutely everything she did, always said: 'Don't live by what someone else tells you that you can or cannot do or should or shouldn't do. What you need to do is find that spark inside yourself that allows you to know that you are part of something bigger than you and feel committed to that.'"

— co-founder of the Galileo Education Network, **Dr. Sharon Friesen, BEd'86, MEd'91, PhD'00**, is this year's **Career Achievement Arch Award winner**.

Visit [arch-magazine.ucalgary.ca](http://arch-magazine.ucalgary.ca) to read more about these inspiring alumni.

# DANCE DANCE REVOLUTION

Twenty-five years in, a UCalgary dance education is more dynamic and valuable than ever

photographed by **Trudie Lee**

**T**here was a time when the words “Calgary” and “dance” conjured up one thing and one thing only: two-steppin’ at the Ranchman’s. While some of our Eastern counterparts (not naming names) might like to stubbornly cling to that narrow perception of our city’s performing arts scene, the wider world knows better.

Twenty-five years ago this fall, the University of Calgary launched its formidable and hard-won Dance program — one of only seven degree-granting dance programs in the country. For many years leading up to that milestone, artists, and community leaders, including professor emeriti Keith Burgess, Anne Flynn, Anna Mouat, Melissa Monteros and the late Shirley Murray, advocated for a dance major.

Thankfully, they won — we all did — and, boy, a lot can change in a quarter-century.

Michèle Moss, BEd’84, MA’07 (pictured here dancing with characteristic joy), is the longest-serving faculty member in



the program. She arrived in Calgary in 1977 via the U.K. and Montreal where she danced at the Negro Community Centre as a kid. In Calgary, she signed up for jazz dance classes at UCalgary taught by Vicki Adams Willis, BFA’72, and soon embarked on an education degree.

Moss’s approach is that a dance education can be a profound vehicle to the successful pursuit of any goal — be it a dance-related career or anything from medicine to law — with greater self-awareness, discipline and mind-body connectivity.

“Dance is about cultivating knowledge and using your body to high effect,” says Moss, who co-founded Decidedly Jazz Danceworks (DJD) with Willis and Hannah Stilwell, and put West African dance into mainstream classes in Calgary. “Social justice, politics and history are knit into a dance education, and dance is a way of learning to take action.”

The Dance program, part of the School of Creative and Performing Arts in the Faculty of Arts, now offers both a Bachelor of Arts and Bachelor of Fine Arts in dance, as well as a combined Bachelor of Kinesiology/BA and concurrent Bachelor of Education/BA degrees. The program has graduated upwards of 400 students, including high-flying DJD dancer Jason Galeos, BA’12, pictured here.

To all the dancers, their teachers and the legends who have shone a spotlight on Calgary as an exceptionally inventive and energetic centre of performing arts — happy anniversary! •  
— JM

› Visit [arch-magazine.ucalgary.ca](http://arch-magazine.ucalgary.ca) to watch our dancers dance.

CALGARY

# Quantum LEAP

by Brennan Black, BA'18

**A universe-defining science is making a big name for itself in Calgary**

**l**uck is on your side next game night, the word “quantum” could score you 54 points on a triple-word play in Scrabble. It’s also the name of the nefarious organization that dogs James Bond in the 2008 film *Quantum of Solace*. And on TV, Dr. Sam Beckett spent years taking one “Quantum Leap” through time after another.

While these facts are great for trivia night, they don’t tell you what a quantum is and, more to the point, why you should care. Well, with a global quantum revolution underway in which the University of Calgary is becoming a major

player, it’s undoubtedly something we’ll be hearing a lot more about as our economy shifts and expands in robust and dynamic new directions. In the interest of ensuring you’re armed to score triple points in a second-wave quantum-era conversation, here’s the 411 on the science of everything.

“At the very basic level, quantum mechanics describes everything,” says Dr. Barry Sanders, BSc’84, PhD, DSc, director of the Institute for Quantum Science and Technology at UCalgary. “Quantum mechanics is the set of rules for all of science.”

That seems important — so why isn’t quantum theory something people are more familiar with? According to Sanders, quantum mechanics is very counterintuitive and can be ignored for most macroscopic or large-scale purposes. For example, a bridge can be built without taking into account the laws of quantum mechanics.

**Quantum communications involves encrypting data so thoroughly that it can’t be hacked into by any computer — ever.**

that we’re getting better and better at making this hidden reality manifest on a technological level.”

This hidden reality has already crawled out from underneath the bed in more ways than you might think. Sanders cites three prominent examples from the first “quantum revolution” in the mid-20th century. The first is the transistor, a key piece of technology behind the computer revolution. The second is lasers, which you encounter every time you scan a barcode at the grocery store. Third is magnetic resonance imaging (MRI), which allows those in the medical field to diagnose serious brain conditions like tumours, aneurysms and strokes.

Now that we’re well into the 21st century, a second quantum revolution is underway in three sectors: sensing, communications and computing. Quantum sensing has a potentially enormous range, from assessing patients at a molecular level to detecting the

“When we make things, we safely use a different description of nature because it’s easier to handle,” explains Sanders.

Up until a couple of decades ago, in fact, most of quantum mechanics was restricted to a scale smaller than anything the human eye can see. But things are starting to change because, says Sanders, “nowadays, our technology is getting so good,

collisions of black holes. Quantum communications involves encrypting data so thoroughly that it can’t be hacked into by any computer — ever. By exploiting the quantum phenomenon of superposition, quantum computers will vastly outperform their poor binary cousins at problem-solving.

Thanks to the Quantum City partnership with the Government of Alberta and the City of Calgary, UCalgary is aiming to ride the quantum wave of this revolution. The goal of Quantum City is to lure

companies from industries such as computer software, computer hardware and communications to Calgary, where they can take advantage of the university’s strength in quantum science and technology. In practical terms, this means the creation of more local jobs, the transformation of Calgary’s economy and a boost in Calgary’s stature as an innovative city.

“The idea would be to develop a quantum ecosystem in Calgary that would allow the city to benefit from these advances,” says Sanders.

As the technology improves, will the science fiction of quantum theory as seen on the big screen become science reality? Could we one day shrink down to the atomic level like Ant-Man or send coded messages to our children in the past after being sucked into a black hole, like Matthew McConaughey did in *Interstellar*? Sanders says the laws of quantum mechanics don’t preclude such possibilities. We’ll be ready for it. •





# You've Got a Friend

## Should animal companionship — a proven boon for older adults — be a privilege or a health-care imperative?

by **Jacquie Moore, BA'97**

photographed by **Bryce Meyer**

**Jellybean is a dream roommate.** He's quiet and fun and never argues. He and Stan Parsons have lived together for nearly eight years, most recently in a small, sunny basement suite in Crescent Heights. Parsons spends a lot of time talking to Jellybean (a golden retriever) and to his cat, Kitcat. "They're good company and Jellybean gets me out every day to exercise and talk to people in the park," he says.

Parsons, 86, says he feels in his gut that, given his age and isolated living situation, having companion animals is good for him. Science backs him up: in the 1980s, University of Pennsylvania researchers confirmed the positive effects that pets have on everything from lowering blood pressure to allaying anxiety. And, earlier this year, the World Health Organization acknowledged the positive influence of animal companions on the health and well-being of adults later in life.

But, for many seniors living alone or in congregate-care settings, healthy pet-ownership can pose insurmountable financial and physical challenges. Indeed, just when an individual might benefit most from animal companionship, increased obstacles stand in the way of such a relationship. Vet bills and grooming can be prohibitively expensive; walking a dog may be an overwhelming prospect, if not physically impossible in some cases due to mobility limitations; and there's fear that a beloved pet might be abandoned if the owner has to move to a non-pet-friendly residence, or the pet outlives its owner.

If having an animal companion makes people feel better and prospectively supports their health, shouldn't such partnerships have a bigger place on the age-friendly agenda? University of Calgary researcher and adjunct assistant professor Dr. Ann Toohey believes so.

Toohey, MSc'12, PhD'18, is a manager of UCalgary's Brenda Stafford Centre on Aging in the O'Brien Institute for Public Health and is focused on ways that people's circumstances as they age shape how human-animal relationships unfold.

According to Toohey, 40 per cent of Canadian adults between the ages of 65 and 69 have a pet; that number drops to a still fairly significant 22 per cent for adults aged 80 and older. Her research underscores the need for leaders, planners and architects to consider new ways to create more age-friendly communities that might include better availability of appropriate housing, and policy changes that are more socially inclusive to older adults and their pets. "I'm interested in exploring the increased barriers that some older adults face with pets later in life — and that brings up issues around ethics and social justice," Toohey says.

One of the questions at the heart of Toohey's work is, "How can we support people who are struggling to keep their pets in ways that end up cancelling the benefits?" For instance, an older senior might not disclose their own declining health to their doctor because they fear losing their pet. Anxiety about paying for pet food, etc., likewise precludes the benefits of having a companion animal.

The focus of one of Toohey's research projects is a novel social service program called Pet Assist. Delivered by the Calgary Seniors Resource Society, Pet Assist consists of a team of volunteers who help the most disadvantaged isolated seniors with pet care, from walking and administering medication to driving an animal to the veterinarian. "It's a really important initiative because it not only provides social interactions, but keeps pet situations from getting out of control when an older person can no longer care for an animal on their own," says Toohey.

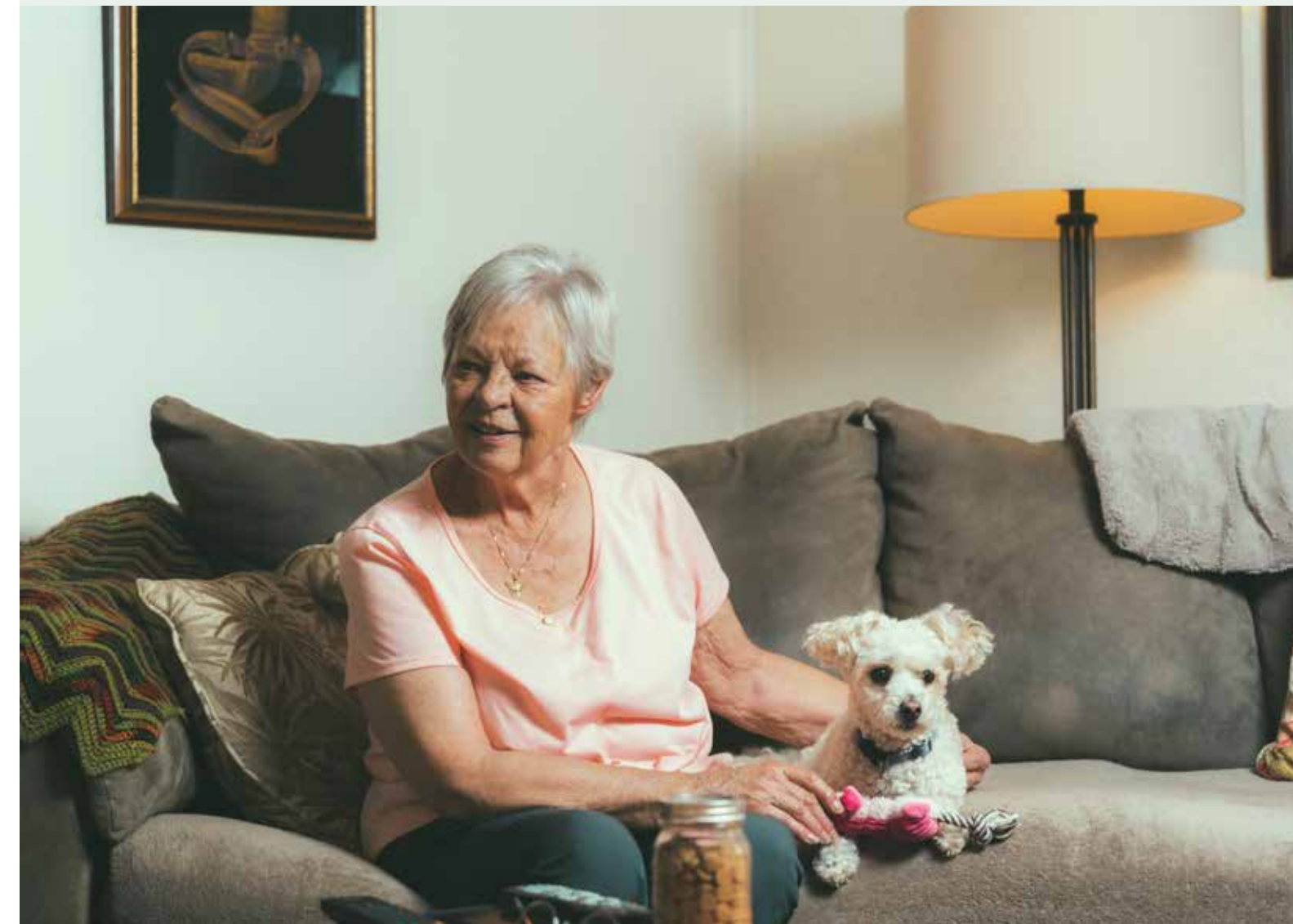
Another new area of Toohey's research is robotic pets in care settings for people with dementia. She's currently part of an interdisciplinary research team investigating the ethical implications of introducing robotic pets as alternative companion animals for those who can't care for a true pet, but "who may experience these entities as if they were alive."

Toohey's contributions to informing policy frameworks for age-friendlier cities has begun to raise awareness that human-animal relationships are shaped by social and physical environments — in other words, she and her team are discovering ways to give older people and their companion animals a better shot at experiencing a relationship with all the health benefits and far less stress.

That's good news for Jellybean and his loyal human-friend.

### **Stan Parsons** *with Jellybean & Kitcat*

A couple of years ago, through a series of unfortunate events, Stan Parsons found himself in need of new rental housing — a tall order for an 86-year-old with a small budget and a large dog. He acquired his current digs when a homeowner saw him on the news making a plea for more pet-friendly affordable-housing options. “I’ve had dogs just about all my life,” says Parsons, who has lived alone for more than a decade. He says that, were it not for his golden retriever, Jellybean, getting him out the door, he’d “stay in and watch the idiot box and curse at Donald Trump. I don’t know what I’d do without him.”



### **Donna Bottoms** *with Holly*

Rescued from a high-kill shelter in California, Holly — a miniature poodle-Bichon-Frise mix — eventually found her new home in northwest Calgary with Donna Bottoms, despite a number of potential obstacles. “I really worried about vet bills and grooming costs, and I still do,” says Bottoms, who, at 73, has lived alone since her husband died 25 years ago. “Not only that, but I was concerned about getting a dog that might outlive me.” Bottoms confessed her worries to her son, who told her he would help out where needed, and also take the dog should his mom die before Holly. “That was big for me,” she says. Reassured, Bottoms allowed herself to fall for her little companion who, she says, “gets me out for a daily romp and who looks at me funny when I talk to her all day long. I’d be very lonely sitting here all day without her.”



### **Stella Massey-Hicks with Thomas & Tucker**

Stella Massey-Hicks, 90, grew up in South Africa where she had a dog as a child. “I’ve always absolutely adored dogs,” she says. Funny, sweet and sharp, Massey-Hicks is experiencing memory loss, but she never forgets to take her stuffed pets wherever she goes. “My daughter bought them for me, and I think they’re so cute, I really love having them,” she says. “Everyone enjoys them.” Sometimes, she worries they might go missing and she appreciates the staff’s attentiveness to keeping them safely tucked away when they’re not in Massey-Hicks’ lap. “I love them because, when I’m feeling lonely, I want them with me,” she says. “They bring out tenderness and loving thoughts and feelings, and that’s very admirable.”

### **Phyllis Humphrey with Kiwi**

For 19 years, Phyllis Humphrey and her cat, Miss Maggie Mae, had a good thing going. “She was my baby girl and my security blanket,” says Humphrey, 57, who noticed a decline in her physical and mental health after her beloved cat died two years ago. Indeed, her mental-health issues recently required her to move from an independent apartment into a seniors’ facility. That was a tough move for Humphrey, but things got better when Silvera for Seniors staff asked for her input in creating a communal “cat room” for residents. “That was so exciting,” says Humphrey. “I was included in a meeting with the Calgary Humane Society who provides cats for us.” A tiny, glassed-in space with cat climbers and a comfy chair gives one resident at a time an opportunity to play and cuddle with a cat until they’re adopted. “I just feel better when I hold her and play with her,” says Humphrey.



### **Fahreen Nathoo with Kiwi (no relation to the other Kiwi), the Hasbro Joy for All Companion Pet**

Fahreen Nathoo is the wellness co-ordinator at southwest Calgary’s Staywell Manor Village. She works with a team to ensure residents’ wellness and comfort on a day-to-day basis. “We’re looking for behavioural changes, anxiety, confusion, restlessness — and, in conjunction with medication-management, we use creativity to intervene when we can. That’s where the robotic cat comes in.” Kiwi purrs, meows and seemingly enjoys having her belly scratched. Nathoo says that, for some residents in the assisted living suites, agitation subsides when they pet Kiwi. “Kiwi is a helper; that’s how I think of her,” she says.



### **Greg Grant** *with Yogi*

Persuaded by their son to get a dog — specifically, a Shiba Inu (a breed now nearly impossible to get thanks to the absurdly popular “Doge” meme) — Greg, 73, and Judy Grant adopted Yogi as a tiny pup eight years ago. When Judy passed away in 2019, the dog became a lifeline for Greg. “I wouldn’t have gotten a dog on my own,” he says. “But, since I already had Yogi, well, that really made a difference for me.” Greg hadn’t ever cooked much for himself, but having to care for a dog demanded commitment to a meal routine: “Yogi likes mac ‘n’ cheese and sausages, so I started cooking for both of us.” Not only that, but Yogi’s need for daily, energetic walks forced his owner out into his Arbour Lake mobile-home community where Greg falls easily into conversation with fellow dog-walkers. “I tend to sit and read in the evening, but getting out with Yogi makes me see people I wouldn’t otherwise and that’s good,” he says.

# How Ethnically Diverse are Older Canadian Pet-Owners?

The truth is, we don’t really know. **Dr. Ann Toohey, MSc’12, PhD’18**, shares her observations on the complex relationship between ethnicity and pet ownership

**I**n 2020, just shy of 60 per cent of Canadians reported that their household included at least one dog or cat. Based on my analysis of a nationally representative sample of older adults participating in the Canadian Longitudinal Study on Aging (CLSA), I have found that 33 per cent of older Canadian adults report having a companion animal (which, I assume, will primarily be a cat or dog).

In this same study, I also found that 23 per cent of older participants who identified as a visible minority reported having a pet, compared with 33 per cent of those who identified as being White. As an important consideration, however, the CLSA sample under-represents members of visible minority populations who are recent immigrants, and especially those who were born in Asia. Therefore, 23 per cent is likely not an accurate estimate, given that CLSA participants had to be able to conduct the data collection survey in either English or French language.

In a different component of my research, I recruited older Calgarian pet-owners representing a wide range of household incomes. My aim was to begin to better understand ways that income and social support may shape ways that older adults experience both benefits and challenges of pets later in life. I saw two marked trends in my study participants: nearly all of the older adults who contacted me lived alone with their pet(s),

and none belonged to a visible minority population.

These trends raise some interesting questions. For instance, what are the pet-keeping practices of older Canadians who identify as visible minorities? How are these shaped by immersion in the dominant Canadian culture, where keeping dogs and cats is so prevalent? How might pet-keeping practices change as second-generation Canadians reach the age of 65 years and beyond? And are there links between pet-ownership, social isolation and different cultural practices when it comes to ways that we support our loved ones later in life?

*We know that having pets is an international phenomenon, yet there is much we don’t know in relation to our increasingly diverse, aging population.*

Undoubtedly, the relationship between ethnicity and pets is a complex one. We know that having pets is an international phenomenon, yet there is much we don’t yet know in relation to our increasingly diverse, aging Canadian population. Improved understanding of this phenomenon will help to inform animal welfare and social-service organizations that recognize the health-promoting potential of relationships that many older Canadians have with pets. • — *Dr. Ann Toohey*

Cutting-edge wearable tech can tell us a lot about our habits and health, and what we need to feel better and live longer

# READY TO WEAR

by Brennan Black, BA'18 & Jaclyn Molyneux, BA'05

Illustrated by Katie Lukes



**O**f all the changes to the world that circa-1985 Marty McFly encounters in the year 2015 (where he arrives to — what else? — save the future), fantastical wearable technology is among the most inventive. While *Back to the Future II*'s auto-adjusting jacket and self-lacing Nikes haven't hit the mainstream yet, they certainly predicted the direction of 21st-century innovation.

Also known simply as “wearables,” current iterations of these devices can be worn as accessories, embedded in clothing, tattooed on the skin or even embedded in the user's body.

In 2019, the global wearables market, one of the world's fastest-growing industries, was valued at US\$36 billion, and is projected to expand annually at a rate of

15 per cent between now and 2027.

Wearable tech isn't exactly new (clocks small enough to be worn have been around since 1500), but the growth of mobile networks, high-speed data transfer and miniaturized microprocessors have allowed modern, network-connected wearables to explode onto the scene in recent years.

The most common of these wearables are fitness trackers, including Fitbit and smartwatches, but those are only at the tip of the iceberg. In the medical field, wearable ECG, blood pressure and glucose monitors can help doctors track the health of their patients. Body cams have increased accountability in law enforcement, and virtual reality gear, such as the Oculus Rift, has allowed gamers an even more immersive experience.

Some of the industry's most cutting-edge research and application innovation, informing and improving our physical and mental health, is being done at the University of Calgary.

The Wearable Technology Research and Collaboration (We-TRAC) program is a partnership between the university and the City of Calgary in which “citizen-scientists” provide their wearable data for analysis by researchers, including founding lead Dr. Reed Ferber, BPE'93, PhD. In combination with 35 other researchers, Ferber has gathered physical activity data that's being used to improve the experience of walking and cycling on the city's roads and pathways.

Dr. Teddy Seyed, BSc'11, MSc'13, PhD'19, leads wearable research and initiatives at Microsoft Research. His work

in the field has included collaborating with some of the world's major fashion houses and, during the pandemic, he collaborated with tech designer Dr. Maggie Orth, PhD, to create medical face masks for people with disabilities. Seyed and his colleagues at Microsoft Research are developing wearable technology that includes everything from environmentally sensing scarves to mother-daughter dresses that light up when they get near each other.

Meanwhile, Olympic wrestler Erica Wiebe, BKin'12, BA'16, used Hexoskin biometric clothing to track her performance and refine her training.

For now, we'll continue manually adjusting our jackets and tying our shoes but, wait for it — the future is here.

## A FINE BALANCE

*Detecting concussion and triggering reflexes*

Springboarding off their research into measuring head trauma in boxers and Muay Thai fighters, Dr. Ryan Peters, PhD, and his team in the Faculty of Kinesiology are creating wearable devices that could help protect those athletes as well as provide therapies for people with neuro-degenerative conditions like multiple sclerosis and Parkinson's disease.

Inside our inner ear is the vestibular system. It includes tiny hair cells that are important for controlling balance, eye stabilization and orientation. Those cells can be damaged by aging, disease and the hits to the head that a boxer might take. To measure that damage, Peters developed a technique called Electrical Vestibular Stimulation (EVS) that applies low-level electrical currents to those hairs, tricking them into thinking the head is moving, and triggering reflexes in the legs to keep the body in balance. He measures the speed and strength of those reflexes to assess the damage.

Peters is collaborating with Silicon Valley's PROTXX (with operations based in Calgary) to create a wearable EVS system that could make for quick ringside assessments that would give athletes quantitative information to decide if they should go back in the ring.

As well, Peters has a patent pending on a device that goes behind the ear and measures balance. "You can think of it like a neuro-prosthetic system," he says. Electrical currents that trigger reflexes would set an off-balance wearer right again. The device, is being tested in the lab with various populations, including those with neuro-degenerative conditions.



## AT ONESIE WITH TECHNOLOGY

*Improving language skills for kids*

Understanding how well your baby's language skills are developing, and what you can do to help, gets easier when you drop a recorder into their onesie.

LENA (Language ENvironment Analysis) is a small, wearable device that collects audio files of babies and their caregivers. It runs the files through an algorithm that generates a report with biometric data that measures the baby's language environment, including adult words, baby's words, conversational turns and background noise.

That information can be used by caregivers to help them improve the conversations they have with their babies.

"We know that the gold in infant language-



acquisition is conversational turns," says Dr. Penny Pexman, PhD, who leads the Language Processing Laboratory in the Department of Psychology. "It's those kinds of reciprocal interactions with a caregiver where kids learn a ton of language skills."

Calgary Reads uses a LENA program, based out of the U.S., that includes 10 weeks of workshops, videos and tips along with the recording technology for families. The program is successful, but the technology component is expensive and Calgary Reads wants to know how much of the success is down to the technology and how much is because of the workshops. LENA has never done a technology-only control group to determine that.

That's where Pexman and her team come in. They're giving families a onesie with the recorder to use without the programming. The data collected over those 10 weeks will be compared to participants who also attended workshops. The results will help determine if the wearable tech is the key to improved language skills, or if success comes down to the other tools.



massive shift in society, Venkataraman studies remote communities who are just now going through that transition.

"We work with Indigenous groups that are undergoing subsistence transition," says Venkataraman. "A lot of them are born in the rainforest. They grew up hunting and gathering, but their lives are changing very rapidly. It's valuable to understand the causality behind changes to human metabolism that come with capitalism, market integration and globalization."

A deeper understanding of the data behind how the human body changes with changes to environment, diet and physical activity could have implications for policy and health care.

## HUNT, GATHER, BREATHE

*Fighting modern disease*

Dr. Vivek Venkataraman, PhD, an assistant professor in the Department of Anthropology and Archeology, is an evolutionary anthropologist interested in studying how much energy it takes to complete activities that were common hundreds of thousands of years ago (i.e., climbing trees, digging, hunting and gathering, and rowing). To do that, he provides respirometry masks to workers in remote fields in Malaysia who wear the masks while they go about their daily tasks. The mask measures the oxygen consumption and carbon dioxide emissions in each breath. That, in turn, provides data on how much energy an activity takes.

Energy expenditure is linked to "diseases of civilization" like obesity and diabetes, as well as metabolic syndrome which includes increased blood pressure, abnormal cholesterol and excess fat around the waist — all of which lead to higher risk for stroke and heart disease. These are modern health issues that rapidly expanded with industrialization. Since we can't rewind time to understand what happened to our bodies through that

## DO NOT DISTURB

*Post-stroke assessment for improved treatment*

While a stroke happens in arguably the most complex area of our body — the brain — a cornerstone of evaluating and monitoring stroke patients comes down to watching their body movement.

A stroke occurs when blood supply to the brain is impeded or reduced. If one has a stroke in the left side of the brain, there can be weakness in the right side of their body, and vice versa. Paying attention to that movement is important for monitoring stroke patients.

"Right now, the only way we can detect an improvement or worsening in strength is a bedside assessment," says Dr. Mohammed Almekhlafi, MD, a member of the



Hotchkiss Brain Institute at the Cumming School of Medicine. “In severe cases, those assessments might need to be done every 15 minutes, including through the night.”

Those hands-on assessments are disruptive and that can also lead to imprecise results. For example, if a patient is woken up to be assessed, it can be difficult to know if their movement is weaker because they are sleepy or if it is related to stroke worsening or even a new stroke. To improve on that, Almekhlafi is studying the use of sensors. He’s currently

working with camera

technology that detects and registers when a patient moves. Anyone who has played a video game with an avatar that mirrors how you lift your arm or take a step has used similar technology. In the case of stroke patients, a camera is set up in their hospital room to track movement. The data is used to better understand the patient’s progress and inform treatment options, all without continually disturbing them.

Almekhlafi’s study is in the proof-of-concept phase to determine how much and what data the sensors should collect. After that, it will incorporate wearable technology that will continue to make data collection less disruptive and subjective.

## SLEEPLESS IN FINLAND

*Tech to improve your rest*

So, your watch tracks your sleep — but how does that tracking stack up against proven science? Dr. Marc Poulin, PhD, DPhil, a professor in the Cumming School of Medicine and Faculty of Kinesiology, and his team put one watch to the test.

The gold standard for measuring sleep is called polysomnography. It involves devices that measure breathing, heart rate and oxygen saturation, as well as electrodes on the head to measure brainwaves. Typically done in sleep labs, polysomnography can now be done in people’s homes, thanks to technology developed by Poulin at UCalgary.

When Finnish company Polar Electro Oy developed its new heart rate-based Sleep Plus Stages algorithm for its smartwatch, it wanted to validate its data by comparing it to the gold standard that Poulin had honed. Poulin and his team tested 36 healthy adults wearing Polar’s smartwatch over two nights of sleep (one after rest and one after exercise). They were measuring for accuracy, specificity and sensitivity. While it didn’t match the much more intensive polysomnography testing, it did

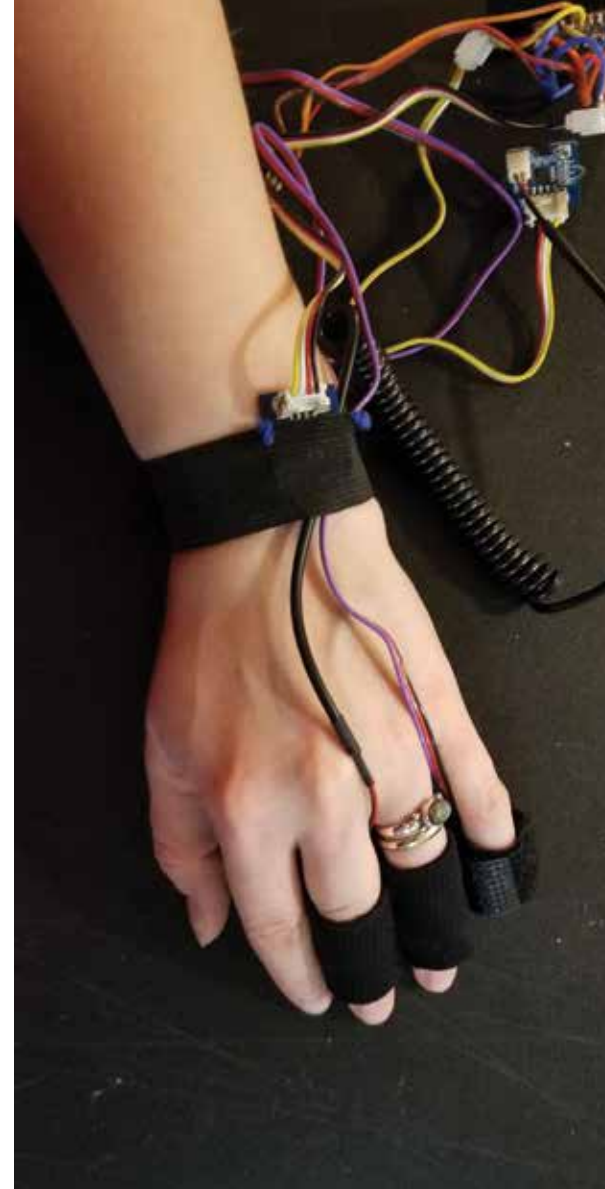
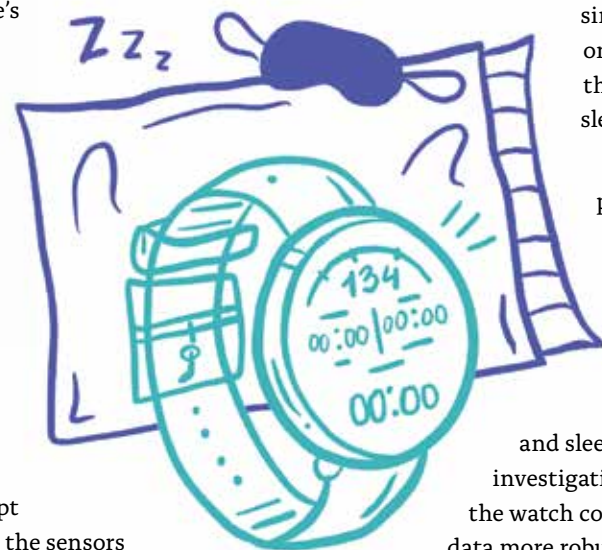
outperform other similar technology on the market for the detection of sleep stages.

Polar is particularly interested in using this technology for elite athletes to help them optimize training

and sleep. With more investigation and refinement, the watch could also make sleep data more robust and accessible

for anyone experiencing daytime fatigue, issues concentrating, or other general health concerns related to sleep.

“Sleep is a very exciting new area of research and physiology,” says Poulin. “There’s a lot we still don’t understand about it, and increasingly the technology to measure sleep is improving.”



# WE ARE WHAT WE WEAR

*Can clothing make you feel better?*

### What would happen if computers managed our emotions for us?

Kathryn Blair, MFA’18, a doctoral student in the Computational Media Design program in the University of Calgary’s Department of Computer Science, explores that provocative question and puts it into haute couture.

Blair’s conceptual fashion has embedded sensors that track the wearer’s heart rate, temperature and how well their skin conducts electricity. All of those are indicators of current emotions. Most recently, Blair also incorporated an electroencephalogram (EEG) into one of her fashion pieces that detects the electrical activity in the wearer’s brain.

While most commercial wearable tech uses mood-trackers for awareness — like your smartwatch that suggests maybe you should meditate or take a deep breath when your pulse increases — Blair’s tech-meets-art takes it a step further. The data collected by her clothing triggers a small computer to manage and manipulate the wearer’s mood by changing colour or playing a song.

The technology Blair uses is widely accessible, and she’s interested in exploring just how much control we want to give it.

“Our minds and our bodies are inherently related to each other,” says Blair. “Our emotions do come through in our physiological indicators, but how much do we want the responses to be automated? I would love to not have to do the emotional labour to make myself feel better or manage my emotions. It would be lovely to have a computer system do that for me — but I’m also terrified of that idea.”



Photos: Trevor Lalonde. Taken at Beakerhead’s Cybermentor Workshop.

# WAYS OF TEACHING

WHOSE JOB IS IT TO MAKE SURE KIDS KNOW AND CARE ABOUT INDIGENOUS TRAUMA AND CULTURE?

by **Marcello Di Cintio, BSc'97, BA'97**

**I** was born in Calgary in the 1970s and spent my grade-school years in the Catholic system. I only ever learned about Indigenous culture as ancient history. I learned about wigwams and buffalo jumps and tried on feathered headdresses in replica teepees on museum field trips.

For Alberta students of my generation, the First Nations were akin to the Aztecs or the ancient Romans — their civilizations captivating, but bygone. I didn't know if any of my actual classmates were Indigenous, much less anything about the abuses being perpetrated at the time at St. Mary's residential school about three hours south in Cardston. For me, Indigenous people did not exist in the present tense.

After graduating from high school, I earned an English degree from the University of Calgary without reading a single book by a Canadian Indigenous author — at least, none that I can recall. To my great shame, I was well into adulthood before I learned about treaties or the residential school system. I feel I've spent the last decade catching up, learning the sort of things I should already have known.

I've also spent the last decade being a dad. My 11-year-old son already knows more about the residential school system than I do. Earlier this year, he explained to me the significance of the colour orange for Orange Shirt Day and, when I pointed to the red dress hanging in our neighbour's window, he already knew the dress represented murdered and missing Indigenous

**How much my son learns about Indigenous issues — and how much he *doesn't* learn — will depend, in large part, on his teachers.**

women and girls. My son's knowledge somewhat tempers my own ignorance. At least his generation will be more informed than mine.

But, after a year in which the Alberta government put forward a new draft education curriculum that, according to most observers, undermines Indigenous perspectives, I feel less reason to be optimistic about my son's education. How much he learns about Indigenous issues moving forward — and how much he *doesn't* learn — will depend, in large part, on his teachers. And the teachers who teach his teachers.





**A white, male student put his hand up and demanded to know why he had to take the Indigenous Education course.**

were taught with the same colonial bias. “Instructors were either teaching from outdated resources — with typically racist undertones — or they largely ignored the Indigenous side of the story,” Poitras Pratt says. When she sat down to redesign the university’s Indigenous Ed class, she and her colleagues sought to fill the gaps in teachers’ learning. “We very deliberately sat down and thought to ourselves, ‘Okay, so what are people missing?’”

Not everyone supported the new mandatory classes. On her first day teaching the course, and immediately after she finished giving her introduction, one of Poitras Pratt’s white male students put his hand up and demanded to know why he had to take the course. “He was sprawled out in his seat, legs spread,” she says. “I’ve got two big brothers. I know male power when I see it.” Other students boycotted some sections of the program entirely, submitting assignments and writing the exams, but not attending the classes at all.

The animosity towards the program did not last long, though. Poitras Pratt still endures challenges and “troubled assumptions” from some students — as well as the occasional racist blurt — but many students now rank the classes among their favourites. “We’ve really worked hard to make sure that the course is compelling and meaningful,” she says. “It has to meet the university rigour, of course. We do that alongside honouring our own knowledge traditions. So, it’s not like teaching math.”

**In 2013, Calgary entrepreneur David Werklund, Hon. LLD’12, endowed UCalgary’s Faculty of Education with \$25 million,** the largest donation ever received by an education faculty in Canada. The faculty, which now bears Werklund’s name, promptly set aside funding for Indigenous education and hired five Indigenous scholars to design and implement a mandatory Indigenous education class for pre-service teachers as part of their two-year after-degree program.

Among the scholars tasked with designing the Indigenous Ed class was Dr. Yvonne Poitras Pratt, BA’02, MA’05, PhD’11. Her own undergraduate experience at UCalgary had been similar to mine; Indigenous topics

In 2016, the Werklund School of Education launched a graduate topic in the Master of Education program called Indigenous Education: A Call to Action. Poitras Pratt helped design the program in response to the recommendations of the Truth and Reconciliation Commission of Canada (TRC). Students examine concepts related to decolonization and social justice, engage with Indigenous scholarship, and connect with Indigenous partners. According to the description, the four-course program encourages students to “explore, and enact, their own responses to a national call for reconciliation with Canada’s First Peoples.”

“I always celebrate the students that actually sign up for this program,” Poitras Pratt says. “I say to them, ‘It takes a tremendous amount of courage and self-awareness to understand that you were implicated in this.’ And, so, they step forward into the learning with the right ethos in mind.” Poitras Pratt’s students show a willingness to move their education beyond mere awareness. “They’re moving into action, and that’s where you make the shift,” she says. “That’s where you make the change.”

As part of this action, students must complete a capstone project that brings Reconciliation out of the lecture halls and into real classrooms. “Not only do we train our students to be ethically positioned and give them a fulsome understanding of the Canadian past that nobody wants to talk about, but they choose from a variety of community partners from across Canada to enact a service-learning project that responds to the TRC’s Calls to Action,” says Poitras Pratt. While 80 per cent of those students are educators, many are social workers, and health-care and other professionals who want to take this learning into their workplace.

Nicole Farwell completed the Indigenous Education: A Call to Action course in 2020 as part of her masters of education degree, which she expects to complete in

2022. For her service-learning project, Farwell, BA’04, BED’08, decided to see how Reconciliation could work in early childhood education. She worked with a daycare in St. Albert, a community with a large Métis population, and helped staff work through Alberta Human Services’ mandated day-care toy list with an Indigenous lens. For instance, she and the staff added more traditional and contemporary Métis clothing to the daycare’s “dress-up corner.” Farwell knew simply tossing a Red River Coat and a pair of beaded moccasins into the classroom “Tickle Trunk” wouldn’t teach much. Not without context, anyway. “You have

the education piece around it,” Farwell says. “So, we have a local Métis educator who will come in and talk about jigging, and who uses a stash of all these things which end up as part of dress-up alongside the doctor and firefighter costumes.”

Farwell now serves as the curriculum co-ordinator for the Sturgeon Public School Division north of Edmonton. I asked her how the lessons learned from the MEd Call to Action program might be manifested in the sort of public-school classrooms my son might attend. Farwell believes curriculum needs to move beyond the tired narratives of pre- and post-Contact where the whole

Indigenous experience is framed around the arrival of Europeans. “Students have to start understanding First Nations, Métis, Inuit cultures as nations, not as people who were colonized and are now part of the larger Western European story,” Farwell says.

Teachers require confidence to approach issues of reconciliation in their classrooms. Farwell speaks with many teachers who fear “doing it wrong” or “saying the wrong thing.” A survey of 90 Calgary-area teachers in 2018 revealed that 84 per cent of teachers believed that Indigenous education should receive more attention in schools. But the survey also showed that half of the teachers interviewed feared culturally appropriating or making errors.



The solution, according to Poitras Pratt, is to allow Indigenous people to lead the way. Alberta's students "should be learning about Indigenous peoples from their perspectives," she says. "Not from some overpaid consultant who knows nothing of our lived experience nor the impact of the colonial history. Not from someone who has this colouring-book idea of us sitting in teepees in the past." Poitras Pratt believes teachers need to step aside, adopt a "stance of humility," and "make space for Indigenous peoples who actually could tell us the real story."

This means having Indigenous people in the room. Farwell recommends schools and school boards hire on-staff Indigenous Elders or Knowledge Keepers who would visit classrooms regularly; that way, Indigenous perspectives become part of students' every-day experience. This is already policy in some districts. The Sturgeon Public School Division, for example, employs a First Nations woman and a Métis man as part of the district's curriculum-support team.

"They've been clear they don't want to just teach First Nations culture," Farwell says. "They want to look at the whole curriculum through that lens." A Grade 4 science unit on plants, for example, could include Indigenous knowledge about local flora. A language arts creative writing unit could include a section about Indigenous oral storytelling traditions. Such an approach lifts Indigenous perspectives out of the merely historical context and presents them as another way of knowing the world. Having such expert consultation as part of professional development helps teachers become more confident in presenting Indigenous perspectives to their students.

**I first reached out to Poitras Pratt in the summer of 2021,** at a time when unmarked and mass graves were being identified at former residential school sites across Western Canada. The surprise of non-Indigenous Canadians to the news angers her. "We're working with a group of Canadians finally waking up to what we've

been telling them for decades upon decades. They just simply haven't chosen to hear. That's the privilege of not hearing," she says. "Are they choosing not to listen? Or do they have to see the bones of children before they wake up? Isn't that, like, kind of sickening?"

Pushing past this privileged ignorance is a burden for Indigenous educators like Poitras Pratt who have even suffered health impacts from the stress. "What tends to happen is that the heaviness of the work is foisted onto Indigenous peoples," she says. "'Tell us your story.' 'Show us your pain.' And it's a necessary part. Nothing about us without us. But, at the same time, there's a cost. There's a toll on those of us who are actually taking up the work."

It is not enough for settlers like me to simply be aware of historical and contemporary wrongdoing. "I think they have to commit to actually taking on some of the hurt," says Poitras Pratt. "That's nothing compared to what we've gone through."



## Alberta students should be learning about Indigenous peoples from their perspective — not from someone who has this colouring-book idea of us sitting in teepees in the past.

The reports of the residential school burial sites made me wonder about the idea of "Canada the Good" I'd always been taught. I grew up hearing about Canada as a multicultural haven for poor and oppressed people from around the world. These stories are not mere myths. My own family arrived in Canada after escaping postwar poverty in Italy. Over the years, I've met refugees from places like Palestine, Syria and Somalia — and a Hungarian survivor of the Holocaust — all who've found comfort and success in Canada. Yet our own dark history of colonization and genocide counters this maple-sweet narrative. I asked Poitras Pratt how we can teach our children to be proud of our country. How do we teach them to love Canada? Should we even bother to do this at all?

"Canada is seen as a place of refuge," she says. "We're seen as all these beautiful things. I love our country. But I also think we have to do some cleaning up in our own backyard. And, until we get our own backyard cleaned up, I don't think we should be going around pretending to be peaceable, tolerant and multicultural." Ignoring these harder truths risks the stability of the entire culture. "Without recognizing the deep-rootedness of Indigenous peoples in this land, by severing those roots, you've got this floppy tree of multiculturalism that will not hold the test of time."



Yvonne Poitras Pratt

Poitras Pratt believes we do our children a disservice if we leave out integral parts of our national story. "If we keep sticking our head in the sand, and we keep treating the First Peoples as lesser-than, are we truly all that we can be? If we want this nation to continue on its path to what it could be, we need to start doing some truth-telling."

The truths needn't all be traumatic. The whole story encompasses beauty, too. "It's not just focusing on the residential schools and the hardships that First Nations, Métis and Inuit people have gone through," Farwell says. "A lot of it is celebrating the strength and the richness of the variety of cultures that exist."

And there is plenty to celebrate. Indigenous music and visual art, for example, provide opportunities for students to engage with new perspectives. So does literature. I've learned more about Indigenous perspectives from Dr. Joshua Whitehead's, PhD'21, fiction and Alicia Elliott's stunning essays than I ever did from my grade-school teachers.



Nicole Farwell

Farwell believes grade-school reading lists need to change. "Shakespeare is lovely, but I question why he is one of the most studied writers," says Farwell, who jokes some of her English-teacher friends might run her out of town for doubting the Bard's contemporary relevance but, at the very least, space should be made for the work of First Nations, Inuit and Métis authors. That my son might read Cherie Dimaline's post-apocalyptic thriller *The Marrow Thieves* in English class while learning about the Indian Act in Social Studies gives me some degree of hope.

The subject matter of such books makes some teachers cringe, Farwell says. Teachers are uncertain about assigning novels about residential schools, for example, because of harrowing content they feel might not be appropriate for young readers. But suitable titles exist, and more are being written all the time. "We know there's access to literature that is certainly age-appropriate and is beautiful," Farwell says. Educators just need to make the effort to find them.

Poitras Pratt and Farwell also agree that university education programs need to turn out more Indigenous teachers. Part of Poitras Pratt's role as director of Indigenous Education is the recruitment of Indigenous students, and she has been successful: half of the MEd program Call to Action students are Indigenous.

Farwell cautions, however, against schools relying on their Indigenous teachers to take sole responsibility for Indigenous education. "That's not fair," Farwell says. "The Indigenous teacher on staff cannot be the crutch we all lean on. We still have to do the hard work."

The effort is key. The common theme in my conversations with both Poitras Pratt and Farwell was that non-Indigenous teachers need to put in the effort. "Sometimes, my First Nations or Métis friends are frustrated with the assumption that the information should just land on your lap," Farwell says. Teachers need to seek out the knowledge to enrich their students' learning, and find those who can speak about their experience or direct them to resources. "Do the legwork. Go and find out the information. Go seek it out. Go have those tough conversations where you might ask questions that you're uncomfortable asking."

**In March, 2021, Adriana LaGrange, Alberta's education minister, released a draft curriculum for elementary school-aged students.** The curriculum earned near-universal derision and ridicule from the province's educators, Poitras Pratt among them. The majority of Alberta's school boards declined to pilot the curriculum, and 91 per cent of educators surveyed by the Alberta Teachers' Association were unhappy with the draft. Among the myriad problems identified by critics of the curriculum was the handling of Indigenous subject matter. The Confederacy of Treaty Six First Nations issued a blunt response to the curriculum in a March 2021 press release:

*What was anticipated to be an opportunity to tell future generations of Albertans about the fulsome and diverse history of this province, including the histories of Treaty First Nations that have existed here since time immemorial, has instead devolved into a Eurocentric, American-focused, Christian-dominant narrative that perpetuates rather than addresses systemic racism and falls far short of providing a balanced, nuanced perspective on Treaty 6 First Nations history and culture.*

Poitras Pratt was the only Indigenous scholar who took part in the curriculum review — a process she referred to as a "debacle." The Government of Alberta insisted everyone involved in the review sign a confidentiality agreement which made any individual providing initial feedback unable to speak on the matter until the second phase of public engagement commenced. Poitras Pratt lambasted the draft curriculum in the press, telling *Real Talk's* Ryan Jespersen that she was "dismayed, if not disgusted" by the lack of depth in the First Nations, Métis and Inuit content, and went as far as calling the draft "racist." And she described the curriculum to the *Globe and Mail* as "very much a celebratory story about the colonial side of our history, where the Indigenous people are more of an add-on to this bigger colonial story."

As the parent of a school-aged child, I was worried, too. I felt some relief that my son had just graduated from Grade 6 and would, therefore, dodge the much-derided curriculum, as it only covers kindergarten to Grade 6. But I know that a new curriculum for Grades 7 to 12 is being developed by some of the same consultants.

## The truths need not all be traumatic — the whole story encompasses beauty, too.

Farwell, also no fan of the draft curriculum, offers some surprising solace.

"Would it be the thing I would roll out personally? No," she says. But, despite all the harsh criticism, Farwell doesn't consider the curriculum to be an irredeemable disaster. She remains confident the document leaves space for teachers, especially "bold" teachers willing to keep learning, to continue the work of reconciliation in their classrooms. "To me, Reconciliation isn't about outcomes in a curriculum. It's about an entire way of approaching things. It's about shifting the dominant worldview in your classroom," Farwell says. "This work transcends curriculum."

Farwell doubts any single document can upturn the efforts of her fellow Werklund grads. "The work that's being done has more energy than any particular piece of paper," she says. Besides, teachers are more independent-thinking than they are often given credit for, especially when they are motivated to make a difference.

"I trust educators. We're able to see what has to be done — and to see how it can be done in a way that continues to inspire and continues to put forward the things that we see are true." •



**Sometimes, learning to lead happens halfway up a mountain. A singular program, which recently lost an extraordinary professor, guides business students to become their best selves**

by **Valerie Fortney, BA'86**

# INTO the WILD



*“Authentic leadership hinges on the insight that who you are as a person is your most valuable contribution. The more present you can be for yourself, in any given moment, the more able you are to be of service to others.”*

—Dr. David Lertzman, PhD

**H**e came into my life like a tornado, the human embodiment of life’s possibilities. He was charming, funny, talented and the first non-conformist I’d ever had the good fortune to sit near in homeroom class.

My effusive recollections of how David Lertzman impacted me when both of us were so young may sound hyperbolic. Yet, of all the people I met as a junior high school kid in Winnipeg, Man., it was the irrepressible David who left the most lasting and inspiring impression. The Winnipeg native had spent his elementary school years in the San Francisco Bay area, which gave him a cosmopolitan air — the adolescent version, of course — and likely influenced his dashing sartorial choices. He was the best-dressed kid at Acadia Junior High and one of the most talented. A gifted singer and musician, in time he’d become adept on the drums, mandolin, ukulele, flute and blues harmonica; I would later learn he’d also go on to compose his own songs.

Not surprisingly, I wasn’t the only junior-high kid who adored this charismatic, compassionate teenage boy. In the short time I knew him — I’d soon pack up and join my family on a move to Calgary and quickly lost track of my old friend — David became one of the most popular, best-loved students at our school.

*“Many were saying  
IT WAS NOTHING LESS  
THAN LIFE-CHANGING  
and that his course,  
in fact, made them  
BETTER AT BUSINESS.”*



Sometime in 2018, four decades after I’d last seen him, I stumbled across the name Dr. David Lertzman, PhD, in a newspaper article, where it said he was a long-time resident of Waiparous Village west of Cochrane. Could it be the same David Lertzman? I did a quick Internet search and discovered that, indeed, it was him. His photograph on a University of Calgary web page noted he was an assistant professor at the Haskayne School of Business, whose research and work focused on sustainable development and leadership with Indigenous communities.

Taking a chance he might remember me, I reached out to David in the fall of that year. Soon, we were sitting in a lounge on campus, laughing and reminiscing about our youth. David, though, became serious and highly animated when he described the work he was doing. The former boy who I could have imagined performing on Broadway had, instead, devoted his life to building bridges between different segments of society, such as the Indigenous community and the business and energy sectors. He was teaching undergraduate and graduate courses on leadership and sustainable development with Indigenous elders. His weeklong wilderness/nature

retreat courses in Kananaskis, he promised, could change not only minds, but lives; he later sent me material on it to better understand its scope.

On May 5, 2021, while he was on his twice-daily run near the home he shared with his wife, Sarah, and their two little children in Waiparous, the 59-year-old visionary was attacked and killed by a grizzly bear. David’s death left an entire community devastated, from his family and friends to his students and UCalgary colleagues.

**Not surprisingly, this incredible man touched so many lives,** both personally and professionally, leaving us with an extraordinary legacy that is deep, wide and lasting.

David is remembered as a “beautiful, unique, marvellous human being,” by Dr. Jim Dewald, PhD’06, dean of the Haskayne School of Business. By the time Dewald arrived at the faculty in 2006, David was already there, and he quickly learned about the wilderness training David did. “After meeting some of his students, I was totally sold on what he was doing,” says Dewald. “Many were saying it was nothing less than life-changing and that his course, in fact, made them better at business.”

In those early days, however, it wasn’t all smooth sailing. “Actually, it was really tough for him at first — some saw it as ‘pinstripes-meets-Amazon rainforest activist,’” says Dewald. “A lot of people thought, ‘What is he doing in a business school? He has no business training.’ It took a good decade for many people to see the benefits, so it wasn’t easy for David for a good long time.” Dewald credits his predecessor, former Haskayne dean Dr. Leonard Waverman, PhD, for first spotting the potential for such an education within the confines of an academic environment preparing future business leaders.

Certainly, David had his champions — some of them who fueled the program to ensure he could keep doing the work he was so passionate about. In 2016, Hal Kvisle, MBA’82, Hon. LLD’19, a veteran oilman, business leader and member of the Canadian Petroleum Hall of Fame, provided a \$3-million endowment to ensure the future of the Haskayne Adventure Leadership Program, which includes the retreat and other courses.

Kvisle knows from personal experience the benefits of the great outdoors and the lessons it teaches. His father, who had a passion for wildlife and conservation, toted him along on summer projects in Alberta’s mountains



Pictured here with Lertzman, students practise risk assessment, campcraft, ecological awareness, problem-solving, and engage in structured personal reflection and small-group work.

Photo Left: Ali Kazal on Unsplash

and foothills while he studied the effects of forest clear-cutting on wildlife habitat. “Sometimes I’d be out with him a week at a time, living in a tent,” says Kvisle, adding that his times there taught him the importance of teamwork. “It’s so important that business schools teach about things like collective group decisions.”

Other influential businesspeople, such as Mac Van Wielingen, Hon. LLD’14, who in 2012 raised nearly \$10 million to establish Haskayne’s Canadian Centre for Advanced Leadership in Business, also understood not only the benefits, but the necessity of David’s teachings.

“After the financial market crisis of 2008, I saw a lot of directors and executives in the investment world thinking in a very narrow way,” says Van Wielingen, founder of ARC Financial, the largest energy-focused private-equity firm in the country. “I saw it very much as an ethical issue, so I started a series of conversations with some of the professors at Haskayne about the need to educate around ethical leadership.” A business

education, says Van Wielingen, shouldn’t just be about learning how to read spreadsheets and understand variable profit. “We need to think more broadly, such as how we treat people.”

Then-Dean Waverman insisted that Van Wielingen meet one of his trailblazing professors — Dr. David Lertzman. The pair was soon engaged in a meeting-of-the-minds conversation in a boardroom at Van Wielingen’s downtown office. “David pulled out his laptop and began asking me a series of questions,” he recalls. “He became very animated when he realized we were on the same wavelength — he was very excited to hear a corporate leader talk about ethical leadership and the role of business within society.”

Something in particular that interested Van Wielingen also turned out to be a passion of David’s. “One of the common interests we developed was the concept of a ‘roundtable,’” he says. “The idea of a circle of dialogue is something that Indigenous peoples have

# RETREAT, REIMAGINE, REPEAT

For alumna **Juli Rohl**, a week in the woods with the late Dr. David Lertzman was (and still is) a mind-shifter that has made her more compassionate, courageous and nimble in everything she does

**I**n striving to be “the best geologist (I) could be,” Juli Rohl decided to follow her Bachelor of Science with an MBA. In 2008, she found herself at the Haskayne School of Business, where she met Dr. David Lertzman, PhD — an educator who would not only change her way of thinking, but her entire life.

“I hadn’t learned anything about accounting and economics in my first degree, so I found all of that fascinating,” says Rohl, BSc’05, MBA’11. “But what really grabbed my interest was this course other students were calling ‘camping for credit.’”

Familiar with the field school approach while doing her geology degree, Rohl didn’t have the same skeptical reaction as some of her peers. “Endure rugged terrain and extreme conditions? Sleep outside with nothing but a tarp and a sleeping bag? That was *definitely* for me,” says Rohl, who is just one of hundreds of alumni who, like her, work in the kind of resources industries where decisions are regularly made that impact the land and society. “It turned out to be nothing short of transformative; it opened up my eyes to a world I wanted to participate in.”

Before heading into the woods with the Lertzman-led Haskayne Wilderness Retreat (BSEN 749), Rohl had to devour an “enormous” booklet of academic readings on sustainability and business. Once at the weeklong retreat in Kananaskis that included instruction from Indigenous elders, she was treated to a program that, she says, “weaves academic learnings of sustainability theory with Indigenous world views — a melding of science with Indigenous culture.” Students are limited in what they can bring beyond a change of clothing, drinking water, sleeping bag, tarp and cord, matches, and a journal for writing their thoughts. Anything that tells time — like a watch, laptop or cellphone — is forbidden.

The experience includes guided walks through the forest, learning such basic outdoor skills as how to build and start a fire, and some physical challenges that include climbing up to Prairie View Lookout, a 6.6-kilometre hike with an elevation of more than 400 metres.

At one point, participants are sent out on a solo 24 hours in the forest with no food and only water, a tarp and a rope

— what Rohl calls a “kind of vision quest,” embarked upon after a sweat lodge ceremony led by an Indigenous elder.

“The students are supported in going as far away, or as staying as close to camp, as they feel comfortable with, to push their personal boundaries,” says Rohl. “And, when all that is done, you have to write a paper on your experiences and what you learned.”

For Rohl, who doesn’t like to reveal everything about what goes on during the retreat — “enough secret sauce to dip your toes in,” she says, since discovery is elemental to the experience — the revelations she had changed her perspective on both business and life.

She was so impacted, she returned three more times as a volunteer for the program. “I found David’s use of experiential, independent self-study highly effective to reach students,” she says. “He was a master of creating an inviting and compassionate environment for authentic learning and self-exploration.”

Rohl is not the only one who has been transformed by the course, which has become a legacy for Lertzman, who died in May 2021.

“Every couple of years, we’d see other students come back and say they wanted to continue the learning they’d started at it,” Rohl says of the retreats which

currently are led by Dr. Julian Norris, PhD’10 (MBA students), and Dr. Sarah Brown, PhD’21 (undergrads). “Some people didn’t have that experience and that’s OK too, but there are so many who said it made them look at things differently and impacted how they approached business.”

Today, Rohl works for a non-profit called Energy Futures Lab, which focuses on collaboration to find middle ground solutions to help move energy transition forward. “It bridges oil and gas, clean tech and different levels of government and academia to find solutions people can buy into and that we can implement,” she says.

“The wilderness retreat shifted so many things for me — it reframed my western views of the world and it set me on the path to where I am today. I believe that, by applying this long-term view into today’s decisions, I’m changing the world for the better.” — VF

*“... it made them look at things differently and impacted how they approached business.”*



**Left:** In a tribute to Lertzman, Norris (left) wrote: “For 30 years he was my closest friend, my bandmate, my co-guide and professional colleague, my training partner and conversational crony. I had a ringside seat at his triumphs and tragedies and he at mine.”

**Below:** David with a group of students and leaders on one the dozens of trips he guided.



long embraced. Effective leadership means listening to multiple perspectives and being sensitive to those perspectives.”

For businesses to survive and thrive in the 21st century, such an evolution is not only beneficial, but necessary. “Most businesses eventually underperform and ultimately fail,” says Van Wielingen, who at one time was called “Calgary’s corporate radical” for his progressive thinking. “Ethical leadership increases the probability of sustaining successful organizations.”

Like so many others who had the luck to encounter David, Van Wielingen also formed a strong personal bond with the professor who was as famous on campus for his bandanas and sleeveless T-shirts as he was for his ideas that some saw as radical. “I still feel really hurt and I’m in disbelief that David is gone,” he says.

“David was instrumental in the formation of the Canadian Centre for Advanced Leadership in Business, and it gives me great satisfaction to know that he knew that,” adds Van Wielingen of the beloved instructor who received his PhD in regional planning from the University of British Columbia. “A lot of people played different roles in its development, but David understood more broadly what the vision was and what we were trying to achieve.”

Kvisle shares Van Wielingen’s enthusiasm about David. “Jim Dewald, Dick Haskayne and Mac really inspired me to make a significant contribution to the program,” he says, adding that UCalgary’s close proximity to the Rockies and other wilderness areas gives it a competitive edge in delivering such programs, adding that meeting David and his colleagues “solidified it for me.”

The roots of David’s unorthodox teachings go back more than a quarter century, to his time working with Indigenous youth in B.C.’s Haida Gwaii as part of the first Rediscovery International team, a movement that, in time, would spread around the world. “It was sort of a reversal of residential schools, getting kids back onto their territories, back with language, place, cultural and artistic expression,” recalls Dr. Julian Norris, PhD’10, who first encountered David there at the start of decades of collaboration and friendship. “The one difference is that it would always have cross-cultural connection,” he adds, with non-Indigenous youth and guides included.

After Haida Gwaii, Norris, who also worked as associate director of Outward Bound Canada, would start up a Rediscovery camp in Calgary called Ghost River Rediscovery, with David joining him in Calgary after Norris completed his PhD. When he came on faculty

at UCalgary, David soon embarked on bringing the learnings he had from those experiences and recruited Norris to help him develop a course for an academic mindset. MBA students, while highly successful people, have had little time in their education to look at life's big picture, says Norris. "Often, they had a view of nature that was very instrumental, like, 'How many matchboxes can I get from this tree?'" Norris says. "It was about developing a more 'eco-centric' perspective."

Indigenous elders were included as part of those early courses, a tradition that continued into 2021. "They came from sustainable cultures," Norris says of these indispensable fellow educators. "They understood deep values and had a deep ecological awareness ... and they shared generously."

The goal, adds Norris, was to always frame the work within the notion of sustainable development, asking such questions as, 'What is sustainable development?' and, 'What is one's role as a leader within that?'

"We were developing leaders for a sustainable world," Norris says of the interdisciplinary Haskayne Wilderness Retreat program that combines scholarship with real-world experience. As their thinking and the program itself evolved over the years, it became a highly sought-after one. "It went from one small program to three programs," he notes, with up to 800 MBA students at Haskayne going through what many called a life-changing educational experience.

Along with his wilderness retreat, David also brought Indigenous ways of knowing into his other courses, exploring such issues as how colonialism has shaped everything from treaties to the legal context that underpins oil and gas lease deals. "You cannot have the wisdom without understanding, acknowledging the way that the legacy of erasure and colonialism not only shaped the past, but continues to shape the present," says Norris. "David took very seriously that we in this generation have not initiated this but have inherited a very long genocide project. And it's our job and responsibility to step into playing our part."

Norris remembers students coming to them "knowing 50 jingles from the advertising world, but they couldn't name a tree. David saw the importance of coming to a deeper relationship with place, a deeper ecological literacy."

So much of David's thinking and approach was far ahead of his time and he sometimes paid a price for

that, says Norris. "David is someone who should have been a beloved professor in a small liberal arts college," he says, noting that, decades earlier, David was talking about unfamiliar issues and concepts that are now part of the lexicon.

"Instead, he chose a difficult road, choosing to put his work into the mainstream — because it was where he



*"David saw the importance of coming to a deeper relationship with place, a **DEEPER ECOLOGICAL LITERACY.**"*



Norris says that he once invited David to articulate his life's purpose. His characteristically thoughtful answer was, in part: "I am here to contribute to a more ecologically sustainable way of life. To facilitate a greater individual and collective sense of intimacy with the human and non-human worlds for a greater sense of connection with mystery and meaning."

thought he could have the biggest impact."

That sentiment is shared by Ryan "Gitz Crazyboy" Derange, a Blackfoot and Dene youth facilitator. "David had belief and hope that this generation would think and act differently than the previous one," he says, noting the work was an important component of the Truth and Reconciliation movement. "He made time for those he loved, and he made time for those who loathed him," says Derange, who served as a liaison with Indigenous elders participating in David's courses and retreats. "I think his understanding and appreciation of how different our worldview is, and how we conduct ourselves, received the ire of some folks at the school."

David's champions, though, intend to preserve his legacy and continue his work.

"He cultivated a generation of very smart, very capable leaders who not only understood the realities of the oil and gas industry, but who could also work across

boundaries and see things from a different perspective and were on an inner journey and who were kind of getting switched on," says Norris, who is leading the next several MBA wilderness retreats, with Haskayne sessional instructor Dr. Sarah Brown, PhD'21, another long-time collaborator with David, taking on the undergraduate retreats.

"He was a pioneer in so many ways," says Dewald, adding that David's work was an integral part of UCalgary's Indigenous Strategy, *ii' taa'poh'to'p*, and a big part of why the university has been lauded for its efforts towards sustainability. "He showed us how important it was to have this kind of understanding, not only for future business leaders, but all of us."

Indeed, in his all-too short, but meaningful life, David Lertzman touched so many, leaving a legacy of understanding and humanity that will continue to shape our leaders and our city with heart, wisdom and resilience. •

# When Fabricio Met Theresa

Becoming a nurse calls for an extraordinary level of knowledge plus practice, courage and belief in the needs of a family of radically realistic manikins

by **Jacque Moore, BA'97**  
illustrated by **Vidhya Nagarajan**



**I**n 1911, one “Mrs. Chase” arrived at a Connecticut hospital. Perpetually rosy-cheeked and dressed in a demure cotton nightgown, she was Patient Zero in an experiment designed to improve health-care practice.

Before she came along, nurses had been getting hands-on experience on the fly, attending to real injured people in clinics and on battlefields. Mrs. Chase came to the hospital with stitches in her knees, elbows, shoulders and hips — she was a life-sized manikin, the first “doll” designed for training nurses. She, and her modern-day descendants in simulated hospital settings around the world, transformed nursing education.

The University of Calgary’s Clinical Simulation Learning Centre (CSLC, or “the sim centre”) in the Faculty of Nursing is delivering increasingly true-to-life experiences to students poised to embark on health-care careers with deeper knowledge and more finely honed practical skills than ever before. For third-year nursing student Fabricio Abril, the sim centre’s diverse family of uncannily lifelike manikin-patients have significantly advanced his learning (and, not incidentally, shifted his



perspective on babies thanks to what might be Mrs. Chase's great-great-grandbaby).

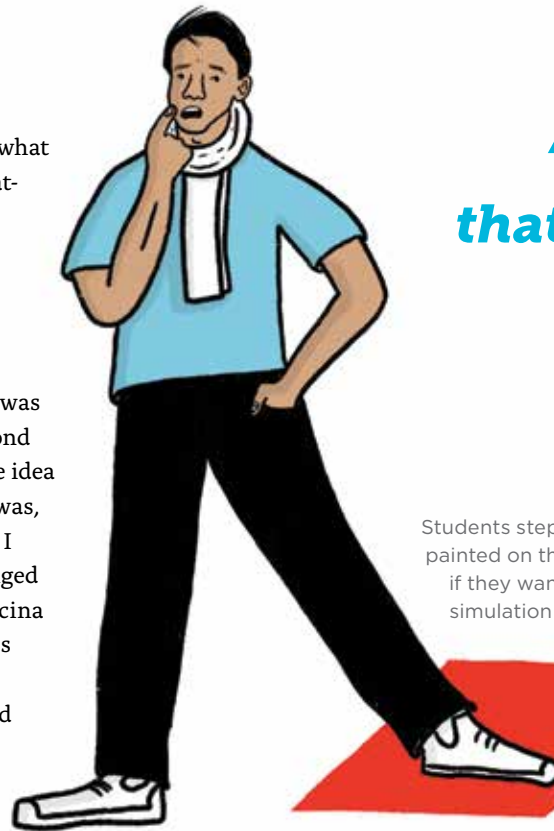
In his first year of nursing, Abril, along with his cohort, visited real people in a local nursing home, which he found gratifying and illuminating. He was therefore skeptical when, in second year, they were introduced to the idea of training in the sim centre. "I was, like, 'Manikins? What? How can I learn with a manikin?'" He changed his tune when faced with the Lucina Childbirth Simulator (her friends call her Lucina), a high-fidelity, wireless manikin with integrated maternal-fetal physiology that breathes, bleeds and mechanically gives birth to a 2.5-kg sim baby.

On one occasion, following instruction and preparation in the sim centre, Abril and a small group were left to take care of postpartum Lucina while their instructors took their places behind the one-way glass that separates the simulated hospital room from a control booth. "We were so nervous — it's incredible that it's a manikin because it all feels so real, we were sweating and shaking," he says. The students checked vitals (controlled by the trained behind-the-scenes simulation instructors) and talked to the patient (who talks back via the same instructors).

When Lucinda began to hemorrhage, Abril panicked.

"There's protocol in hospitals when a nurse calls for help — state your name, the patient's name, the room, etc. — but, instead of using calm language and codes, which I didn't yet know, I just picked up the phone and yelled, 'She's bleeding!'" Abril laughs at himself as he recalls the incident, but he's grateful for the opportunity to have viscerally felt the importance of hands-on, in-the-moment training.

Given that Abril and his classmates sometimes feel genuine life-or-death anxiety in the sim-suite, it's fortunate that they are not additionally burdened by the stress of high-stakes testing. The centre's philosophy emphasizes learning rather than performance, which is often attached to grades, says Carla Ferreira, BN'03, senior instructor and the nursing practice simulation co-ordinator.



**"It's incredible that it's a manikin because it all feels so real."**

Students step into a 'red zone' painted on the sim-suite floor if they want to pause the simulation and re-group.

"The experiences here are based on formative assessment that allows students to build practical skills as well as assertiveness in speaking up about what might not be working," she says.

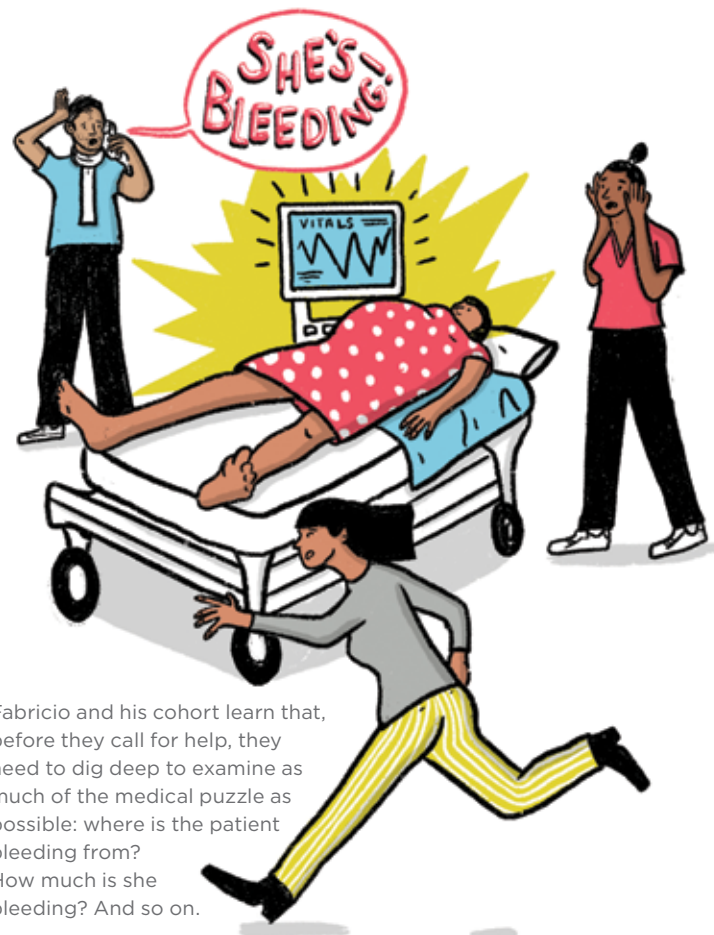
After each simulation-based learning, the participating group of students and the simulation instructor settle into a debriefing room to discuss not only what went right and what didn't, but more importantly why. For Abril, that process was another transformative moment.

"I thought, 'Oh, I shouldn't highlight the mistakes I made to draw more attention to where I failed,'" he says. "But right away I realized that, no, it's the opposite: nurses benefit from learning to be vulnerable and fearless by sharing and talking about how we felt in a situation and what we experienced so that we can do better. We need to learn to process and let go of things so that we don't carry that with us to the next patient."

Ultimately, a successful learning experience in a nursing simulation centre pivots on a student's ability to suspend their disbelief. Sure, the medical instruments are fake; the numbers on the vital sign monitors are controlled by instructors; Rubbermaid bins hold spare limbs and abdominal wounds; and, of course, the patients are made in a factory. But, evidence shows, the more a student can buy into a scenario, the more likely it is that they'll achieve learning goals, increase their confidence and skills, and retain what they learn. The centre occasionally hires actors to play patients, which is one way of circumventing



Faculty members work from a script to speak to students through the manikin. The script is intended to evoke action from the learners. If Lucina says, "this is so painful!" the students' response ought to be along the lines of, "Can you tell me how intense the pain is?" Students are taught to become more and more curious about their patients.



Fabricio and his cohort learn that, before they call for help, they need to dig deep to examine as much of the medical puzzle as possible: where is the patient bleeding from? How much is she bleeding? And so on.



In simulation pedagogy, debriefing is the heart and soul of any simulation. It's understanding *why* something went well or did not go well. Most of the learning happens during the debriefing process.

the challenge of creating realistic sims, but, as the sim centre's manager, Jeff Dawes, points out, "You can't stick an IV in an actor's arm or give them a broken leg."

Unfortunately, stiff-limbed Mrs. Chase, along with the majority of contemporary manikins that tend to be modelled on younger, light-skinned, anatomically ideal individuals don't cut it anymore, says Ferreira. While mechanically speaking they are certainly useful training tools — most come with built-in electronic components that allow for lifelike functions including blinking and breathing — they don't quite hit the emotional buttons. "We need to realistically reflect Calgary's community, the people nurses will be caring for," she says. With that crucial goal in mind, sim centre faculty and staff do their best to diversify the look of existing manikins using makeup and wigs, but they can only do so much. "If we're asking students to imagine they're talking to an 80-year-old individual, it's distracting for them to have to 'remember' that when what they're looking at resembles a younger person," says Ferreira.

Thankfully, the medical-simulation industry is making progress on this front. Last year, Dawes was able to order two EchoMasks — highly realistic, medical-grade silicone masks that fit over existing manikin heads. The skin tone of the masks is darker, and the faces look more aged than the smooth white manikin faces beneath. Dawes recently ordered two more masks meant to resemble the faces of senior Asian individuals.

Ferreira says she's cognizant of the fact that, no matter how true-to-life the manikins are, "we are only representing what we can see on the outside." That's true, of course, but, as Abril experienced, sometimes what we see on the outside can have a startlingly moving effect on how we feel on the inside.

When Abril — who admits he had never been particularly interested in babies — first held an uncannily realistic Lifecast infant, he was surprised and delighted (the centre's family of Lifecast brand manikins are the most eerily lifelike on the market but they don't have the electronic components of their high-fidelity brethren).

"Most of the girls in the group had experience holding babies, but the guys didn't," he says. "My sister likes babies, I didn't really. But when I picked up that baby? She's amazing." Smitten, Abril named her Theresa. "She made me like babies." •



The underpinning "Basic Assumption" of the nursing sim centre is that all learners are "intelligent, capable people who care about doing their best, and want to improve". It's a place where babies dazzle, students shine, and our future nurses become competent, compassionate professionals.

Visit [arch-magazine.ucalgary.ca](http://arch-magazine.ucalgary.ca) to learn more about the nursing sim centre.

# On Leaving a Job You Love

Sometimes, you just have to go

by Mayor Naheed Nenshi, BComm'93

**'m so sad to see you go!"**

"I'm kind of sad to see me go, too! But there is a time for everything."

I've had this exchange countless times since slowly venturing out into the world again in July. It's my rote answer. But it doesn't ring entirely true, even for me.

Let me take you back to April 2021. It's the Thursday before Good Friday. For months, I'd been asking myself whether I should run for re-election or not. I'd gone through multiple scenarios. I'd talked to dozens of people to get their advice. I had even had a regular video meeting with a team of close friends and advisors I call the "Sunday Morning Group" (though we never meet on Sunday mornings). And, for a brief, glorious moment last summer when it was safer, we even met in person a couple of times on the Hose & Hound patio.

The advice has been more or less unanimous: "As a Calgarian, I want you to stick around. As someone who cares about you as a person? I want you to move on."

Now, what in the world was I supposed to do with that? I've been extraordinarily lucky in my career. Since leaving the private sector and coming back to Calgary two decades ago, I've been able to merge my love of public service with what I do for a living. What was right for me personally was inextricably linked to what was right for the community. Or so I kept telling myself.

So, I went back to first principles: Why was I in this

job in the first place? What was I trying to accomplish? Would it be irresponsible to leave at this critical moment in history while we're facing five simultaneous crises including a public health crisis, a mental health and addictions crisis, an economic crisis, an environmental crisis, and a long-delayed reckoning on the issue of equity, including an uncertain journey to reconciliation and anti-racism? How could I possibly leave now?

And yet.

These days, even though I can't always remember why I walked into my own kitchen, I *do* remember some lessons from my undergraduate days. I thought about Dr. Ron Glasberg's General Studies 300 and 500 classes. Dr. Glasberg talked about the cyclical nature of time: how societies went from periods of transition to tension to transcendence to torpor. I'm likely applying this incorrectly even now (sorry, Dr. Glasberg!) but, maybe what so many see as a civilization in its last throes — a time of torpor — is actually one that is critiquing what it truly stands for. Maybe we're in a time of tension. Which means, as we sort it out, that we can move to a time of transcendence. *But how?*

One thing I heard constantly during the summer of 2020 was that too many voices in the community felt they weren't being heard. Was it time to make some room for these voices by getting out of the way? Was it time to make room for younger voices, more diverse voices? Or would the vacuum I created cause us to go backwards? Or was I just massively overthinking it all? Probably.

Ultimately, I have loved being mayor. All of it. I loved the crazy hours and the 30-event weekends. I loved grappling with really tough decisions that make a difference in people's lives every day. I did not love social media towards the end and there were some days when I did not love my City Council colleagues — but I have really tried hard to live my life in gratitude.

I tried to never forget that people put their faith in me. That I had the privilege to hold in my hand, even for a second, people's hopes and dreams — their fears and challenges for themselves, their families and their community. I tried to never forget that enormous and humbling responsibility.

But I couldn't do it forever, could I?

In the end, the decision came a little easier when I looked back at the time I was first elected. I remembered the promise I made to myself — a promise my mum and dad drilled into me my whole life: leave it better than you found it. And, all crises aside, I know that things are much better for so many.

Perhaps the most important thing for me has been to recall how I started that very first speech, close to midnight on Oct. 18, 2010. I was in a basement with far

too many people. It was hot. I was sweating like I've never sweated before. Over the crushing din and noise, I took a deep breath and I said, "Today, Calgary is different than it was yesterday. It's better. And it's not because of me; it's because of you."

The Purple Revolution was never about me. It was about Calgarians willing to take a risk on a better future. Willing to take a risk on a nerdy shlumpy

professor to help take us there. I needed to remind myself of that.

Now feels like the right time for someone new to meet the challenges facing our city — someone with new perspectives, new ideas and new methods of doing things. We can take a risk with a fresh person like we did 11 years ago and continue to strive for a better Calgary.

This city has 1.4 million people living here, people who love this city. Every day, there are acts of

tremendous service and heroic community-building. We are strong.

So, I'm off to new adventures — new ways, I hope, of being of service. *Inshallah*, as we Muslims say, I'll have the chance to be part of the story that we are all writing. We won't just be OK, we will be amazing. And we will do the work together. •



Now feels like the right time for someone new to meet the challenges facing our city — someone with new perspectives, new ideas and new methods of doing things.

Naheed Nenshi, BComm'93 (with distinction), was sworn in as Calgary's 36th mayor (he was the first Muslim mayor in Canada) in 2010 and was re-elected in 2013 and 2017. Naheed has won several awards for his work, which includes the President's Award from the Canadian Institute of Planners, the Humanitarian Award from the Canadian Psychological Association, and he was named a Young Global Leader by the World Economic Forum.

# The Drive to Thrive



**Heather Culbert may have beaten cancer but she's all too familiar with the devastating effects of a disease whose outcomes she's determined to help change**

**What's your personal experience with cancer?**

My mother, Connie Cooper, who was a nurse, passed away from cancer in 2013. She developed breast cancer three times, and colon and liver cancer. In 2009, just before my mother got her third breast cancer diagnosis, I found out I had breast cancer, too. The timing of my diagnosis was wild: at the time, I was not only taking my mom to her appointments for breast cancer treatment, but I had just recently been named honorary chair for the Weekend to End Women's Cancers in Calgary.

**How did you feel when you got your diagnosis? What did you do?**

Given my mom's history with breast cancer, I can't say I was really surprised. I was fortunate to be diagnosed very early on: I'd gone in for my annual mammogram and they saw a shadowy spot. I was offered different options and took the more radical route — I decided to have a mastectomy right away instead of a lumpectomy where you're not sure whether they ever got it all. I'm clear now. And I'm clearly a big believer

in getting an annual mammogram. Even if there's no family history — cancer can happen to anyone.

**You're also a big believer in the impact of cancer research — where do you want to make a difference?**

Early detection and precision oncology. My support is largely focused on breast cancer. My husband, Michael, and I have given to help advance research at the University of Calgary led by Dr. Tina Rinker. She and her team have developed a blood test for rapid testing and diagnosis of breast cancer. It can help cancer be detected much faster and find it in places where imaging techniques wouldn't detect it as quickly. And we've given to help the university purchase equipment to advance genetic profiling for precision oncology — that's how doctors can develop customized treatments for patients to target an individual's tumour.

**What was it about your mom's cancer experience that moved you to support cancer research?**

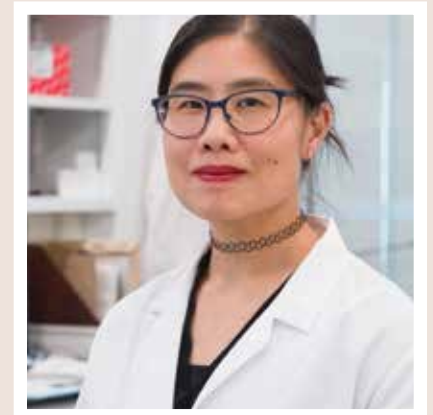
I was my mom's advocate as she went through the system, which is fragmented. There has been no central place for cancer testing, treatment, and care, and we had to go all over the city for all the various appointments, which made things challenging and confusing sometimes. I wanted to help change that. I feel like that's my calling, it's why I give to the university — to keep making the experience better for others by improving how cancer is diagnosed and treated. It's why I've supported cancer research and why I am now advocating to help get the Calgary Cancer Centre underway — it's an incredible project and it will change the future of cancer research and care.

**To you, what's the most exciting or transformative aspect of the new centre?**

That everything patients need throughout the course of their cancer journey is all in one place. I'm also excited about the thoughtful spaces designed for people with cancer to recover and spend time with their families. It's an incredible opportunity for improved patient care and earlier diagnostics, and Calgary has the capacity and ability to improve the experience. When the Centre opens in 2023, this city be home to a world-class cancer hospital with a comprehensive approach that allows researchers, clinicians, patient-care specialists, and diagnosticians to work together in one place. I would love for people to feel a sense of calm and hopefulness when they walk into this place.

Heather Culbert is the volunteer co-chair for the Calgary Cancer Centre OWN.CANCER campaign — a \$250M fundraising partnership between UCalgary, the Alberta Cancer Foundation and Alberta Health Services to support the best of the best in cancer research, education, and patient care in Calgary.

Photo: Elizabeth Stange



**Dr. Jennifer Chan, MD**, is the Scientific Director of the Arnie Charbonneau Cancer Institute, a co-entity of UCalgary and Alberta Health Services. She is also an associate professor in the Department of Pathology and Laboratory Medicine at the Cumming School of Medicine. Dr. Chan, along with Dr. Don Morris, MD, PhD, are leading the patient care and research vision priorities for the campaign.

**“We're ushering in a new era of cancer research in Calgary — one that aims to interweave research into every aspect of clinical care, and is driven by the power of creativity, connection, innovation, and transformative collaborations. We're doing this to accelerate progress against cancer for Calgary, for Alberta, for Canada, for the world.”**

—Dr. Jennifer Chan

# Live Long and Hail a Cab

A round-up of the best new books  
from our writerly friends and faculty

■ **Call Me Stan: A Tragedy in Three Millennia** (Dec. 2021)  
Kevin Wilson, BMus'80



The story of a man endlessly struggling to adjust as the world keeps changing around him, *Call Me Stan* is a biblical epic from the bleachers, a

gender fluid operatic love quadrangle and a touching exploration of what it is to outlive everyone you love. Or almost everyone. Wilson, writing under the pseudonym W.R. Wilson, is the author of the award-winning debut novel *An Idea About My Dead Uncle*.

■ **Unlocking** (June 2021)  
Amy LeBlanc, BA'17, BEd'19

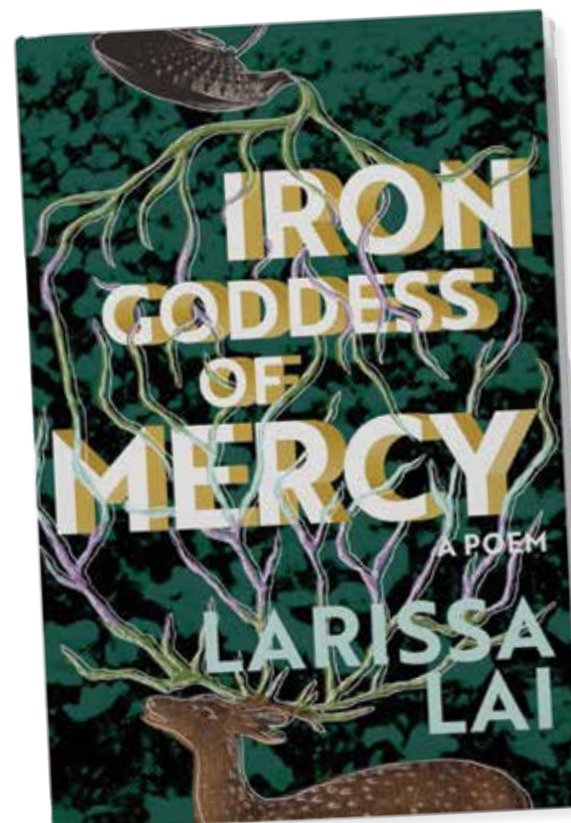
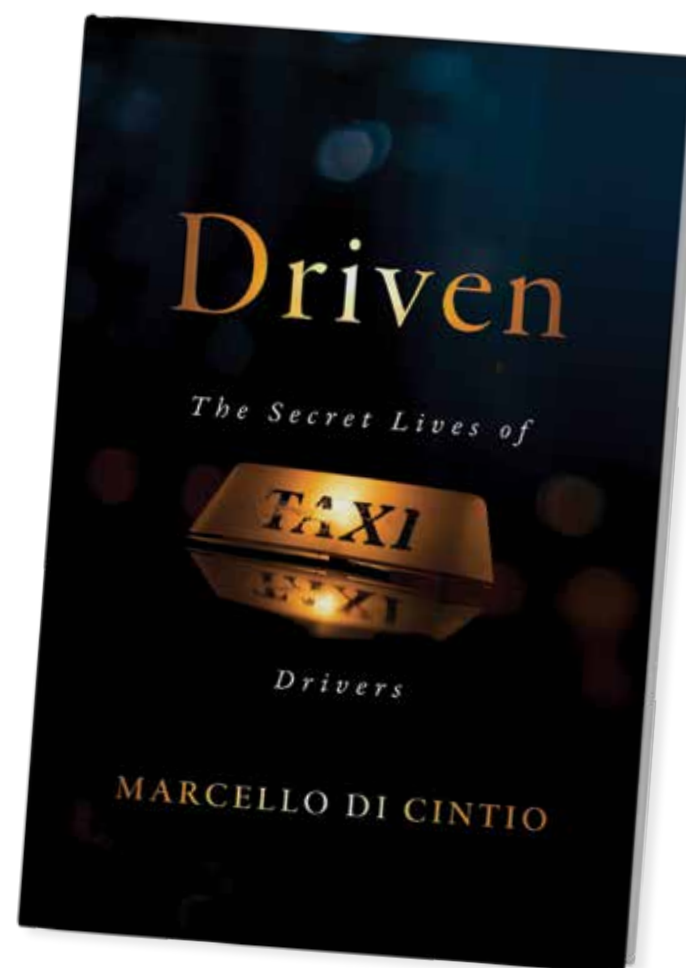


In Snowton, Alta., secrets flourish like the crocuses in spring. When Louise Till lets herself into a neighbour's home using a surreptitiously copied key, she

discovers more than she ever wanted to know about her small town and herself. Lou must confront not only the lives of her neighbours, but the unspoken truths of her family and the doors within herself for which there are no keys. Told over the course of one long winter, *Unlocking* is a poignant and penetrating exploration of grief, community, family and the secrets we keep, even from ourselves.

■ **Driven: The Secret Lives of Taxi Drivers** (May 2021) Marcello Di Cintio, BA'97, BSc'97

Occupying the space between public and private, a cab brings together people who might otherwise never have met — yet most of us sit in the back and stare at our phones. Nowhere else do people occupy such intimate quarters and share so little. In a series of interviews with drivers with backgrounds ranging from the Iraqi National Guard, to the Westboro Baptist Church, one recalling an arranged marriage that left one woman stranded in a foreign country with nothing but a suitcase, *Driven* seeks out those missed conversations, revealing the unknown stories that surround us.



■ **Iron Goddess of Mercy** (Feb. 2021) Dr. Larissa Lai, PhD'06, associate professor, Department of English

Inspired by the tumultuous history of Hong Kong, from the Japanese and British occupations to the ongoing pro-democracy protests, *Iron Goddess of Mercy* is a long poem that interrogates the complicated notion of identity, offering a prism through which the term "Asian" can be understood to make sense of a complex set of relations. Presented in 64 fragments to honour the 64 hexagrams of the I Ching, *Iron Goddess of Mercy* also borrows from *haibun*, a traditional Japanese form of travel writing in which each diary entry closes with a haiku.

*"An astonishing book about folks from all over, many of whom have been through total hell but have somehow made their way out... You never know who's driving you. Each person contains multitudes."*

—Review by Margaret Atwood for Marcello Di Cintio's book, *Driven*, on Twitter

■ **The River Troll: A Story About Love** (Sept. 2021)  
Rich Théroux, BEd'03



*The River Troll*, written and illustrated by Théroux, takes place late at night as our protagonist wanders a little and ponders quite a lot on a long walk along

a river looking for a reason to keep on living. He meets up with the River Troll, a minotaur, a cheeky monkey and a few other all-night ghouls as he drifts along, searching for purpose. They all find it amazing that their friend can negotiate his way through the day posing as a teacher.

■ **Fish Wars & Trout Travesties: Saving Southern Alberta's Coldwater Streams in the 1920s** (Aug. 2021) Dr. George Colpitts, BA'90, MA'93, PhD, professor, Department of History



*Fish Wars & Trout Travesties* offers an instructive glimpse into an earlier era, before the government assumed its present degree of regulatory control over the environment. Colpitts draws on rarely consulted historical

documents in an effort to tease out the "fault lines" within conservation practice. As he demonstrates, the move for conservation described in *Fish Wars* was largely a grassroots phenomenon, and the rules subsequently formulated were often the result of pressures from below.

■ **On Borrowed Time: North America's Next Big Quake** (Sept. 2021) Gregor Craigie, BA'95

For more than a decade, Gregor Craigie interviewed scientists, engineers and emergency planners about earthquakes, disaster response and resilience. He has also collected vivid first-hand accounts from people who have survived deadly earthquakes. *On Borrowed Time* dives headfirst into explaining the science behind "The Big One," and asks what we can do now to prepare ourselves for events geologists say aren't a matter of if, but when.



■ **Icefields: Landmark Edition** (Oct. 2021) Dr. Thomas Wharton, PhD'98 | Afterword by Dr. Suzette Mayr, BA'90, PhD, professor, Department of English

First published in 1995, Thomas Wharton's *Icefields* is an historical novel set in a mesmerizing literary landscape, one that is constantly being altered by the surging and retreating glacier and unpredictable weather. Here — where characters are pulled into deep chasms of ice as well as the stories and histories they tell one another — is a vivid, daring and crisply written book that reveals the human spirit, loss, myth and elusive truths. •



# 10 Things We Like About You

Olympic athlete, activist, actor and motivational speaker **Mark Tewksbury, Hon. LLD'10**, finds purpose in empowering others to lead — and joy in the Mediterranean, the Elbow River and his supportive husband



Photos: Kelly Hofer

**If you could do anything for a living, what would it be?**

I'm a secret home chef. When I go into the kitchen, my husband and I joke that I'm starting my shift. I'll roast tomatoes for four hours to make a sauce. But I'm afraid if I cooked for a living, I'd lose my passion for it.

**When and where were you happiest in your life?**

The last time I felt enormously happy was on the banks of the Elbow River where I plunked down my chair and put my feet in the water. The greenery there is so gorgeous, and it all made me feel so fresh, and the water sounded beautiful as it moved and rushed around us. But I believe happiness is fluid — and you can't know happiness unless you know other moods.

**Who or what has had the greatest impact on the person you've become?**

The Olympic movement, from the time I was a child and captivated to watch Bud Greenspan's Olympic documentaries in black and white to now being vice-president of the Canadian Olympic Committee. Through the Olympics and the University of Calgary, I met (synchronized swimming champ-turned-coach) Debbie Muir, BEd'75 — together, we created our leadership training program that allowed us to take our skills from high-performance sport to business and life. As an Olympic competitor, Debbie was my secret secret-weapon coach — it was the first time in history that a female synchro coach worked with a male competitive swimmer.

**What do you like most about yourself?**

That I'm really comfortable in my own skin and that makes other people feel comfortable around me.

**If you could travel anywhere you wanted today, where would you go?**

I had a trip to Greece interrupted and cut short a few years ago and I'd like to go back — that would have been the first three-week holiday of my life and I'd like to try that again.

**Describe the most beautiful place you've ever been.**

The Mediterranean comes immediately to mind. The old part of Barcelona or Malta or the southern part of Italy. I love the way of life in those parts of the world, the way people eat and live. What strikes me is how important community and family is; I love that.

**When you're restless or unhappy, what do you do to improve your mood?**

I hop on my bike and I travel Calgary's most incredible pathways that I discovered during COVID. I didn't have a bike for many years and now I'm on my bike every morning. This city is such a jewel from a bike.



**Current guilty pleasure?**

Big Rock Traditional beer and the Slice TV reality show, *Below Deck*. At least it's in the Mediterranean...

**Who or what in life brings you the most joy?**

Thankfully, after 16 months of being together all the time, I can answer wholeheartedly that that is my partner, Rob Mabee, BA'92. My life has kind of taken off because of meeting such a great human being who I get to be with.

**If a song played whenever you entered a room, what would it be?**

*Everyday People* by Sly and the Family Stone. •

Mark Tewksbury, Hon. LLD'10, is a multiple medal-winning Olympic champion and a prominent advocate for the LGBTQ2S+ community worldwide. Alongside Debbie Muir, BEd'75, he developed the Great Traits Corporate Champions Program. He is deeply involved with the Special Olympics movement and the Canadian Olympic Committee. In 2020, Tewksbury was appointed a Companion of the Order of Canada, the highest level of our country's most prestigious honour.

**OWN. CANCER**

THE MORE WE OWN CANCER, THE LESS IT OWNS US.



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> Third-year nursing student **Fabricio Abril** bonds with the Lifecast manikin baby he named “Theresa,” in the Faculty of Nursing’s Clinical Simulation Learning Centre. (p. 44).



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