

# Calgary









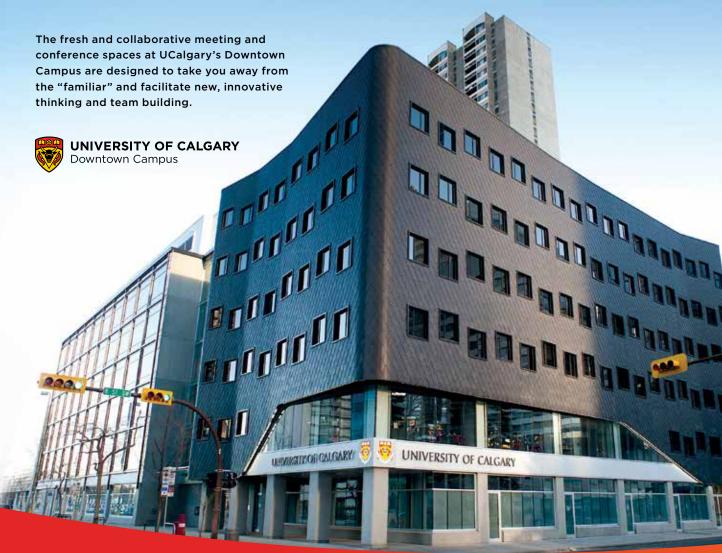




Skin in the Game | Altered Egos



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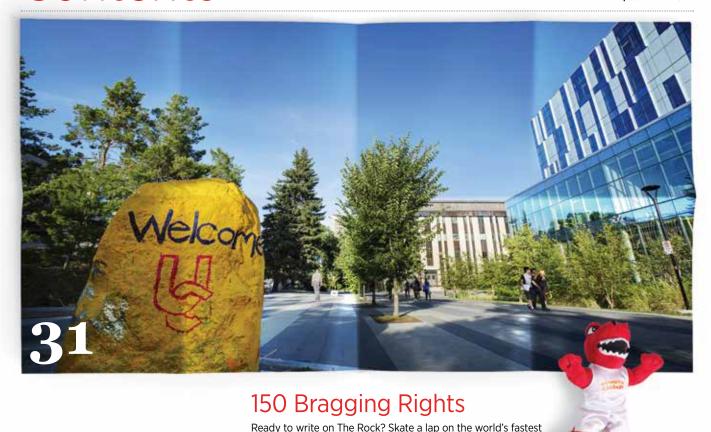


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discover these 150 bragging rights.



#### **Altered Egos**

What's the deal with our weird take on scientists? We set out to explore the stereotypes that shackle these folks and found six UCalgary scientists with seriously altered egos.



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#### Skin in the Game

Recent polls reveal that tattoos are more acceptable for athletes than for any other occupation. We check in with various Dinos who reveal their mark on the world.

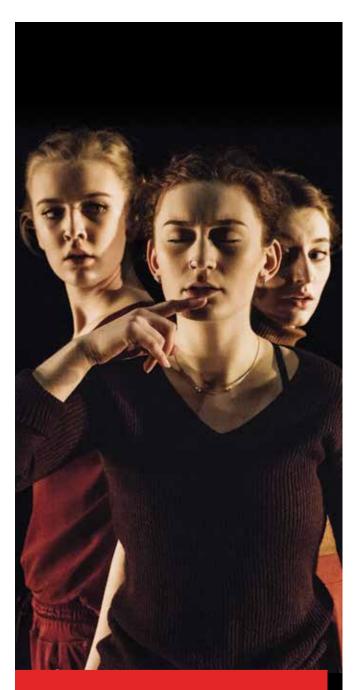




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Ramberg in our exclusive behind-the-scenes video. alumnimag.ucalgary.ca



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The Scarf, choreographer: Maggie Myles with Elizabeth Clarke, Emily Losier, Reese Wilson. Dance@Noon, 2017.

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**\lumni**magazine

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Put on your reds, grab a thunderstick and come out to the next Dinos game — Sept. 23. Alumni enjoy discounted Dinos football tickets all season long. nusual experiences have always been a lure for travellers, but never as much as they are for millennials. If there's one thing we've learned about this generation — born between 1981 and 1997 — is that they love bragging rights. Whether it's setting foot on all seven continents before they turn 30 or kayaking around Greenland's icebergs, millennials seem driven by acronyms such as YOLO (you only live once) and FOMO (fear of missing out).

That attitude spills over to academia, as well — which is precisely why we've devoted our features section to saluting Canada's birthday with 150 of our own bragging rights. In compiling the list, we were amazed by all the one-and-onlys found on our campus and in our city, from bizarre public art — yes, we're talking about rocks, zippers and bears — to high-achieving entrepreneurs, scientists, researchers, artists, CEOs, educators and innovators. There was no shortage of people, experiences and iconic items to document and recount. Without them, our country, city and campus would be lesser in every sense. You can read about our 150 bragging rights starting on page 31.

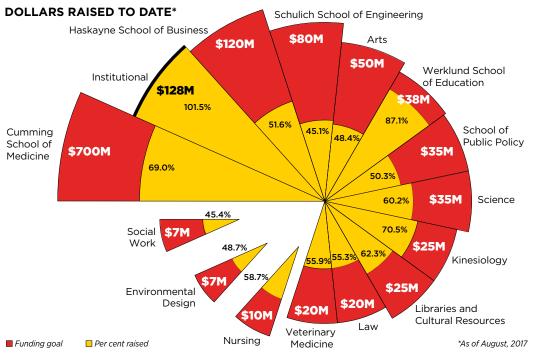
In the spirit of FOMO, we kick things off with a salute to our homecoming football game where our beloved Dinos — the only dinosaur-related team name in university sport in North America, (Bragging Right No. 11) — take on the University of Saskatchewan Huskies on Sept. 23, one of Alumni Weekend's signature events.

For this special game's preferred alumni rate, visit ucalgary.ca/alumniweekend/sessions/play/dinos. — Deb Cummings U

#### The *Energize* Campaign So Far

Thanks to the generosity of thousands of alumni and friends, the *Energize* campaign has raised more than \$870 million to unleash student potential; empower research outcomes that benefit

society; and strengthen and build vital and enriching community connections. As we strive to raise \$1.3 billion to spark lasting, meaningful change on campus, in our city and beyond, we are thrilled by the extraordinary commitment by those who support the university's vision. Thank you for creating and contributing to *Energize:* the Campaign for Eyes High — together, anything is possible. U









#### **Venturing Out**

Anyone can think like an entrepreneur — all you need is a problem, a solution and one-of-a-kind support to launch your next big idea into orbit

**ENTREPRENEURS** 



Suzanna Crawford



le Hu



Erica Hughes

he words "entrepreneurial thinking" have stirred up a buzz on campus. Little wonder. While the Haskayne School of Business has long been in the vanguard of entrepreneurial teaching and learning, there's a new commitment afoot to infuse the entire campus with such programs and spaces.

Thanks to philanthropic support behind the \$1.3-billion Energize campaign, including a recent \$40-million gift from the Hunter Family Foundation (the donors behind Haskayne's highly successful Hunter

Haskayne's highly successful Hunter Centre for Entrepreneurial Thinking), the university is poised to build the cross-discipline Hunter Hub for Entrepreneurial Thinking in the heart of campus; that, along with other experiential learning opportunities in the works, promises to make the university a global leader in entrepreneurial thinking.

Meanwhile, these three student entrepreneurs are proof that brilliant ideas and viable ventures are born every day, in every discipline: **WHO?** Suzanna Crawford, BN'12, BSc'10; current MN student

**WHAT?** Enable, a startup aimed at increasing a sense of community for people of all abilities. Its website links student caregivers with people who have disabilities, enabling both to share activities and support.

**WHY?** While volunteering with the non-profit Between Friends, Crawford saw a need for more

one-on-one caregiving for individuals with disabilities who couldn't find the right fit. **HOW?** Enable was, well, enabled by a recent grant through Haskayne's Hunter Centre and Innovate Calgary; this year, Crawford won the Innovation Development Award through the Graduate Student Association.

**WHO?** Jade Hu, current MA (Economics) student

WHAT? Jadehu Box, an early stage export business that ships cosmetics to China. WHY? Growing up in China, Hu was aware of the illegal and expensive grey market that made cosmetics unattainable for her and her friends — and she saw a huge appetite in China for trendy products. Subscribers to Jadehu Box can try new Canadian cosmetics at affordable prices.

**HOW?** Hu developed her idea via courses and mentorship at the Summer Incubator Program at the Hunter Centre.

WHO? Erica Hughes, BSc'09; current BComm (Accounting) student WHAT? *CareFind*, an app that connects parents to real-time vacancies posted by child-care facilities.

**WHY?** Hughes once missed a job interview when she couldn't find last-minute care for her twins; she saw value in offering a solution to other parents who need a reliable last-minute babysitter.

**HOW?** Haskayne course ENT 317 (Intro to Entrepreneurship) empowered Hughes to develop her idea. This year, *CareFind* won the RBC Fast Pitch Competition, prompting her to enrol in Haskayne's Summer Incubator Program. — *Jacquie Moore* U



#### Learning From Our Closest Relatives

As one of six new Canada Research Chairs at UCalgary, Amanda Melin's research provides insights into how humans can respond to shifting diets and climates

f you tried to track down Asst. Prof. Amanda Melin in early July, you would have got an out-of-office message explaining she was in Costa Rica. Not at a yoga retreat or surf camp, but at a field site in Santa Rosa National Park where Melin, BSc'03, MA'06, PhD'11, and her students were collecting fecal samples from capuchin and howler monkeys, seeking to deepen our understanding about these primates' health and ecology.

Why this matters is straightforward.

"By improving our understanding of the how the senses, diet and health of these monkeys intersect, we can gain insight into how these factors contribute to human evolution, adaptation and health, including nutrition and eating disorders," explains Melin. "While we know all of these factors are connected, my work will go further to

NEWS

link genes to sensory behaviours, allowing us to better understand

genetic and behavioural variation in our own species and in our closest relatives."

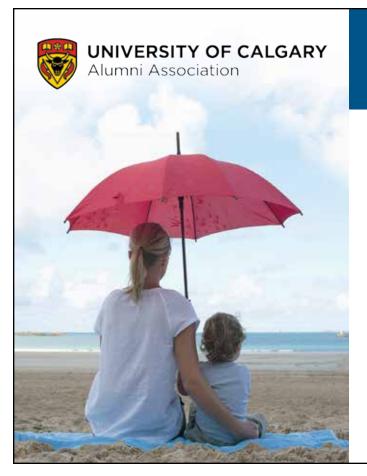
Established 35 years ago, the Santa Rosa primate field project remains among the longest-running programs of its kind in the world. Working with wild animals, it's impossible to obtain blood samples or cheek swabs. So, in order to perform primate DNA analysis, Melin gathers samples



from the monkeys' droppings and takes those back to Calgary's Centre for Health Genomics.

In the past decade, an explosion of clinical studies have linked gut microbiota to anxiety, depression, obesity, inflammatory bowel disorders and malnutrition. "Yet," points out Melin, "very little is known about how gut microbiota responds to natural changes in climate and diet."

Melin's research will markedly deepen our understanding of how shifting environmental conditions of a howler monkey's habitat and diet can connect and link us to factors that impact human health. — Deb Cummings U



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#### **New CRC Chairs**



Joining UCalgary's 50 other active Canada Research Chairs are six new appointments that award scholars for advancing global health and energy challenges.



Joule A. Bergerson's economic and environmental assessments are guiding energy transitions as governments and industry move to adopt more aggressive carbon-mitigation technologies.



Nils Daniel Forkert has made advances in medical imaging analysis that are improving diagnosis and treatments for life-altering brain impairments, including cerebrovascular and neurological diseases.



Marco Gallo's epigenetic cancer research is aimed at understanding gene expressions, rather than the genes themselves, offering hope for the treatment of pediatric brain tumours and adult glioblastomas - the most common malignant brain tumour found in adults.

Arthur Kuo is one of the few scientists to straddle research that intersects human locomotion biomechanics and neuromuscular control, developing new algorithms and wearable sensors to accelerate our search for new rehabilitation technologies.



Peter Tieleman is applying high-performance computing to reveal the intricate cellular interactions that take place in all living things and is combining biophysics and bio-computing to simulate how cells function to advance development of new drugs and technologies, including drug delivery and biosensors. U





#### **Connect to the Energy of UCalgary Alumni**

UCalgary Alumni is your global network that is more than 173,000 strong — and growing! There are so many ways to connect to this energetic hub in Calgary and cities around the world. Follow @ucalgaryalumni on social media, watch your inbox and visit ucalgary.ca/alumni for dates and more information about these programs and events.



#### **NEW BREAKFAST SERIES LAUNCHES IN OCTOBER!**

Enjoy a hot breakfast and lively expert-led discussion examining hot topics, current events, social issues, innovations, technology, trends and more.



#### **NEW SEASON LAUNCHES IN NOVEMBER!**

Challenge your perceptions as we share transformative ideas on topics that matter to all of us: energy, entrepreneurial thinking, health and well-being. Join your fellow alumni at Idea Exchange events in Calgary and around the world.



#### **JUST FOR RECENT GRADUATES**

Check out our quarterly workshops to connect with UCalgary alumni and other experts whose advice and learnings in life and career will help guide you through your post-university journey.



#### **GROW YOUR CAREER**

You worked hard for your degree — now gain the confidence, skills and inspiration you need to achieve your career goals with the UCalgary Alumni Career Program.

Book your one-on-one in-person or virtual career coaching session to get the advice and guidance you need most.

Register for our monthly career webinars for an in-depth exploration into job-related topics and issues.

#### **Enjoy the Best of UCalgary**

Your time as a student may be in the past — but there's still plenty to learn from UCalgary's professors, researchers and alumni! Open yourself up to discovery by attending these events that UCalgary Alumni is proud to support:



#### CALGARY AND BEYOND: SUSTAINABILITY IN THE NEXT 20 YEARS

Join a panel of experts in exploring the barriers and opportunities to moving toward a more sustainable future. Topics address today's most pressing social, environmental and economic challenges. The 2017/18 speaker series launches on Oct. 11.



#### SNYDER INSTITUTE'S MINI-MEDICAL SCHOOL

Want to gain more insight into healthy living and learn more about chronic diseases? The doctor's in starting Nov. 6 at the Snyder Institute for Chronic Diseases' Mini Medical School series.



#### MARK YOUR CALENDARS — SKATE WITH SANTA IS DEC. 16

Skate with Santa returns to the Olympic Oval on Dec. 16, 2017! Lace up your skates and bring the whole family to take a spin around the fastest ice in the world, get creative in Santa's Workshop and test your hockey skills with the Dinos at the Crowchild Classic Corner.



#### GIVE BACK WITH UCALGARY ALUMNI

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# Alter Can be replaced by George Clooney, but lifelong personality drifts are inevitable. Some

by Mike Fisher • main photography by Fritz Tolentino

UCalgary scientists have perfected this drift, honing their altered egos to new heights



white lab coat; a beaker bubbling with some nefarious liquid over a Bunson burner; a goggle-eyed, tousle-haired lost soul working the tongs on another ghastly experiment, squinting through their spectacles at the thing they've created. Who are these people?

These, my friends, are scientists. Often misunderstood, sometimes maligned, typically given shape by some grim stereotype, scientists spark the modern imagination. They are not oft-mad, tweed-jacketed ciphers that speak in equations — although lurid 1950s black-and-white sci-fi movies and modern-day superhero blockbusters suggest otherwise.

So what's the deal with our weird take on scientists? Who are they, really? Just what is it that they do, exactly, and how do they fit into our world?

"Humans have stereotypes about pretty much every group that exists," says Cara C. MacInnis, a University of Calgary assistant professor in the Department of Psychology. Her research includes examining perceptions, behaviours and emotions that negatively impact intergroup relations.

Stereotypes of scientists might include characteristics such as introverted, intelligent, nerdy, quiet, unattractive, not fun or workaholic, says MacInnis. While stereotypes help us save cognitive resources, she explains, they are problematic, because they are generalizations. "Relying on stereotypes to form impressions of individuals can cause serious judgment errors," she says.

So we conducted a little experiment.

We poked and prodded into the lives of six UCalgary scientists. And you know what? These people rock, inside and outside the lab.

Whether they're thrashing onstage with a metal band, motoring into mountain country, building a LEGO legacy, earning another karate black belt or perfecting one more delicious cake, they are passionate about their pursuits. They create wonder in the experiment of living, something from which we can all learn.

#### Gerald Zamponi

Professor and Senior Associate Dean for Research, Cumming School of Medicine

UCalgary neuroscientist and researcher Gerald Zamponi, PhD '94, is working through his routine, meticulously readying the stage so that his metal band Hellrazer can blow the minds of everyone who has squeezed themselves close to its fury.

He sets up the vocal mic, twists knobs on his guitar amp and tunes his guitar. He hangs the Hellrazer banner, does a quick sound check and then . . . blast off.

"Nothing compares to the feeling when the band is tight and the audience is into it," said Zamponi, whose research focuses on ion channels and receptors and their roles in chronic pain. "It is almost as good as having a paper published in Nature."

A room for scientific discoveries or a recording studio for musical exploration are laboratories, of a sort, for Zamponi. For him, the creative process can arise from activities that require little brain power.

# Neuroscientist proves his creative met te

"It's interesting in the sense that some of my best scientific ideas simply pop into my head while doing mundane things," he says. "In the end, one cannot force creativity; it just happens."

A walk through a church in South America yielded the chorus and melody of a song. A movie prompted a storyline. Meanwhile, his academic career has bloomed. His major administrative roles have included being head of the Department of Physiology and Pharmacology, and serving as senior associate dean in the Cumming School of Medicine.

Zamponi's research into how inflammatory and neuropathic pain impact cells is being used to develop new pain therapeutics, while his lab is also studying approaches to decipher how pain signals are processed in the brain.

Otherwise, Hellrazer has garnered attention internationally, as well as being short-listed for a Western Canadian Music Award for best metal recording, among other honours.

There are commonalities that make Zamponi's job as a widely respected scientist and his status as a successful songwriter, musician, performer and recording artist more unified than they might first appear. Both music and academia, he says, require creativity, professionalism and a drive for success.

On stage in Hellrazer with fellow UCalgary cell biologist medical student and lead guitarist James A. Rogers and faculty members Simon Hirota (bass) and Shigeki Tsutsui (drums), Zamponi fuses his two worlds. "The high energy of metal music, along with the creativity that comes from writing songs, is the perfect yin to the yang of being an academic researcher," he says.

#### **Jennifer Chan**

Associate Professor, Cumming School of Medicine

It was the summer of 1993 and Dr. Jennifer Chan, then 20, had just moved to Concord, N.H., for a teaching job. Wearing her favourite red dress, she was pumping gas into her Saab 900 S when she noticed something going on across the street. She hesitated, peered over her wire-rimmed sunglasses, and saw her future.

"All these gnarly looking guys with tattoos were on their Harley-Davidsons," says Dr. Chan, a UCalgary neuropathologist and scientist. "I wondered what it would be like to ride, as if you were flying through the air. Then I thought: why should these guys have all the fun?"

Soon after, she bought a motorcycle — a relatively safe bike, a Honda Shadow 600. Today, she rides a Ducati Monster 696, a beautiful and graceful brute that slings her petite, five-foot-one-inch frame along twisted Rocky Mountain roads at dizzying speeds.

"The wind flows up your arms and past your body," says Dr. Chan, now the Kids Cancer Care Foundation Chair in Pediatric Oncology Research, as well as deputy director of the Charbonneau Cancer Institute. "You work to hold your head up. The wind mixes with the

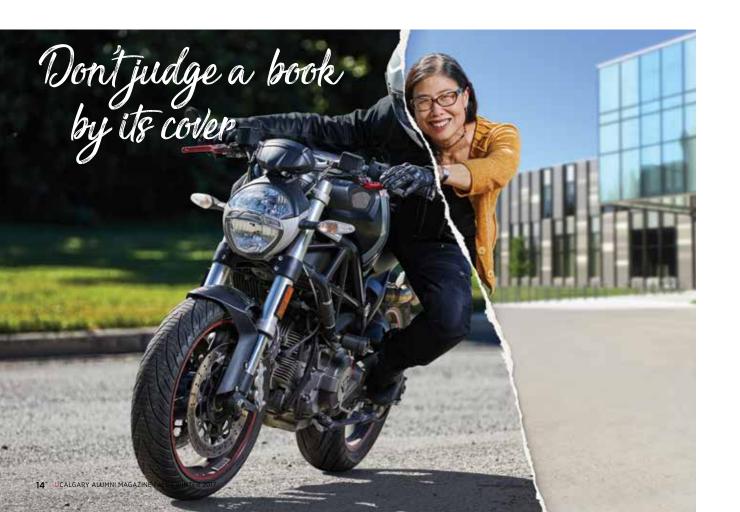
dull roar of the motor. Green forest rushes by, the light dapples the trees — you can even smell the grass."

In her younger years, riding was an escape. These days, it's more like life encapsulated, she says, a way of condensing the conceptual into something physical.

"There's the expression that life is like a road," says Dr. Chan, whose research focuses on the functions of genes that are mutated in brain tumours, specifically those associated with gliomas and particular types of childhood brain tumours. "I'm a fan of twisties, both literally and figuratively, not the straight open road," she continues. "I prefer complexity over being a lotus-eater. The twisty road demands quick decisions and the will to steer the course. It requires self-awareness, as well as knowing what's around you."

That's what being on a winding road atop a rocket of a motorcycle summons in her, and it is the perfect melding of her alter ego as a motorcyclist with her career in oncologic neuropathology.

"I've met people who ride different kinds of motorcycles and dress differently," says Dr. Chan, who does not appear to be the kind of gearhead who presides over every detail of her Ducati, from its lightened flywheel to the stickers on the tank to make it look cute. "I've learned you can't judge a book by its cover."





Location: W.R. Castell Central Library

#### **Ben Stephenson**

Professor, Department of Computer Science

From a box of used LEGO bricks, dreams are made.

One of computer science professor Ben Stephenson's first memories is of his parents buying him a tub of used LEGO. It was a humble start, as legends go.

From there grew a mighty passion that's evident in Stephenson's many ambitious LEGO creations. His best-known work is his model of Calgary's New Central Library that took approximately 100,000 bricks to construct over the course of a year.

The LEGO-model library remains on display in the current W.R. Castell Central Library, where it continues to attract the attention of both adult and child visitors.

"As a child, I received numerous LEGO sets as presents over the years," says Stephenson, who has completed a handful of commissioned builds for several local Calgary companies and is an enthusiastic member of the Southern Alberta LEGO Users Group.

"While I always built the model that was on the box, it didn't stay together too long before it was disassembled, so that the pieces could be used for my own custom creations."

Though his passion for LEGO lagged during his teens

as he got into video games and computer programming, he reignited it when he visited Walt Disney World. While there, he bought a cup of LEGO (yes, you can buy the bricks by the cupful) and remains a Disney fan, scooping up unusual bricks during trips to central Florida.

One common aspect between computer programming and building with LEGO is that both are creative pursuits, where you take an idea and create a manifestation of it that you (and others) can interact with.

"A computer program or a LEGO model that you can look at from various angles, and pick up and hold, encourages experimentation," says Stephenson, whose primary research is education-oriented. Besides assessing innovative teaching techniques that can benefit other instructors, he has also connected artificial intelligence techniques to search methods employed when constructing LEGO models.

Stephenson's findings in computer science pedagogy have been published in two textbooks and a recent paper that examines the efficacy of exam wrappers (study skills questions that wrap around a midterm exam with the intent of identifying knowledge gaps that could help students with their final exams).

Stephenson continues to experiment with LEGO, and we can't wait. So many iconic Calgary landmarks just scream for the LEGO treatment.



#### **Lesley Rigg**

Dean, Faculty of Science

Martial arts helped save Faculty of Science Dean Lesley Rigg's life, though not in the way people might expect.

A catastrophic and life-threatening bike accident in 2010 put Rigg in a hospital emergency ward, but she fought back to regain her strength and credits her training for her remarkable full recovery.

"I used the strength training and the mental health from karate to help myself heal," says Rigg, who is also co-chair of the Implementation Committee of the Prevention of Sexual Harassment and Sexual Violence.

Having trained in martial arts since 1996, with two black belts in karate, Rigg also trained in self-defense against both gun and knife, and her expertise includes martial arts weapons. These credentials allow her to occasionally teach self-defense on the main campus where she loves to pass on her skills and wisdom, particularly to empower women.

Rigg's martial arts and academic training go handin-hand. As a forest ecologist, she has worked in the field for years, out in the wilderness, exploring the broad themes of vegetation dynamics, the role of the environment on vegetation communities and the impact of humans on these communities. She has taught self-defense and resistance training since 1997.

"The similarities are great — focus and passion are key to both my life as a scientist and my (martial arts) 'alter ego,'" says Rigg. "Also, both involve teaching and having that moment when a student sparks — it happens in the classroom, in the field and in the dojo!"

Though she took her first self-defense class in Boulder, Colo., and found it to be both empowering and confidence-building — "I learned to do things physically that I had never imagined!" — she really got going in Australia where she and her husband lived 20 years ago.

"I walked past a karate dojo every day and, after a few months, dropped in to see what it was all about," Rigg says. "I trained up to five times a week while working on my PhD and achieved a black belt in twoand-a-half years."

Rigg's remarkable abilities and experiences can serve as an encouraging signpost for alumni who are entering middle age and beyond.

"One last point of great importance is that (karate and martial arts training) is physically demanding and builds strength," adds Rigg. "As we age, it is important to stay flexible and strong. Martial arts are a great way of doing that."



#### Isabelle Barrette-Ng

Senior Instructor, Biochemistry, Department of Biological Sciences

As a child, Isabelle Barrette-Ng would sit patiently, watching her mother bake, knowing that, at some point, she'd be able to get her hands on all the good stuff that mysteriously turned into delicious cakes.

She'd bide her time at the counter on a stool, her mom standing and wearing an apron, working the mixing bowls filled with cake batter or icing, which would inevitably undergo a magical transformation.

"Our kitchen smelled of cakes, which, to me, smells of home," says Barrette-Ng, now a senior instructor in Biological Sciences.

Years later, the experience would inform Barrette-Ng's love of teaching and her desire to provide her students with memorable explorations.

"My mother would create masterpieces from scratch," says Barrette-Ng, today herself an enthusiastic baker of pastries, cakes and other delicious confections. "I always like to experiment and see what I can make."

Today, she bakes for friends, family, colleagues, students — anyone lucky enough to be in line for a taste. She bakes in her own kitchen, the windows overlooking a ravine that slopes away from the backyard, where she gets lost in the process of creating.

"Baking is my way to relax — it is a stress-reliever," she says. "It also ignites my imagination."

Barrette-Ng sees links between baking and biochemistry. Both require attention to detail and creativity. "When teaching complex topics to large classes, I am challenged to present concepts in an accurate way, but also in a way that will spark a student's interest," she says. "I need to show them links to everyday life."

She has won several teaching awards from UCalgary's Students' Union (including being inducted into the Students' Union Teaching Excellence Hall of Fame). She is also a founding member of the University of Calgary Teaching Academy, and she also won the Award of Excellence in Teaching from the Faculty of Science.

Barrette-Ng has had her students bring in their own foods, using hands-on investigations that consider and identify foods that might be genetically modified — but with a larger aim. "It shows students that science impacts everyone, it's in our everyday lives, and it invites them to be part of it," she says. U

Visit **alumnimag.ucalgary.ca** for more altered egos.

#### **Too Clean for Our Own Good?**

For decades, human beings have tried to wall off their bodies from the microbial world of bacteria, viruses and fungi. But an increasing body of research suggests that an overly sterile environment may not be so healthy after all. Discover two points of view in this issue's debate on germs, microbes, dirt and the hundreds of bacterial species that call us home

#### Illustrated by Kelly Sutherland

Assistant professor Marie-Claire Arrieta has been a microbiologist for 16 years and has co-written a book aptly titled *Let Them Eat Dirt!* A parent of two little ones, she is particularly interested in children and their microbiome, as well as intestinal microbes. Take note: That's microbes, not germs!

When did you become interested in the field of germs? I've been interested in microbes since I was a kid. I became a microbiologist and a research scientist mainly because of this interest. If I have a specific "bug" — pun intended — it's correcting people when they refer to microbes as germs!

Do you have any special thoughts on germs and children? It is important here to distinguish microbes from germs. "Germs" is a popular term used for microbes that cause disease. In the context of germs, yes, it is important to protect people, especially children, from getting sick. Their immune system is still developing and there is no evidence that acquiring infections during childhood make you healthier later on; in fact, it seems to be the opposite. However, children do need to get exposed to non-harmful microbes and their healthy development actually relies on these exposures.

What public places do you avoid due to germs? I do not avoid areas due to germs and only take particular caution to prevent disease exposure in certain places, such as a hospital (always wash your hands after visiting a hospital). Microbes are everywhere; there is no chance of avoiding them. What one has to be cautious about is to avoid the ones that cause disease. Of the thousands of microbes, only about 100 are known to cause human infections. Vaccines, proper hygiene and education on how these diseases transmit are a great way of avoiding contact.

If you could make people change three of their habits, what would they be? In terms of germs (disease-causing microbes): proper





wipe down hotel room surfaces

\*CLR survey of 1,500 adults

When it comes to germaphobic tendencies, Kayla Sambrooke, BKin'14, admits she got them from her mom, but it wasn't until high school that she noticed her obsession. As a manager in a holistic health clinic, Sambrooke estimates she washes her hands 50 times a day, carries hand-sanitizer and wears "summer" gloves when pumping gas.



Do you have any special thoughts on germs and children? I think we need to let kids get dirty and play in the mud. But I think, if they're sick, then they should stay away from school. I think children need to be exposed to some germs or their immune systems will never develop; however, that doesn't mean they need to be handed around from person to person and to be kissed at every family gathering. There should be limits. I certainly wouldn't let my kids lay on public floors and carpets, and I wouldn't allow them to put anything and

everything in their mouths.

What public place/areas do you avoid due to germs? I don't avoid places; I just take precautions. I use my sleeve to open doors and I use a card to press the buttons on debit machines. I also bring a sleep sheet to hotels and I know which side touches the bed and which side touches me, and those never change. I always wear shoes in hotels (and the shower) and I wipe down the whole hotel room with sani-wipes, as well as my airplane armrest and seat (also gross). Oddly, I don't have issues with camping as I use my own equipment, but I always shower when I get home from such adventures. I can never get into my bed without showering first if I've been somewhere where anyone could touch me.

If you could make people change three of their habits, what would they be? I would ask that people wash their hands after going to the washroom, and I'd ask that they cover their mouths when they sneeze or cough.

Do you ever share your views on germs? No. I understand that people have their own views on germs. I just don't want them to touch me or lay on my sleep sheet (my sister did this once; it didn't end well for her). U

#### **Costume Department Takes the Stuffing out** of Drama

Stage costumes, the handcrafted, made-tomeasure clothing worn by actors, remains a hidden world to most of us. UCalgary's costume department provides most of the clothing seen in the university's drama productions. Here, we drop in for a tour

by Deb Cummings . photography by Adrian Shellard

Calgary's costume department is a busy place: In the summer, speckled snakes and beach balls dressed as frilly fish were created for Wagonstage Children's Theatre. This season, fabrics that float, sink and swirl in water are being tested and turned into costumes for November's production of Metamorphoses — set mostly in a pool.

Welcome to the room where "make-believe is taken very seriously," says Chair of Drama April Viczko, giving a nod to where so much of theatre's magic takes place. This is, after all, where pounds of crimson velvet meet pouffs of taffeta, transforming a homely character into a voluptuous queen. Where feathery headdresses and webbed wings can sweep the audience into an androgynous world. Where proportion and weight and movement are debated daily — all necessary essentials that make the show go on.

Founded in the 1980s, UCalgary's fabled costume department, down the hall from the Reeve Theatre, is where every first-year theatre student spends time in Drama 223. In this introductory class, they learn to use a sewing machine, measure an actor and perform the duties of a dresser. Depending on their major, some students will progress to distress costumes and dye fabrics; others will eventually become professional costume designers.

"This department is a bit like a kitchen in a home — it's the heart of the action," explains Viczko, who's taught classes as diverse as History of Costume, Scene Design and Theatre Production. "Every actor and director will come through these doors during a show. And all the designers for costumes, lights and sets, will spend time here discussing how colours, shades, textures of costumes will look next to a . . . sofa, for example."

Having built costumes for more than 200 shows since the department's inception, Halina Supernat, looks up from a serger to admit her most challenging (and beloved) costumes are typically period pieces, such as those worn by the learned ladies in Measure for Measure (a 2014 production).

"I must have spent 60 hours on just one," says the trained tailor, who studied in Poland before immigrating to Canada in 1981. Being the link among the actors and designers could be



a thankless task, yet Supernat has worked in this department for 28 years, creating upwards of 1,300 costumes.

It's a career that has evolved, despite the countless warnings Supernat has heard that "no one will sew by the year 2000 . . . that everything will be held together by Velcro and glue."

Just as Supernat has witnessed numerous changes and advancements, so, too, has the drama department. New this fall are two mandatory practicums (with the option to complete up to four) and Drama 223 is now becoming a winter block week.

Also new this year is a 50 per cent discount for alumni on tickets for any School of Creative and Performing Arts production. Use promo code ALUM when buying single tickets online or show your UNICARD at the box office to receive the discount. U



- Designed by grad student Jennifer Arsenault, this gown was worn by Isabella in Measure for Measure.
- This frilly bustle, dubbed a bum roll, alters the shape of a gown and was used mostly in the Victorian and Edwardian periods.
- Costumer/tailor Halina Supernat has sewn more than 1,300 costumes in her 28-year career at the University of Calgary.
- The department's one and only industrial serger is the workhorse behind the thousands of costumes' tidy trims and well-edged hems.

- One of about 20 dress forms, sometimes dubbed a "Judy," that are made of metal, cotton and foam, varying in size and gender.
- 6 Designed by Douglas McCulloch, this elaborate fabric headdress appeared in Tougeret and sported "tubular, antique pleating."
- One of three industrial sewing machines that will plow through leather and umpteen layers of fabric; they're indestructible and require little maintenance.
- 8 A rack of Keystone Cops jackets that appeared at this year's Kids' Festival. Most of the costume racks are located below the University Theatre.

- 9 An elegant Edwardian hat sports ostrich and pheasant feathers, built in-house.
- 10 A classic boot pull, used in a quick change when riding or cowboy boots are involved.
- Lining the shelves in a storage room are bolts of fabric used for costumes.
- 12 Fabric dyes get mixed in a sandblast cabinet before being applied to a costume.
- 13 Numerous drawers of stage makeup are found in the fabric storage room.
- 14 This foam hip roll, made of crinoline and cotton batting, would have been made of horsehair and wool during the Elizabethan period.



#### A FLASH OF INK AT ANY DINOS GAME HAS BECOME A SIGN OF PRIDE AND CAMARADERIE FOR MANY ATHLETES

#### by Deb Cummings • photography by Roth & Ramberg

Hints of a tattoo peek out from her rugby shorts — the uniform Shannon Chisholm wears for a huge chunk of her academic year as a Dinos scrum half. Like so many of the 450 student-athletes that make up UCalgary's 19 varsity teams, Chisholm is not alone in sporting a tat (actually two). About 73 per cent of people get their first tattoo between 18 and 22 years of age and an estimated 40 per cent of millennials have a tattoo, according to a 2015 Pew Research report.

While a visible tattoo may have a negative impact in some workplaces, it certainly doesn't in sport.

Indeed, it can symbolize so many things. Found on pre-Dynastic Egyptian mummies and on living bodies in Africa, Asia and the Americas, "tattoos have been used to protect people against physical and metaphysical harm throughout the centuries," explains anthropology alumna Karen Lynn Samuels, BA'06, MA'09. "As well,

they have been used to remember and commemorate loved ones who are gone or are far away, and to affirm and remind people of those values most important or inspiring to them.

"I think it makes sense then that athletes might similarly use tattoos to help them maintain focus on their values and goals, as well as navigate human relationships and negotiate social space in the competitive world of sports."

While every piece of epidermal art carries an individual story, our seven featured Dinos adorned their bodies with familial memories, athletic accomplishments or, like Facebook pages, public statements of personal interest.

Here, members of the Dinos rugby, hockey, volleyball and swim teams explain their marks on the world. Or, the very least, their bodies.



#### **Shannon Chisholm**

Fourth year kinesiology student

SCRUM HALF, DINOS WOMEN'S RUGBY

"We all want to have unique identities — some people use clothes to make a statement, others get a tattoo."

#### Tattoo:

Tucked up high on her thigh are two tattoos: One is a band of Celtic knots that connects Chisholm to her family in Claresholm, where she grew up highland dancing, while her brothers piped. The other is a piece of text that reads *Feros Ferio*, meaning "fierce with the fierce" — a motto from the Chisholm family crest.

#### Isla Shill

Fourth year kinesiology student

FLY HALF, DINOS WOMEN'S RUGBY

"I think tattoos are really about self-expression."

#### Tattoo:

When Shill lost her two grandmothers, they each left her a ring. She took those rings to a tattoo artist who combined the rings' designs into a mandala-looking work of art that Shill had tattooed on the right side of her ribs.

#### **Elysa Sandron**

First year master's student in kinesiology

FULLBACK/WING, DINOS WOMEN'S RUGBY

"In certain environments, there are still stereotypes around tattoos. People in some faculties might be concerned how tattoos might impact their careers — less so in sport. Maybe it's because athletes need to be confident in who they are and have confidence in their bodies."

#### Tattoo:

Although Sandron sports five tattoos — from ladybugs to bison — the most meaningful one is that of a tree, twisting up the right side of her underarm. Look closer and you'll see the tree is rooted in a kidney. Ten years ago, Sandron's mom had kidney failure and was on dialysis for a year. Her dad ended up being a match and became a donor for his wife. "The tree symbolizes the life the kidney gave to my mom," says Sandron, adding all her tattoos symbolize family connections.



#### **Hayley Dowling**

Fifth year student in community health and disability services

GOALTENDER, DINOS WOMEN'S HOCKEY

44 I didn't get a tattoo to intimidate anyone — I got it for me. Now, I want to get a sleeve . . . maybe some trees (because I was raised on Vancouver Island) that grow into the Calgary skyline. My family now lives in Penticton, so maybe a peach and some flowers . . . I don't know, but I love tattoos. "

#### Tattoo:

On Dowling's right hip, in loopy, cursive writing are the words: "The sun can't shine every day." Although the tattoo is two years old, Dowling has thought about its uncanny relevancy all too often during the past year. Due to a series of concussions, she couldn't play for six months in the 2016-17 season and found the tattoo was an ironic reminder that, some day, she'd get back to her life on the ice. "I am back to my full strength now," she says, replaying what her almost-daily, 4 to 9 p.m. training regime looks like. "Full running, full lifting. I feel strong again."









#### **Amanda Hehr**

MBA'14

After their first startup, Cru Juice, was sold, Amanda Hehr and Naomi Le Bihan joined forces with Joanna Majcherkiewicz to co-found a new venture — a boxing studio they named UNDRCARD. Hehr gives us the inside look at what it takes to translate the zeitgeist into on-trend business ventures — the sort that percolate in New York City, where she loves to go for a week of trend-spotting



Why did you decide to take the Alberta Haskavne Executive MBA? At the time. I was working for Breanne Everett (alumna and co-founder of Orpyx) who had become my mentor and best friend.

I saw her travelling over the world, with little ones at home, choosing to forego a huge salary, and was inspired. When Breanne asked me what I was waiting for, I didn't have a very good answer.

How did vour first business venture. Cru Juice, come to be? We had to do a feasibility study in our final term and I found myself inspired by the cold-pressed juices I had discovered in NYC and so that became my project. I got such great feedback that I started wondering if it had potential. Then I found a partner (Le Bihan) and we used seed capital to get it off the ground in July, 2014.

Did you always intend to sell Cru Juice? Yes. Our idea was to sell it in three to five years, so, when an offer came through last fall, after only being in business for two years, it was a little premature. But we also knew that JUSU Bar (a Victoria-based company) could take it to a national level, so we sold it.

What was one of your biggest mistakes? Not recognizing that sometimes it's more important what you save than what you make. Every time you spend \$1 of the company's money, you need to ask how many dollars will this bring in the door.

So how did a juice business morph into a boxing studio? Naomi and I had said, "Let's just hit repeat and keep starting new businesses," so something else was always part of our plan. Then we went to New York again and were blown away by the fact they had merged group fitness with boxing. We came back to Calgary, curated 30 active investors, found a cool heritage building to renovate, brought on another partner and opened on — but, of course — Boxing Day.

Is your business model scalable to different markets? Yes. We are currently working on our extra-provincial growth plan. We will open two new studios in 2018.

And now for some personal questions . . . what do you watch on TV? House of Cards - I love the dynamic between Claire (Robin Wright) and Francis (Kevin Spacey). They are so maniacal . . . I just can't look away. And I confess that I love The Real Housewives NYC. It's so horrible that, in some perverse way, it gives me peace of mind, knowing things could be far worse.

Biggest regret? I am just starting to understand what mindfulness means. For too long, I thought about what was next, not what was now.

You've had a rough couple of years with your marriage ending and losing a few people who were close to you. Did that alter anything? Even though I have two little kids. I make sure I find time to work out every day, apart from Sundays. I box, I spin, I do yoga and run. Those are new changes. And I have a very supportive ex, who's a great dad. That's not new — he's always been a great dad.

Any books that you'd recommend reading? Shoe Dog (by Phil Knight, co-founder of Nike). It's a fascinating look at someone who was obsessed with creating a shoe company from the time he was 17.

Deb Cummings U

#### **Lorii Smith**

BSc'14

Lorii Smith's career path changed when she took a summer gig in housing services at UCalgary. Her high school love of behaviourial sciences has happily intersected with a successful career in student recruitment and is about to further meld as Smith pursues a master's degree in higher education and student affairs at Western Illinois University

When you think of someone working in the field of biology, you think of lab work. Are you pursuing the psychological side of biology? I remember telling my high school biology professor that I really liked the behavioural part of biology and asked if there was a way that I could study that. He said it was a declining field and he kind of shut that door for me. That's why I decided to study hard sciences. On a whim. I took the job as a housing services assistant and just sort of stumbled into a legitimate field that I love and that combines my areas of interest.

What made you think to look for a job at the university while in school? I thought I would find something in the energy industry one summer but I didn't, and wound up in retail which really wasn't for me. That summer, I saw an ad in the residence newsletter for a housing services assistant, and that's when it just clicked. That opened the door to student services.

When did you know you wanted to pursue another degree in the student-experience space? Let me start by saying that, when I worked in residence, I didn't even know this was a viable long-term career path. All I knew was that it was fun and that I liked working with students. I remember being an orientation leader and saying to the coordinator, "I wish there was some way that I could go to school and study students." She looked at me oddly

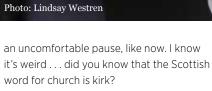
and said, "You know there are programs out there that specialize in this." I had no idea.

What are you taking at Western Illinois? It's called the College Student Personnel Program, which will give me my Master of Science, specializing in higher education and student affairs.

Were vou nervous about moving across the continent? It's all scary, but I keep telling myself that, when you are scared of something, you're on the cusp of growth. It's okay to feel that way.

Do you have a favourite travel memory? My trek up Hollow Mountain in Thailand. where I wound up inside a giant crater-like hole. A guide had me tethered while I was in a full-body harness and then I jumped off a plank. I actually had to fall off backwards because I didn't want to see where I was going. I remember thinking to myself, after I had fallen and was swinging across this gorgeous vista, that now I could do anything. I just jumped off a freaking mountain. Hands down — best experience of my life.

Do you have any signature words or phrases? I love random facts and sharing them with the world, especially when there's



What do you like to read? Non-fiction.

What author are you reading right now? Brené Brown.

Who are your heroes? Carl Sagan. Anyone who is looking to take what they know and make it accessible

Do vou have a favourite motto? First seek to understand, then be understood.

− Lindsay Westren U



#### **Learning On the Job**

he first 150 days on the job are crucial for everyone, including our new associate vice-president of Alumni Engagement,

**Michael Sclafani**. We caught up with the alumni-relations expert (he's been in this sector for 25 years) during his first few months:

What inspired you to pursue a career path that connects alumni with their universities? I was lucky enough to attend schools (Marietta College in Ohio and Seton Hall University in New Jersey) that realized



Michael Sclafani, associate vice-president of Alumni Engagement

the valuable role alumni can play in a student's success. Before I even stepped foot on campus, they introduced me to highly successful alumni who became my mentors. I learned early on that alumni have a vital role to play in their university, and that our connection doesn't end at convocation ... in many ways, it's just beginning.

How will you apply that lesson to your work at UCalgary? As a young university, the relationship between our alumni and UCalgary

is developing and growing. The challenge is in connecting our 173,000 alumni with roles that are meaningful to them, fit into their already-tight schedules, and allow them to utilize their talents to advance the causes they care about. The foundation we're laying today will impact generations of students to come. I find that incredibly exciting, and it's what drew me to this position.

Why should alumni stay connected? What's in it for them? The university has made great strides over the last four years in connecting alumni to activities, programs and services; developing active peer networks; and building the profile of institutional and alumni successes. As we strive to reach the next level, I look forward to working with alumni every step of the way, from ideation to execution.

**How can alumni get involved?** Very soon, we'll be reaching out to alumni about specific opportunities. Until then, tell us how you'd like to be involved with your alma mater and we'll find an opportunity that matches your interest. Email us at **alumni@ucalgary.ca**.

#### **Inspirational Alumni**

he University of Calgary Alumni Association launched its first Arch Awards gala in 1985. Recognizing notable alumni continues to inspire us which is why we are enormously proud of this year's Alumni Achievement Award recipients:

**Betty Bastien, BSW'80, MSW'86**. An internationally recognized scholar, Bastien is known for her study on Indigenous epistemology, Blackfoot Ways of Knowing. As a UCalgary asso-

ciate professor, she inspires those serving Indigenous communities to think differently about Indigenous scholarship.

Aneel Singh Brar, BA'06, BSc'06. Brar collaborated with Calgary-based health-care providers, entrepreneurs and students to create the MJK Maternal and Child Health Clinic in India where her work provides health services to thousands of low-income women.



Vern Kimball, president, Alumni Association

**David Eisenstadt, BA'66**. As the founding partner of Toronto-based TCGPR, a public relations firm, Eisenstadt also served as a UCalgary Senator for six years and was awarded the Order of the University of Calgary in 1997.

**Andrew Mosker, MA'12**. As CEO of the National Music Centre, Mosker promotes music appreciation by connecting the performing arts, museum and commercial music communities. Mosker was key in having the EMI Music Archives donated to UCalgary.

**Anila Lee Yuen, BSc'02**. As CEO for the Centre for Newcomers, Lee Yuen advocates for diversity and creates opportunities for all to participate fully as citizens. She currently volunteers with the Calgary Foundation, Calgary Police Service, Calgary Arts Development and the Calgary Stampede to build a more equitable community.

**Distinguished Alumna Award Recipient: Hayley Wickenheiser, BKin'13, MKin'16.** This year's award goes to four-time gold medallist in women's hockey at the Olympic Winter Games (1998-2014) and recipient of the Order of Canada for her athletic achievements and for helping grow women's hockey. — *Vern Kimball* **U** 

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# BRAGGING RIGHTS PEOPLE, THINGS AND IDEAS THAT MAKE US PROUD

**Editors Note:** We've all read at least one book that leaves you clasping it to your chest, closing your eyes and inhaling deeply — like a mom in a fabric-softener commercial. That's how I felt at the end of reading our compilation of 150 bragging rights — a combined salute to Canada's 150th birthday and UCalgary's unique victories. Now that was some read.

We all love articles about big ideas and big wins. But, in this article, we wanted to take our readers on a tour of another place — a place where newly created poems and student-penned plays can still stun an audience. It might be the same place where researchers spark scientific breakthroughs and where those who toil at field stations in the Arctic stagger the world with their findings. We wanted to show a university of big and small, where, right now, entrepreneurial thinking is sweeping through 14 faculties and where our alumni are reconnecting in bigger numbers than ever. Alive and thriving, the University of Calgary is a habitual work in progress. That's what writers **Mike Fisher, Mark Witten** and **Elizabeth Chorney-Booth** set out to find. To show. To share.

May you find the following roundup of extraordinary experiences, programs, ideas, inventions and people — all unique to UCalgary — illuminating.

This is UCalgary's story, told by way of 150 bragging rights. — Deb Cummings





#### **BEYOND THE SURF AND THE SWELL**

Hawaii Art Photography is a unique 18-day group study course, led by award-winning photographer Denis Gadbois. Here, students focus on art photography and 360-degree (VR) photography to capture the jaw-dropping beauty of Hawaii. This photo depicts where lava hits the ocean. The group woke at 3:30 a.m., drove for one hour and then biked for 40 minutes to reach the location.

LITERARY LIONS Since its inception with Michael Ondaatje in 1993, the University of Calgary's Distinguished Writers Program has brought more than 50 visiting writers to the city. The stellar cast includes luminaries such as Zadie Smith, Oliver Sacks, Timothy Findley, Thomas King, Ursula K. Le Guin, Margaret Atwood, Alberto Manguel, Emma Donoghue, Paul Quarrington, D.M. Thomas and Tony Kushner.





METHANE-SNIFFING DRONES Geography professor Chris Hugenholtz is leading a New Earth-Space Technologies (NEST)-funded project to develop North America's first commercial methane-sensing drone system. The autonomous drones will use artificial intelligence to seek out fugitive methane emissions from natural gas leaks and other natural and industrial sources, and then quantify the rate of emission into the atmosphere. The lightweight drones will be equipped with tiny, highly sensitive gas sensors to detect and measure emissions. "If you can teach a dog to track a scent, we can teach a drone to find a gas leak," Hugenholtz says.



#### NOT TOO COOL FOR SCHOOL

Prof. Darin Flynn's rap linguistics course was named by the *Huffington Post* as one of the coolest classes in Canada.



#### **DANCE AS ART AND THERAPY**

Prof. Anne Flynn, who played a key role in establishing the program before retiring in 2015, has done innovative research on using dance as an effective therapy for people living with Parkinson's disease.

#### **DID YOU KNOW?**

Geography Prof. Brian Moorman, MSc'90, discovered an ancient plant virus cryogenically preserved in 700-year-old caribou dung taken from ice in the Selwyn Mountains of the NWT.

In his Philosophy of Money class, Prof. David Dick explains why Aristotle thought banking was evil and Adam Smith thought ambition was a curse.

The School of Creative and Performing Arts offers an inter-arts program that produces 200-plus performances each year.

The Ronald B. Bond Bach Organ in Eckhardt-Gramatté Hall is the only instrument of its kind in Canada. The tonal design and specifications of the organ are consistent with 17th-century North German organs, providing a musical window into the world of Baroque organ music heard in the time of Bach.

The Department of Art's Visiting Artists series will feature guest talks by five talented Indigenous artists in 2017-18 as part of the Art Now class.



#### THE ONE AND ONLY DINOS

Alumni's fondness for North America's only dinosaur-related varsity team name has never faded. From the Dinnies to the Dinosaurs — our 19 varsity teams became known as the Dinos in 1998.



**HASKAYNE STUDENTS BRING HOME THE GOLD** WITH A LITTLE HELP FROM DR. BOB

Haskayne students have won 90 gold medals in the past 39 years at the Inter-Collegiate Business Competition (ICBC), the world's longest-running undergraduate business case competition. Legendary UCalgary business professor and team coach Bob Schulz (a.k.a. Dr. Bob) shares his coaching secrets on their phenomenal track record:

What distinguishes your approach as a coach in preparing students to be successful at the ICBC? In

the 1980s, I spent more than 100 hours asking questions and listening to outstanding university sports coaches - some of whom were highly motivated Canadian Olympic coaches.

Does stellar performance at the ICBC help UCalgary business students get a leg up in competing for jobs? Yes! Recruiters from investment banks and management consulting firms definitely seek the top students, who are usually the ICBC team members.

Are there UCalgary gold medal-winners who have gone on to do great things? Mayor Naheed Nenshi,

BComm'93, won four team ICBC gold medals (two in debate with partner Ezra Levant, BComm'93, one in Labour Arbitration and one in Business Strategy). Dean Prevost, BComm'90, won a three-person ICBC medal in Simulation and became CEO of MTS Allstream, which was sold to Bell for \$3.9 billion in 2016. Amanda Provost, BComm'98, won ICBC Accounting Gold and became the Global Marketing Manager for Boston Consulting Group in Washington, D.C.



#### **BEST IN THE BUSINESS**

High-performance Haskayne alumnae include Chandra Crawford, MBA'16, a three-time cross-country ski racing Olympian, and Kirsti Lay, BComm'14, team pursuit cycling bronze medallist in the 2016 Summer Olympics.

The Haskayne Undergraduate Leadership Expedition is a spectacular, five-day backpacking trek that offers commerce undergrads experiential leadership training in the Rockies.

The Energy New Venture Competition, hosted by the Hunter Centre for Entrepreneurship, is Canada's leading early stage pitch competition that advances innovations for the energy sector.

Haskayne's Global Energy Executive MBA program is the first of its kind, bringing in top talent from major energy organizations across the alobe.

Haskayne alumnus and Calgary Mayor Naheed Nenshi, BComm'93, was named the No. 1 mayor in the world for 2014 by the City Mayors Foundation.

Haskayne's annual RBC Fast Pitch Competition is the largest competition of its kind in Canada.

The Haskayne Hour — a regularly sold-out Calgary breakfast event — pairs university researchers with executives to talk about timely business issues.





#### **UCALGARY GRADS RULE IN OIL AND GAS**

More CEOs in North America's oil and gas industry are UCalgary graduates than from any other post-secondary institution. Among 277 global companies, UCalgary was the school of choice with seven per cent of oil and gas CEOs being alumni. For Canadian companies, 22 per cent of CEOs had undergrad degrees from UCalgary, mostly in business, engineering and geoscience.





## **BUILDING GREENER PASTURES**

Go big or go home. In the case of the new 200-acre University District community, UCalgary achieves both aims.

The new University District community now underway is the largest LEED-ND (Leadership in Energy and Environmental Design for Neighbourhood Development) Platinum-certified development in Canada. It is the only project of its kind in Alberta.

A LEED-ND certification considers markers such as walkability, greenhouse gas emissions, recycling, and energy and water consumption.

The planned mixed-use community expects some 6,000 homes to be built over the next 15 to 20 years, including town houses and apartment-style condos, with respect for the environment and healthy living spaces as prime concerns.

A unique trust fund revenue and investment model helps to drive the ambitious project. The province gifted endowment land to the university, which is managed on the university's behalf by the West Campus Development Trust. The independent and self-funded trust is the first of its kind in Alberta.

#### LITTLE-KNOWN FACTS

The Faculty of Kinesiology's Sport Injury Prevention Research Centre is one of only 10 International Olympic Committee Centres of Excellence in Injury and Illness Prevention in Sport in the world. Researchers at the faculty have played an integral role in shaping an international consensus on recognizing and treating concussion in sport.

It's the only tower in Canada dedicated to higher learning where squash balls have been used as hand- and toeholds. Students pressed squash balls into the side of the Social Science Tower in the 1980s as part of a prank to scale the tower, but they ran out of places to insert the balls and had to be rescued by the fire department. A few handholds remain to this day.

The Olympic Oval was the first covered 400-metre ice surface in North America and was the first covered speed skating track for an Olympic Games.

It was a Canada-wide problem that prompted made-in-Alberta solutions. Alberta's first Faculty of Veterinary Medicine opened in 2005 at UCal-gary in response to the Bovine Spongiform Encephalopathy (BSE) crisis, offering innovative programs and community care.



There are 11 LEED-certified projects at UCalgary that comprise 1.7 million square feet, one of the largest concentrations of green buildings on a Canadian post-secondary campus. UCalgary ranks among notable green post-secondary institutions in North America, and is listed in the *Princeton Review's Guide to 353 Green Colleges in 2015*.

RAISE A RACQUET Here's one place you can have a ball in supersized splendour. The Racquet Centre is the largest public racquetball facility in Canada. There are 13 squash and four racquetball/handball courts, all international size.



AGING IN PLACE The Age-in-Place Laneway Housing Project at the Faculty of Environmental Design considers health systems research, along with advances in aging research and biomedical engineering, to create innovations in how seniors live. The laneway housing project is a portable unit that allows the elderly and frail to remain in a home environment for as long as possible.

HISTORIC CHANGE UCalgary's numismatic collection of 23,000 objects houses one of Canada's most important collections of ancient coins, specifically ancient Greek, Roman and Byzantine money.

DISCOVER A-MAZE-ING UNDER-GROUND UCalgary's main campus is crisscrossed by a unique 8.5-kilometre underground maze of hot water tunnels that supply more than 100 buildings with heating, chilled water, electricity, natural gas, drinking water and compressed air.



#### A NEWER BIG BANG THEORY

UCalgary's Explosive and High-Pressure Research Laboratory was established in the late 1960s and began operation in southeast Calgary. It was used for studying the behaviour of high explosives and was believed to be the only university facility of its type in the country.

#### **HEAD OF THE CLASS**

UCalgary's Werklund School of Education (WSE) is considered a leader in ADHD and autism research, largely thanks to the work of Emma Climie, MSc'08, PhD'12, and Adam Mc-Crimmon, BA'00, PhD'10, who focus on children's resiliency, rather than their challenges.

There was once a dragon in (33 UCalgary's midst: businessman, philanthropist and former Dragon's Den star W. Brett Wilson, MBA'85, is a Haskayne alumnus.

UCalgary has a prime minister among its alumni: the Honourable Stephen Harper, BA'85, MA'91, who studied economics here. His ties to the university are strong — fellow alumnus Ian Brodie, MA'92, PhD'97, became Harper's first chief of staff and is now an associate professor in the Department of Sociology.

WSE's unique Bridge to Teaching program (BTT) gives international immigrants with education backgrounds the opportunity to combine their existing skills with the knowledge needed to deliver the Alberta curriculum. Since its launch in 2012, 70 students from 22 different countries have graduated from BTT.

WSE's new Professorship of Masculinities Studies - a program aimed at busting stereotypes about boys in schools to create a more equitable society for boys and girls - is one of the first such designated research positions of its kind in North America.



#### RRRRR REX!

On umpteen campuses, you'll find mascots that are bears, pandas, huskies and thunderbirds - but there's only one T-Rex. and he's ours!



#### **LEARNING TO LISTEN**

WSE has developed numerous strategies to honour the Truth and Reconciliation process with Canada's Indigenous communities. This includes a 2014 symposium called "Kindling Conversations, Weaving Indigenous Perspectives into the Werklund School of Education," which brought together students, educators and community leaders, both Indigenous and non-Indigenous.

**IMPORTANCE OF LANGUAGE** Honouring Indigenous culture means honouring Indigenous language. This year, the Faculty of Arts launched a university-level Stoney Nakoda language course, taught by WSE grad student Trent Fox.

PAY IT FORWARD WSE's namesake, David Werklund, grew up on an farm, but, thanks to the encouragement of a teacher, he worked hard to become a leader in the oilfields. In 2013, he donated \$25 million to UCalgary's Faculty of Education, the largest single gift to an education faculty in Canadian history.







#### **GREEN THUMBS UP!**

The University of Calgary Community Garden aims to seed sustainable agriculture. It offers a gardening space to university students, faculty, staff, alumni and community members. The Students' Union made operational aspects of the garden possible.

# SPARKING SOLUTIONS FOR ENERGY AND THE ENVIRONMENT



Solar Biocells is a bioengineering startup that has worked with Innovate Calgary (the university's business incubator) toward creating clean energy sources. The company focuses on the capture and conversion of carbon dioxide (CO<sub>2</sub>) into biomass that could be used for production of clean and renewable energy for industry and the home.

Solar Biocells team member and geoscience professor Marc Strous co-founded the startup with Christine Sharp, PhD '14, a postdoctoral fellow and environmental microbiologist.

# INNOVATING HEAVY OIL RECOVERY Schulich School of Engineering professor Brij Maini, the NSERC/Nexen and CNOOC Industrial Research Chair in Advanced In-situ Recovery Processes for Oil Sands, has a mandate to study additives that will reduce the financial and environmental costs of steam injection for heavy oil recovery.



THRIVES For more than 50 years, the Kluane Lake Research Station in the Yukon has provided opportunities for research on energy solutions for sustainability, including investigations into renewable energy sources such as wind and solar.

**KLUANE LAKE** 

**RESEARCH STATION** 



#### **CLEAN AND GREEN**

Geography students contribute to climate research by examining the economic, political and cultural changes that affect the globe. The Environmental Management and Governance research group aims to provide solutions for the sustainable use of natural resources.

UCalgary researchers are working with Canada's energy regulator, the National Energy Board, on a unique three-year project that aims to make the board's wide range of energy data more accessible by using interactive visualization tools.

UCalgary's Certificate in Sustainability Studies is the only program of its kind in Canada. Students who earn the certificate can graduate with the skills to become sustainability leaders in their careers and communities.

CREATING A SAFER PIPELINE

A leak-proof pipeline that combines real-time monitoring with an outer layer around the pipeline? UCalgary engineering researchers have created a fully functioning prototype to illustrate the feasibility of the technology, which may be licensed by companies or driven by a startup to produce the equipment.

THE AFTERMATH OF FRACKING
A UCalgary geophysics breakthrough explains how hydraulic
fracturing can induce tremors in the
earth. The study examined two distinct
processes of seismic activity and considered data from stations around Fox
Creek, Alta.

UNCONVENTIONAL OIL TECHNOLOGIES Steven Bryant, the Canada Excellence Research Chair in Materials Engineering for Unconventional Oil Reservoirs, is leading a \$10-milliion effort to develop a new era of unconventional oil technologies.





#### **RESEARCH EXTREMES**

Canada's first and longest-lived Arctic research body, the Arctic Institute of North America (AINA), has been part of UCalgary since 1976 (the institute itself dates back to 1945).

The AINA is also home to one of the largest digital collections of Arctic data, with 83,000-plus records of publications and Arctic-related research projects.

#### **BIOMECHANICAL ALL-STARS**

The Cumming School of Medicine's Mobility and Joint Health (MoJo) at the McCaig Institute for Bone and Joint Health is a cutting-edge research facility working on a number of new innovations including new stem cell treatments to combat arthritis.

The Faculty of Kinesiology's (54 Human Performance Lab is a leading centre for the study of biomechanics. Its founder, Benno Nigg. received the International Society of Biomechanics' Muybridge Award in 2012 and 2013, as well as the Prince Faisal Bin Fahad International Prize for Arab Sport Development Research in 2014.

Walter Herzog is another lead-(55 er in the field of biomechanics. The director of the Human Performance Lab is not only a world-renowned expert in the molecular mechanisms of muscle contraction and joint biomechanics, but is also a symbol of UCalgary's interdisciplinary approach to research. He's a full professor in the Faculty of Kinesiology, with adjunct appointments in the Schulich School of Engineering, Cumming School of Medicine and Veterinary Medicine.



**NEVER BUY GEAR AGAIN** 

The university's Outdoor Centre boasts the largest equipment-rental program of all Canada's universities and is one of the few places where you can rent gear for a wide array of sports and outdoor adventures out of a single location.

> **STAIRWAY TO HEAVENS** UCalgary sparks minds, but it also sparks fit bodies. After a stint as a world-class synchronized swimmer, alumna Helen Vanderburg, BPE'80, went on to found Heavens Fitness.



#### WHAT'S IN THE ICE?

The Olympic Oval is home of the fastest ice in the world. The ice is made with demineralized water, which reduces the amount of mineral buildup, giving speed skaters less friction between their skates and the ice.



#### WHERE THERE'S WILL, THERE'S A WAY

The Hon. Justice Patricia Rowbotham, BEd'75, LLB'81, was named the 2017 Lifetime Achievement Award Winner at the 2017 Women In Law Leadership (WILL) Awards, which are presented annually to female members of the Alberta legal profession. Law professor Jennifer Koshan was one of the eight winners of the 2016 WILL Awards.





### LONG ARM OF THE LAW EXTENDS HANDSHAKE

In the International Energy Lawyers Program, law students can apply for admission to the bars in both Canada and the U.S. The innovative joint degree with the University of Houston Law Center supports the energy industry in both countries while facilitating internships and providing inroads into the environmental and energy sectors.

#### REMARKABLE NEGOTIATIONS FOR REPARATIONS

UCalgary law professor Kathleen Mahoney was chief negotiator for the Assembly of First Nations when it reached its historic settlement with the federal government seeking reparations for Indigenous residential school survivors as part of the Truth and Reconciliation process.

# LAW FACULTY ACCENTUATES THE PAWSITIVE

It's a remarkable achievement to attain a law degree as a visually impaired student, as international athlete and now lawyer Tiana Knight, JD'17, has done at UCalgary. When your dog is also awarded a degree and graduates with you, though, that's a conversation-stopper.

When Knight graduated last spring from the Faculty of Law, not only did she receive her Juris Doctor degree, her guide dog, Cashmere, fetched a Juris *Dogtor* degree. The Labrador cross is actually the second guide dog to receive the honour from UCalgary's law school.

"Cashmere tells me where there are obstacles," says Knight — but she clearly hasn't let anything stand in her way on the road to athletic and academic success.

Knight has been a celebrated goalball player while at UCalgary, training hard and attending

the 2015 Parapan American Games in Toronto. Goalball is played by athletes with visual impairments, using a ball with bells inside.

Knight is weighing the possibility of competing at the 2020 Summer Paralympics in Tokyo.



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#### **SUPER COMICS**

The George Morley
Cartoon Collection is
an idiosyncratic array
of comic books, strips,
reference books and
original artwork, gathered
by Morley, an amateur
comic artist and aviation
history buff.

#### **COOLEST COLLECTIONS**

UCalgary Library's Canadian Architectural Archives houses the world's largest collection dedicated to Canadian architecture, with a million drawings, a million photos and half a million boxes of other records from Douglas Cardinal, Arthur Erickson and other influential architects.

A collection of Mordecai Richler's work — from book drafts and radio productions to essays — makes us a magnet for Richler scholars, graduate students, journalists and biographers.

UCalgary houses the earliest writings of Canada's most celebrated author, Alice Munro. In 1980, the first very large shipment arrived in a truck and a suitcase, containing letters and different drafts of manuscripts starting from the 1950s.

The Bob Gibson Collection of Speculative Fiction contains about 40,000 hardcover and paperback books, pulp magazines and other materials amassed by the late Calgary sci-fi fan. It includes an astounding 888 anthologies with covers hand-illustrated by Gibson, and with stories culled from rare popular periodicals published from the mid-1880s to the 1990s.

The TFDL manages the archives of the Naval Museum of Alberta, the largest Canadian naval museum in the country.

#### WHY THE MAPLE LEAF?

The George F.B. Stanley Collection contains the archives of the eminent Calgary-born historian who proposed the design of the Canadian flag. It includes Stanley's fascinating account of how the flag evolved from the Union Jack through various renditions of the Red Ensign to the Maple Leaf, followed by a Royal Proclamation that made the Maple Leaf the official flag of Canada.





#### MOMENTS THAT SHAPE MUSIC

The John Peter Lee Roberts Collection contains a matchless mélange of archival material that documents 40 years of Canadian music history.

REPOSITORY OF BRITISH MILITARY MEMORABILIA

The Chicksands Collection, named after a British military base and Cold War listening post, near London, brags of more than 50,000 books and historical writings ranging from the 1700s to the 1970s. Chicksands was acquired from the British Ministry of Defence in 2011 and is possibly the most important acquisition of military monographs in Canadian history.



### **DANCING TO A DIFFERENT BEAT**

UCalgary's combined Bachelor of Arts in Dance and Bachelor of Kinesiology program, launched in the fall of 2014, is the first of its kind in Canada. The combined degree program teaches students how to organize and plan dance classes for people of all ages and abilities, and gives them knowledge in fields such as anatomy, physiology and motor learning.

#### **LEGAL SHORTS**

The Canadian Institute of Resources Law, created by the Faculty of Law in 1979, has become a leading natural resources law research institute in Canada. The registered charitable organization has an international reputation for excellence in resources, energy and environmental law.

The Ceremonial Sitting of the Court of Appeal of Alberta at UCalgary in 2017 marked the first time the body has held its inaugural sitting outside Edmonton or Calgary courthouses. The sitting was conducted in honour of Faculty of Law's 40th anniversary.

A Faculty of Law business venture clinic in partnership with Innovate Calgary is offering startup businesses in the city access to pro bono legal services.

A Family Law Incubator project prepares graduates for a changing legal market while helping people who need assistance in the courts. Some 60 per cent of self-represented litigants go to family court but cannot access or afford legal advice or representation.

ABlawg, the University of Calgary Faculty of Law blog, has won the Clawbie for best law school blog three times.

Low-income Calgarians have been able to navigate the complexities of tax laws and courts with the help of professors, tax lawyers and UCalgary students. An innovative Faculty of Law program, the Tax Court Assistance Project, has given students experience in tax court while increasing access to justice.





UCalgary's Taylor Family Digital Library (TFDL) is a one-of-a-kind 21st-century hub for cultural resources. The six-storey edifice is the same size as three Canadian football fields, housing 3.4 million digital images, 3.7 million microform units, 1.5 million maps and air photos, 850,000 architectural drawings, more than 400,000 new electronic monographs purchased each year, and a wealth of film/video and audio materials.

TFDL boasts an automated return system that separates books into seven different bins according to their radio frequency identification (RFID) number, so books are back on the shelves in a flash. Vending machines offer not just gum and chips, but USB flash drives, laptop master locks, AA batteries and calculators.



FOOD SMARTS In 2016, Charlene Elliott, BA'94, of the Department of Communication, Media and Film, was inducted into the Royal Society of Canada's College of New Scholars thanks to her work in food marketing, media and food literacy.

THE THEATRE OF FOOD Surprisingly, renowned local food writer and alumnus John Gilchrist, BA'77, studied drama, not food or writing. Before becoming a restaurant authority, Gilchrist performed in a number of UCalgary theatre productions and was an original Loose Mooser.

YOU'RE INVITED Unique to UCalgary is the partnership we have with the Siksika First Nation, evident at the Blackfoot Crossing National Historical Park, where Cluny Fortified Village is located. This archeological dig is open to students and, occasionally, the public. The artifacts on the site date back to the 1700s and include arrowheads, pottery beads and other pre-colonial items.

#### LESSER-KNOWN FACTS

Only at UCalgary will you find filmmaker-in-residence Gary
Burns, the director behind *Radiant City*, who came aboard to mentor film studies students.

Senior instructor and former associate dean of student affairs Marjan Eggermont, BA'91, BFA'96, MFA'98, is not only making waves with her work at the Schulich School of Engineering, she's also the co-founder of *Zygote Quarterly*, an award-winning digital magazine that showcases the nexus of science and design in the field of biomimicry.

Not only did UCalgary provide evacuees with housing, food and other essentials in the aftermath of the 2016 Fort McMurray wildfire, but also shelter and care for animals.



NO DRIPS HERE! Local coffee empire Phil & Sebastian Coffee Roasters wouldn't exist without UCalgary: Phil Robertson and Sebastian Sztabzyb met at the Schulich School of Engineering, both graduating in 2000. They abandoned engineering in 2007 to open their first café.

UNLIKELY PAIRINGS The duo behind Calgary's Sidewalk Citizen Bakery also graduated with unlikely degrees: Michal Lavi in 2004 with a BSc in geology, and Aviv Fried in 2004 with a BSc in physics and then, in 2008, with an MEng in mechanical engineering.



#### **LEAPIN' LEGACY**

If you've slogged up the 13 flights of stairs in the Social Sciences tower, you've likely noticed a poem progressively scrawled on the front of each step. *Leon the Frog* is a whimsical verse, originally written in marker in the mid-1970s, with various additions mysteriously appearing over the years.

"The poem is exceptionally notable," says Ian Kinney, BA'10, MA'12, who has helped maintain the poem over the years. "If you take the time to walk up the stairs."

The poem has long been a point of pride for campus-dwellers — until it was accidentally mistaken for graffiti and painted over this past March. Thankfully, Kinney and other frog-lovers carefully restored it, and Leon's legacy leaps on.





**RICH MUSIC RECORDS CJSW 90.9 FM** is not only a campus radio station, it's a community institution beloved all over the city. It also brags of raising more capital during its annual fundraising drive than any other campus station in the country — almost double that of the second most successful.

#### **EARNING MAGAZINE CHOPS**

You've likely heard Shelley Youngblut, BA'85, on CBC Radio's The Unconventional Panel, but did you know that the current CEO of Calgary's Wordfest is also a CJSW alumna? Youngblut founded the radio station's now-defunct magazine, Vox, a move that she credits with changing her career and life's path.

**RIGHT PLACE, RIGHT TIME** 

A UCalgary alumna at the heart of the United States' latest political scandal? New York Times investigative journalist Susanne Craig, BA'91, got her start at UCalgary, but made headlines last year when an anonymous party mailed her now-President Donald Trump's tax returns in the middle of the election campaign.



#### **SWEET CAREER SHIFT**

Crave Bakery Calgary's co-owner, Jodi Willoughby, graduated with a Bachelor of Community Rehabilitation and Disability Studies degree in 2001.



#### WHO KNEW?

UCalgary is home to the largest social work faculty in Canada, as measured by faculty, students, campuses and geographical reach.

Dating back to the 1990s, the Faculty of Social Work was an early leader in distance learning, using the Learning Circles program, which emphasizes Indigenous teaching, ceremony and cultural practice. This program allows students to work on their degrees while practising social work in areas where they live.

UCalgary bridged the gap between academia and real-world social work earlier this year with the appointment of Angelique Jenney as the inaugural Wood's Homes Research Chair in Children's Mental Health. Jenney works with both front-line workers and researchers to ensure the latest research has an impact on kids' lives.

UCalgary's Department of Anthropology and Archaeology is a leader in primatology research, largely thanks to Prof. Linda Fedigan, who was appointed to the Order of Canada in 2016.

Working for UCalgary isn't (100 just stimulating, it's also safe. In 2015, the university was named one of Canada's safest employers by Thomson Reuters.





### **ROCK ON!**

The Rock is an icon on campus and offers a folksy way to promote university goings-on. Legend has it that The Rock, plopped in front of the MacEwan Student Centre, was unearthed when one of the campus buildings was being built. For decades, students have used it to paint messages advertising campus events or proclaiming political beliefs. There's only one written rule when it comes to The Rock: any painted message must be allowed to stand for at least 24 hours (though most students respect a 48-hour rule and also refrain from profanity and other offensive content).





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#### **IMPROVING CHILD HEALTH IN AFRICA**

UCalgary physicians have helped African communities improve child health with education and health promotion. Unique partnerships with universities in East Africa positively impact the lives of women, babies and children in rural Tanzania and Uganda. Approximately 5,500 community-based health-care volunteers are trained.



### MAKING HISTORY WITH THE NEUROARM

When neurosurgeon and UCalgary professor Dr. Garnette Sutherland and his team created an image-guided neurosurgical robot called neuroArm, they were reaching into the future.

They made history when using it to operate on a human patient for the first time, a 21-year-old woman suffering from multiple brain tumors in 2008. The new surgical robotic system has revolutionized neurosurgery and other branches of operative medicine.

The Space Foundation's Space Technology Hall of Fame honoured Dr. Sutherland three years ago, along with four organizations including UCalgary's Cumming School of Medicine, for developing the neuroArm. Dr. Sutherland has also received the Order of Canada.

**PATIENTS BENEFIT** 

Spearheading a revolutionary major stroke trial — known as endovascular treatment (ET) that can significantly improve patient outcomes after an acute ischemic stroke — were three Cumming School of Medicine researchers and Alberta Health Services clinicians.

#### **GENE THERAPY FOR RARE CONDITION: A WORLD**

FIRST A team of Canadian physicians and researchers including medical geneticist Dr. Aneal Khan (and a member of the Cumming School of Medicine) is believed to be the first in the world to have used gene therapy to treat a patient with Fabry disease. People with the disease have a gene called GLA that can lead to problems in the kidneys, heart and brain. About 420 Canadians have Fabry disease.



Technology developed at UCalgary by sleep researcher Dr. John Remmers aims to improve the lives of the estimated 100 million people in North America who suffer from obstructive sleep apnea. He was the first to demonstrate that sleep apnea is due to anatomical narrowing of the pharynx.

#### **FACTS YOU NEVER KNEW**

Parvus Therapeutics, a company founded by UCalgary professor Dr. Pere Santamaria, signed a partnership deal with Novartis this year to advance the commercialization of nanomedicines to treat Type 1 diabetes.

(108) The most widely used scale around the world for diagnosing depression in people suffering from schizophrenia was developed at UCalgary by Drs. Jean, PhD'87, and Don Addington. It is now available in 41 languages.

(109) A new fly species was named after Jeffrey Goldberg, PhD'83, former head of the Department of Biological Sciences. This new species was identified with the help of 160plus volunteers during BioBlitz, a 24-hour survey aimed at identifying and recording as many local species as possible in Kananskis Country.

UCalgary's Hotchkiss Brain Institute spearheads advancements that have far-reaching results. In 1992, neurobiologist Samuel Weiss discovered neural stem cells in the brains of adult mammals. The professor's groundbreaking discovery led to new approaches for brain cell replacement and repair.

The non-profit Western Canadian Microbiome Centre in the Cumming School of Medicine opened earlier this year, aiming to drive discoveries in fields such as chronic disease- and obesity-prevention, antibiotic resistance, food production, and the search for alternative energy sources.

Studying immune mechanisms relevant to human disease, the research of Paul Kubes and his team has led to important discoveries. In 2011, they discovered how the injured brain suppresses the immune system, helping doctors fight potentially deadly bacterial invasions in people with brain injuries.



Geoscience assistant professor Darla Zelenitsky, MSc'95, PhD'04, and colleagues discovered the dinosaur fossil "Baby Louie" was the embryo of a new species of oviraptorosaur, a giant bird-like dinosaur that lived in China 90 million years ago. The clutch of very large eggs (45 centimetres long) found with Baby Louie means his parents were far larger than any known oviraptorosaur species, with nests bigger than a monster truck tire.

#### **HOW GECKOS GOT STICKY FEET**

(114)Zoology professor Tony Russell and colleagues discovered how geckos developed sticky feet by observing the ostensibly non-adhesive, bridled forest gecko in Trinidad and French Guiana. They determined the gecko's feet have microscopic hairs, called setae, on their toes that help them stick to smooth surfaces.



Sightings of a mysterious atmospheric phenomenon dubbed "Steve" by the Alberta Aurora Chasers Facebook group triggered the curiosity of physics and astronomy professor Eric Donovan. With data gathered from citizen astronomers and electric-field measurements from a European Space Agency Swarm satellite, Donovan was able to identify Steve as a 25-kilometre-wide ribbon of moving gas, hurtling at a speed of about six kilometres per second in a westward direction.

#### SENSATIONAL SCIENCE

A team of quantum physicists led by physics and astronomy professor Alexander Lvovsky is the first to breed Schrödinger's cats that grow ever larger and more energetic.

In 2000, an international team led by UCalgary archaeology prof. Bill Glanzman uncovered a 3.000-year-old temple in Yemen. linked to the legendary Queen of Sheba.

UCalgary computer science professor Christian Jacob and colleagues developed the Lindsay Atlas, a virtual human being that brings anatomy to life. The app is named after Lindsay Kimmett, a bright, promising student in undergraduate medical education who died in a car crash.

A summer course on Hawaiian Shield Volcanoes offers a unique learning experience for students looking to study volcanic processes firsthand. Fieldwork includes visits to the largest active volcano on Earth.

Each year, more than 2,000 Alberta junior and high school students learn about physics through Rollercoasterology, an outreach event at Calaway Park hosted by the Department of Physics and Astronomy.



**AVOIDING FRACKING QUAKES** IN ALBERTA Geophysics professor David W. Eaton, MSc'88, PhD'91, and postdoctoral researcher Xuewei Bao discovered the cause of fracking-related earthquakes is different in Alberta than in parts of the U.S. After analyzing seismic data from Alberta's Fox Creek area, the researchers found that most of the quakes in the region were related to the fracking process itself, rather than burial of wastewater from oil and gas wells. Eaton says their findings could help regulators take steps to avoid fracking-induced earthquakes.







### THE ROCKET SCIENTIST WHO ROCKS FOR WOMEN

Rocket scientist and explorer Natalie Panek, BSc'07, has been blazing trails toward space for years as a leading light for other women and students.

She is a mentor with Cybermentor, a program that helps link Alberta girls in Grades 6 to 12 with women in science and engineering. The students are matched with carefully screened mentors and connect online on a secure site about opportunities in science and engineering.

The former Schulich mechanical engineering student and winner of the 2013 UCalgary GOLD award works in Mission Systems with Toronto's MDA Robotics and Automation.

Panek did failure analysis for space electronics during a stint at NASA and is working on building the chassis and locomotion system for the European Space Agency's 2020 ExoMars Rover, among other projects.



#### **EXAMINING IMPACTS OF LOW GRAVITY ON ASTRONAUTS**

A new study by UCalgary and the Canadian Space Agency looks at what impact prolonged exposure to low gravity may have on astronauts' brains. Canadian astronaut David Saint-Jacques is participating in the study during his six-month mission to the International Space Station beginning in late 2018.



WHERE THERE'S SMOKE, THERE'S FIRE

UCalgary engineer Quazi Hassan's uses NASA satellite data to forecast forest fires, highlighting danger zones in remote areas. The geomatics engineering associate professor in the Schulich School of Engineering and his team are studying

how wildfire behaves, as well as examining smoke migration patterns.



#### AWESOME SPACE FACTS

UCalgary space physicist Emma Spanswick and geomatics engineer Susan Skone are examining how auroras might interfere with GPS signals on Earth. They are looking at the potential impact on applications that include surveying, mapping, hydrology, aviation and military operations.

Department of Geoscience (127 associate professor Alan Hildebrand was part of the science team that guided development of the OSIRIS-REx Laser Altimeter (OLA), an advanced light-detection and ranging system that will map the surface of the near-earth asteroid Bennu.

Students are designing livable colonies for Mars in a Master of Architecture program titled The Mars Studio that examines differences in gravity, radiation, air and water.

No Canadian has spent more time in space than UCalgary Chancellor Robert Thirsk, BSc'76, LLD'09. The former astronaut logged 187 days in orbit.

UCalgary grad Laura Lucier, BSc (Eng)'99, operates the International Space Station's Canadarm2 and other robotics for NASA remotely from Mission Control in Houston.

#### **NEW EARTH-SPACE STRATEGY REACHES THE HEAVENS**

The New Earth-Space Technologies Research Strategy includes researchers in space sciences. geomatics, and communications and satellite systems and has attracted more than \$100 million in funding. Projects range from global navigation satellite systems to remote sensing.

**REMOTE-CONTROLLED SPACE STATION** SURGERY UCalgary researchers — led by neurosurgeon Dr. Garnette Sutherland, who developed the neuroArm used for brain surgery — are considering potential solutions for medical problems that may require acute care in space. The Robot-Assisted Space Telemetry project tests the feasibility of conducting remote-controlled tele-operations on the International Space Station from a workstation on Earth.



#### **BEYOND FRONTIERS**

MEDi, a two-foot-tall multilingual robot designed to comfort kids undergoing medical procedures, was developed at the university and is now helping kids cope with pain in Alberta and in the United States.

Our Rothney Astrophysical Observatory is one of Canada's best-equipped astronomical teaching facilities, helping students, school groups and the public to better understand the cosmos.

UCalgary is a national leader when it comes to space research and teaching, having contributed to 20 space missions.

UCalgary's Space Physics Group provided the world's first view of the global aurora from space in 1971.

UCalgary's engineers and scientists have repeatedly broken ground when it comes to studying space weather's impact on global navigation satellite systems.

Scientists at UCalgary designed three instruments currently being carried on European Space Agency SWARM satellites that study magnetic fields surrounding the earth.



**ONE AND ONLY** 

EVDS offers the only accredited graduate planning program and the only accredited architecture program in Alberta.



WALK21 We all want a more walkable city but a municipality has to be on board for academic research to have real-life impact. Calgary got one step closer to pedestrian-friendliness this fall when EVDS partnered with the City of Calgary to host Walk21, an international walkability conference, in September 2017.



#### **ARCHITECTURAL FIRM LEAVES MARK ON CALGARY**

Anyone who's eaten at Calgary's trendier restaurants has seen the work of UCalgary alumnae Kate Allen, BFA'06, MArch'09; Kelly Morrison, MArch'09; and Kristen Lien, BA'06, MEDes'08. They're the design firm behind FRANK Architecture and Interiors, who's responsible for decking out restaurants like Pigeonhole, National, Model Milk and Alforno Bakery & Café. Lien chats about how the trio has changed the look of Calgary's eateries:

How did your time at UCalgary shape FRANK? It gave us the knowledge we needed to get going and a terrific mentor — Dale Taylor (former director of the architecture program at UCalgary). And it's where we all met.

How many projects have you completed since you started in 2009? More than 100.

#### How has the design of public spaces changed in Calgary since you graduated?

We have a vision, along with a lot of other creative types, to make Calgary a world-class city. We're trying to do that through hospitality and by punctuating the city with these beautiful venues.





#### ZIPPITY DO DA

Legend has it that spinning this kinetic sculpture before an exam will help you ace - or, at least - pass the test. The mesmerizing turning of the Zipper brings peace to students, allowing them to concentrate better.

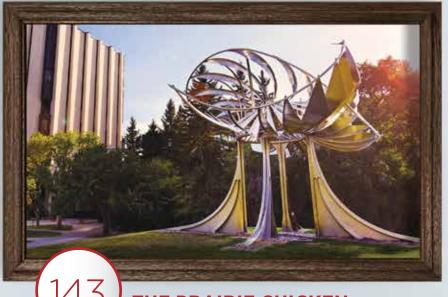


#### **CANADIAN SUPERHEROINE NELVANA RISES AGAIN!**

UCalgary is home to a treasure trove of original, first-run 1940s comics including Nelvana of the Northern Lights, illustrated by Canadian artist Adrian Dingle. Nelvana, the Inuit Goddess of the Northern Lights, was the first Canadian super-powered heroine, predating Wonder Woman.

Teviet Creighton, BSc'94, and his brother, Jolien, BSc'92, discovered gravitational waves ripples in space time — first predicted by Einstein's general theory of relativity. They were part of a scientific team conducting an ultra-sensitive Laser Interferometer Gravitational-Wave Observatory experiment that detected gravitational waves caused by the collision of two black holes. Biology professor Leland Jackson, scientific director of Advancing Canadian Wastewater Assets (ACWA), and his colleagues, created a unique outdoor water system consisting of 12 full-size test streams fed

**EYE-OPENING FACTS** 

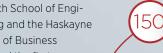


THE PRAIRIE CHICKEN

Only at UCalgary will you find a 5.5-metre-high, 4.5-ton stainless steel sculpture known as the Prairie Chicken. Sculptor George Norris describes his 1975 Centennial Program piece of public art as "a hilltop gateway open to the sun. It is the pages of a book spread out for those who will be transported by its content. It is the prairie chicken's feathers spread in full array, or it is the ritual-dance costume of the Blackfoot Indian."

**DOUBLE THREAT** 

In May 2017, the Schulich School of Engineering and the Haskayne School of Business launched the first combined BSc (Eng) and BComm degree program in Western Canada.





first symptoms.

#### **EYE ON THE SNITCH**

with water from nearby Pine Creek Wastewater Treatment Plant.

Hotchkiss Brain Institute showed

that minocycline, a common acne

medication, can slow the progress

of multiple sclerosis in people who

have recently experienced their

A Canadian clinical trial led

by researchers at UCalgary's

UCalgary hosted the world's largest game of guidditch in 2014. The Calgary Mudbloods, made up of students and alumni, continue to play the Harry Potter-inspired sport in tournaments across Western Canada and compete in the national championships each year. U



**NATURE IS AN ETERNAL MYSTERY** 

Artist Reinhard Skoracki's, BFA'97, impressive, 4.87metre-tall sculpture, Nature is an Eternal Mystery, was created specifically for the new Energy Environment **Experiential Learning** (EEEL) building in 2011.





#### 1960s

Diane Hunter, BA'67, MA'69, with husband H. Douglas Hunter and son, Derrick Hunter, MBA'90, were behind one of UCalgary's largest donations last May. The private Hunter Family Foundation donated \$40 million to establish the Hunter Hub for Entrepreneurial Thinking. The fund will support entrepreneurship education and camps, new venture competitions and seed funding, and will go towards building a dedicated "hub" where students and faculty can learn and share knowledge, as well as build networks.

#### 1980s

**Luanne Metz, MD'83**, neurologist and lead researcher of a Canadian clinical trial, discovered that minocycline, a common acne medication, can slow the progress of relapsing-remitting multiple sclerosis in people who have recently experienced first symptoms. The results of the Phase 3 clinical trial were published in the *New England Journal of Medicine*.

Douglas Morck, BSc'83, PhD'91; Arindom Sen, BSc'91, MSc'98, PhD'03; Robin Smith, BACCS'02; and Colleen Bangs, BA'03, were recognized with peer-nominated U Make a Difference awards. The awards celebrate individuals and teams who exemplify the ability to reach above and beyond the expected. They acknowledge outstanding contributions in the areas of innovation and curiosity, collaboration and communication, and positive work environment and community.

Larry A. Wood, BComm'81, MBA'83; Robert
L. Malach, JD'83; Kyla Flanagan, BSc'03,
PhD'08; Markus Dann, PhD'12; and A.J.
Macaulay, BSc'14, were recipients of the
Students' Union 2017 Teaching Excellence
Awards. Determined solely by students, the
award recognizes faculty members, instructors and teaching assistants who make
significant contributions in helping undergrad
students reach their highest potential.

#### 1990s

Suzette Mayr, BA'90, associate professor of creative writing, has published her fifth book, *Dr. Edith Vane and the Hares of Crawley Hall.* It is set in the haunted halls of the University of Inivea, which is situated in a fictional Alberta town. "Every bad thing I've ever heard about happening in a university in the world happens at this university in the book," says Mayr in an interview with the *Calgary Herald*. Previous works include Mayr's Giller-longlisted novel, *Monoceros*, in 2011, and her Commonwealth Prize-nominated work, *The Widows*, in 1998.

Pierre Maisonneuve, BA'91, longtime Montreal journalist, was honoured as a member of the Order of Canada in June 2017 for his contributions as a journalist, broadcaster and author. He says he owes his success to his father who taught him a great deal about history, politics and social issues. Maisonneuve joined the ranks of 98 other appointments announced

# **Good Morning, London!**

ight deadlines and content and program creation are part of the daily rigours for **Bernard Graham, BA'92**, whose broadcasting career spans more than 30 years, mostly at CBC Calgary. Last June, those tasks jumped a notch when Graham took on the rare opportunity to launch a brand-new CBC Radio station in London, Ont., as executive producer.

**How did Launch Day go?** I will always remember the group of people who gathered outside our station windows at 6 a.m. to greet us as we signed on. I never expected that people would get up at dawn and come support us because they were so excited about the CBC setting up a station in London.

#### What does it feel like to head up a brand-new CBC station?

In one word — great. London had been waiting for a decade for its own CBC service and it's responded with overwhelming support. We held an open house later that week which included a live radio show. The turnout was phenomenal.

Also, I was involved in most of the hiring of staff — a rare opportunity for a leader. I was able to put together a diverse group in terms of background and experience. We all have different skills and support each other on everything from multi-track audio mixing to web

story layout to social media strategies.



What was the most challenging part? All the details required for a station start-up: everything from technical wiring to security protocols to setting up email accounts! One minute, I might be on the phone with a cleaning company, the next minute, I am dealing with the alarm company, then it's a furniture delivery company.

You've been in the newsmaking business for over 30 years. What do you love about it? Every day is different. It is also satisfying to know that many people are reading and listening to the content you are producing. They may take issue with some of it—but that's better than no engagement whatsoever. — Ellis Choe U





on the eve of Canada Day, making up the honour's 50th-anniversary cohort.

Chris Lemke, MEDes'96, architect and founder of Alloy Homes in Calgary, won a National Award for Housing Excellence for New Homes and celebrated 20 years of designing and building modern residences in Alberta. But designing homes isn't his only passion. The veteran sailor also designed his own boat — for the fourth time — to compete in the prestigious 49th Transpac Yacht Race in July.

James Maskalyk, MD'99, an emergency physician and the first official blogger for Médecins Sans Frontières (Doctors Without Borders), blends his two passions of writing and medicine in his new memoir, Life on the Ground Floor:

Letters From the Edge of Emergency Medicine.

This follows his first highly acclaimed book, Six Months in Sudan: A Young Doctor in a War-Torn Village, which was another memoir of a stint with Médecins Sans Frontières.

#### 2000s

**Donald G. Dansereau, BSc'01, MSc'04**, a robotic vision researcher and postdoctoral scholar at Stanford Computational Imaging Lab, presented the world's first wide-field-of-view light field camera at the Computer Vision and Pattern Recognition conference in Hawaii in July.

**William Kellett, BComm'03**, is now Managing Director, Foreign Exchange, at Scotiabank Global Banking and Markets, leaving TD after more than 10 years.

**Sonny Kohli, BSc'04**, is a physician and cofounder of Cloud DX, a private manufacturer and distributor of licensed medical devices. His team was honoured as XPRIZE's first Bold Epic Innovator in recognition of "exponential technological progress in the field of consumer-focused medical technologies." XPRIZE is

# Best of Bridge: The Next Generation

he iconic *Best of Bridge* cookbook series began as a spontaneous project among a close group of Calgary women who loved to cook as much as they loved to play bridge. Now, 42 years and 4 million books later, their legacy continues to live on through a new generation of foodie-friends (minus the bridge).

Food writer and blogger **Elizabeth Chorney-Booth, BA'98**, (also one of our writers for our feature on 150 bragging rights), CBC Radio food columnist Julie Van Rosendaal, and cook Sue Duncan are friends who have devoted themselves to carry on the original authors' tradition — and motto of — "simple recipes with gourmet results." After their successful debut last year with *The Family Slow Cooker*, the group launches *Sunday Suppers* this fall.

Born in 1975 — the same year the first Best of Bridge book was published — Chorney-Booth grew up with the cookbooks and has been a long-time fan of the recipes.

**How did you get involved with** *Best* **of** *Bridge?* The ladies retired in 2007 and licensed the brand to a publisher in Toronto who was looking for a new team of ladies.

an international, multi-million-dollar-prized competition to motivate scientific, creative and technological minds to help solve the globe's greatest challenges.

Raymond Shih, MBA'07, is president and co-founder of QoC Health Inc., a company that has received B Corp Certification, affirming it's met rigorous standards of social and environmental performance, accountability and transparency.

**Emma White, BSc'09**, chronicles a compelling love story in her first memoir titled *Broken*. Just four and a half months after White's then-boyfriend, now-husband **Kev Hayley, PhD'10**, became a paraplegic from a motorbike accident, the two embarked on an 18.000-kilo-



They approached Julie, who's a well-known cookbook author. But she wanted to do it the right way, like the original ladies did. She was tasked to find real-life friends and professional recipe developers and that's how I came on board . . . I've always loved food and, after I became a parent, I got into cooking more.

#### What's Sunday Suppers all about?

They're not necessarily formal Sunday suppers. The mindset is about spending a little extra time eating with family and friends, getting around the table. That's where those recipes are coming from. Some are old family recipes from our childhood. Some are from our grandmas', dads' and moms' recipes.

How do you feel about being part of the Best of Bridge legacy? We have no illusions that it's about us. For me, a lot of it is about those original names and carrying on their legacy. I'm happy to continue to introduce the brand to new cooks, younger cooks and new Canadians and develop new recipes with more modern ingredients. The recipes are a little bit more in tune with the way Canadians cook today. — Ellis Choe U

metre camping road trip across Australia. The journey put their relationship to a test as, the book says, "they fight to regain a future that seems lost while facing the harsh and unforgiving landscape of the Australian outback."

Hayley Wickenheiser, BKin'13, MSc'16, six-time Olympian and CEO of Wick Hockey and Jeremy Gutsche, BComm'00, author and CEO of Trend Hunter, were named two of the Top 40 Under 40 in Canada for 2017. Founded by Caldwell Partners, Top 40 is an annual awards program that celebrates outstanding young achievers visionaries and innovators. Wickenheiser is also the recipient of this year's Distinguished Alumna Award, presented at UCalgary's annual Arch Awards. — Ellis Choe ■









# **Out and About**

Aiming to deepen relationships with alumni in key areas around the globe is what prompts UCalgary Alumni to host various events that honour our successful grads.





- 1. Canada Day in Palo Alto, CALIF. (L-R): Former Assoc. Prof. Payman Mohassel; Golara Garousi, MSc'12; a guest; Leila Hakimizadeh, MEDes'07.
- 2. Bucking Horse Bash. CALGARY. On July 7, Colton Lewis, BComm'14, and friends raised \$56,000 in support of the Brett Wiese Memorial Scholarship (L-R): Co-hosts Colton Lewis and Wyatt Norn.
- 3. AlumNIGHT, CALGARY. UCalgary Alumni welcomed new grads at its first swishy AlumNIGHT, designed around an old Hollywood theme. (L-R): Heidi Exner, BEd'17, Chelsia Tung, BSc'14, BEd'17.
- 4. Stampede Student Sendoff, TORONTO (L-R): Leonardo Baltazar; Alejandra Rangel, PhD'10; Ebrahim Tarameshloo, PhD'16; Mona Loorak (PhD candidate at UCalgary).
- Adventure, ALBERTA. In May, alumni and families enjoyed a guided tour of Blackfoot Crossing. Students working at the Cluny village (L-R): Margaret Patton, PhD candidate; Robert Bird, BSc'18; Tatyanna Ewald, BSc'15; Shalcey Dowkes,

5. Alumni Archaeology

6. Stampede Student Sendoff, VANCOUVER. Kenneth Law, MP'15; Lydia Law (guest); Judy Wong, BCert'16. U

Come mix, mingle and celebrate our NGFM



Join us at the Arch Awards gala at Alumni Weekend, Sept. 22, 2017





#### Alumni Weekend Match-Up

Brand-new this year is TD Park at Taylor Quad. Created to act as HQ for Alumni Weekend (Sept. 22-24), think of this lively gathering spot as part-market, part-activity hub, part-entertainment hive and also where you need to register. You can't miss it — just look for the tents in front of Mac Hall.

Now, to play the game: It's up to you to match the various Park offerings with details on the right. To get you started, UNDRCARD Boxing Studio goes with "Free boxing class." One lucky winner will walk away with a \$70 gift certificate to UCalgary's bookstore.

To enter, correctly answer both puzzles and include your name and telephone number. Scan both completed puzzles and email to: alumni@ucalgarymag.ca.
Contest closes: Dec. 1, 2017.

UNDRCARD Boxing Studio						
JUSU Bar	0					
YYC Cycle	0					
Bike Share	0					
Market Collective	0					
Uber	0					
Dino Fan Zone	0					
Monogram Coffee	0					
Leftovers	0					
<b>UCalgary Wellness Centre</b>	0					
UCalgary Science	0					
<b>Neal's Yard Remedies</b>	0					
Mona Lion	0					
The Sugar Cube	0					
The Den	0					
Fiasco Gelato	0					

F

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Р

- Merch booth and prizes
   Local artist market
   Coffee café
   Kids can create a clay fossil
- $\bigcirc \ \ \textbf{Natural and organic skin-care products}$
- O Kids activities, Rex and more
- Fresh juice booth
- Free boxing class
- O A walk down memory lane
- O An Italian treat
- O Free bike rentals
- O Fighting food waste, plus games
- Free self-care kit
- O First-time user discount code
- O Sportswear for all body types

C

O Cotton candy machine

#### **Alumni Weekend Word Search**

Hidden in the maze of letters are 19 key components of our upcoming Alumni Weekend. They are listed below. Take our word for it, they are *all* there.

They can run in any direction, even upside-down and backwards. Sharpen your pencils!

ARCH AWARDS	OPIOID
GOLD	ABORIGINAL
INNOVATION	YES MEANS YES
DINOS HUSKIES	SHODOU
GANDHI	BIOME
WEARABLE TECH	ADHD
GREEN	EXERCISE
SCIENCE	EQUINE
CYBER	ROBOTS
SCREENING	

Г		_	111	$\overline{}$		D	O		Г	O	11	C
Н	Е	S	0	R	D	J	Н	Ν	Е	Е	R	G
С	S	1	D	С	1	D	Ν	D	В	D	S	В
Ε	М	С	L	Н	Ν	1	Α	Υ	Α	U	Α	F
Т	Е	R	0	Α	0	J	С	0	0	L	В	R
Ε	Α	Е	G	W	S	Υ	Н	D	D	В	0	Н
L	Ν	X	0	Α	Н	0	0	Н	1	В	R	Ε
В	S	Е	K	R	U	Н	Т	0	0	S	I	С
Α	Υ	Q	U	D	S	Ν	М	Т	I	Α	G	Ν
R	Е	U	S	S	K	Е	S	0	Р	1	I	Ε
Α	S	1	Ν	0	1	Т	Α	V	0	Ν	Ν	I
Ε	G	Ν	I	Ν	Е	Е	R	С	S	U	Α	С

G

Puzzles by Larry Humber



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## from bench to bedside to backyard

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