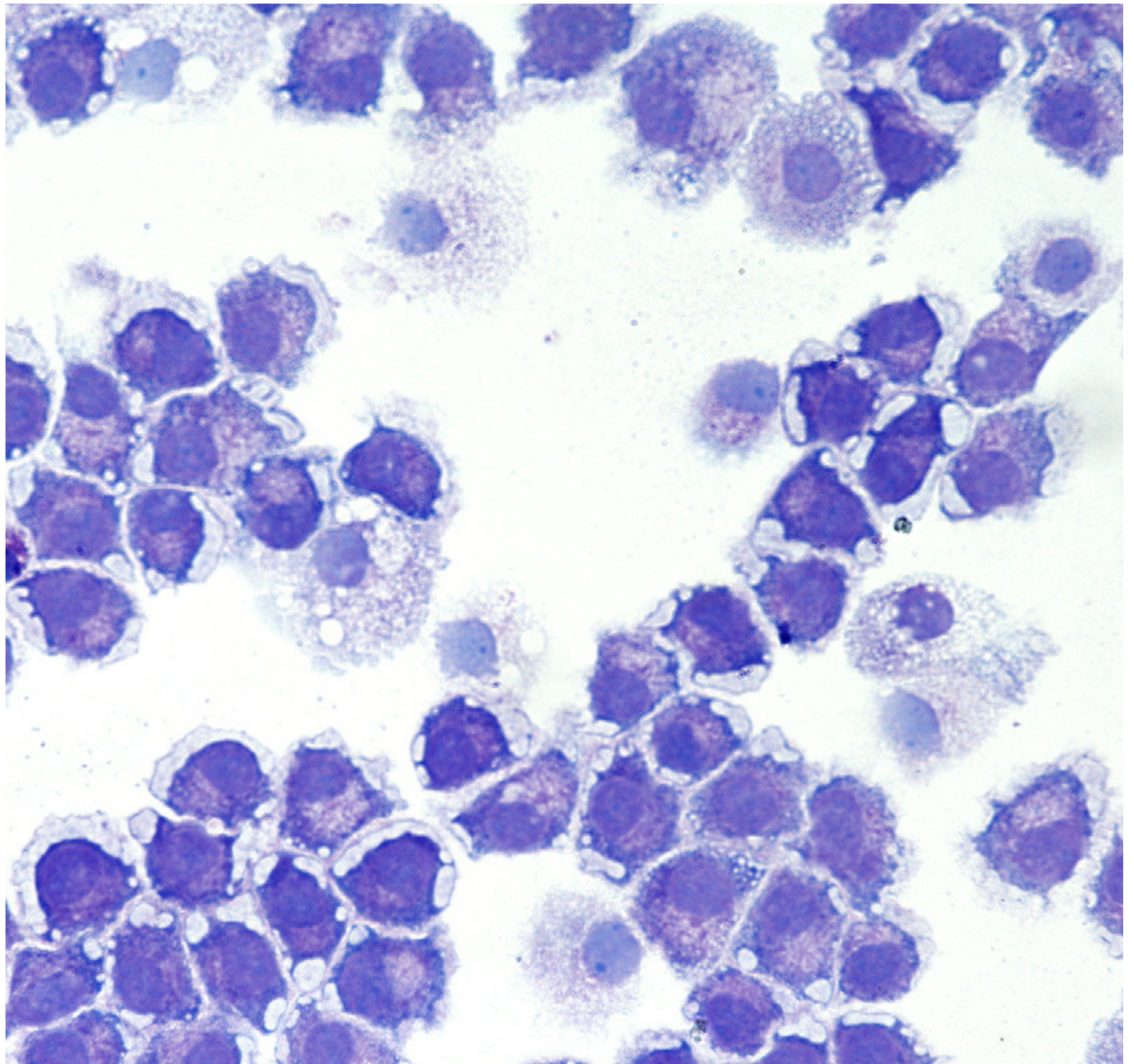


## GOING VIRAL

The work of VIDO-InterVac researchers at the U of S has become even more important as the anti-vaccination movement has led to a weakening of herd immunity. VIDO-InterVac director Andrew Potter says that has contributed to a resurgence of diseases that were once nearly eliminated.

SEE PAGE 7.





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*On Campus News* aims to provide a forum for the sharing of timely news, information and opinions about events and issues of interest to the U of S community.

The views and opinions expressed by writers of letters to the editor and viewpoints do not necessarily reflect those of the U of S or *On Campus News*.

We acknowledge we are on Treaty 6 Territory and the Homeland of the Métis. We pay our respect to the First Nation and Métis ancestors of this place and reaffirm our relationship with one another.

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# U of S takes measures to address funding shortfall

The University of Saskatchewan will reduce senior leadership salaries and benefits and spend its reserve funds far below the recommended level for public institutions in order to meet a projected budget deficit in the coming year, President Peter Stoicheff told the institution's Board of Governors on June 19.

The board approved a comprehensive budget deficit of \$16.7-million following a steep reduction in the university's base operating grant, announced by the provincial government in March. The 5.6 per cent reduction in provincial funding translates into an \$18-million reduction to the operating budget. In addition, the province directed the university to move \$20-million from the base grant to cover a funding shortfall in the College of Medicine, further reducing the amount the university could use as operating funding.

The university already had moved forward on several initiatives to address the sudden contraction of its budget, including the closure of the International Centre for Northern Governance and Development, whose budget was eliminated by the province. In addition,

75 senior staff members will have their salaries reduced by two to five per cent and the university is also offering voluntary buyout packages to employees, all in an effort to avoid involuntary layoffs.

It is an unsustainable situation, Stoicheff said, and while such immediate actions are necessary to manage the shortfall, it is critical that the university make decisions with the long-term future of both the university and the province at the forefront.

"Following the substantial cut in our provincial grant, we must make strategic, deliberate decisions that provide sustainable answers to the serious financial challenge we currently face," Stoicheff said. "Given our history of strong financial management, we can manage the situation in the short term, but it is not sustainable."

He noted the university would do everything possible to protect the student experience and the discovery mission, but that all options would be considered. He also said the university must continue to fuel its ambitions related to Indigenization and internationalization, and must stay firm in its vision to design new programs,

support new research opportunities and engage with the national science agenda. He committed to finding new sources of funding to invest in critical growth areas to serve the needs of the province and the nation.

"The assumption is, of course, that we need to do less with less," Stoicheff told the board. "And it is true that to an extent we will need to do exactly that. We will need to be extremely careful about hiring, about resourcing particular academic initiatives and about undertaking new cutting-edge projects that the province needs. That's today's reality. We are dealing with the stress of that reality every day.

"But we also need to continue to think big. If we can look back at this period and say that we did not retreat into ourselves, that would be a success. We need to be purposeful about our decisions, mindful of our long-term goals, committed to our vision and mission and values. The province, and the people of this province, need us to succeed."

In doing so, the university would continue to be an economic driver in Saskatchewan, where it contributes more than \$1 billion annually to the economy. Interim Provost and

Vice-President Academic Michael Atkinson noted that the U of S drives innovation in the province through research and unique facilities such as the Canadian Light Source, Fedoruk Centre and VIDO-InterVac.

As a trusted steward of taxpayers' money, Atkinson said the university has always been committed to using its resources strategically and carefully to continue building on the important work critical to the province and beyond in areas such as human, animal and environmental health, food and water security, agriculture, the arts and Indigenous engagement.

"Any measures we take to address this financial shortfall must not jeopardize our outstanding research that is actively tackling real-world problems in Saskatchewan and well beyond our borders, and our commitment to a high-quality student experience," Atkinson said.

Vice-President Finance and Resources Greg Fowler said that, although centrally driven initiatives will help reduce the operating deficit, colleges, schools and administrative units will be responsible for determining how they will address their budget reductions. ■



## IN CASE YOU MISSED IT

A lot happens at the U of S during the weeks when *On Campus News* isn't published. Here are a few of the top stories from [news.usask.ca](http://news.usask.ca):

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### Water Futures projects unveiled

The Global Water Futures program—led by the University of Saskatchewan—has announced funding of \$16.2-million over the next three years for 11 initial research projects across Canada to tackle some of the country's most pressing water-related challenges. Four of the projects are led by U of S research teams headed by John Giesy, Helen Baulch, Jeffrey McDonnell and Saman Razavi.

### U of S signs MOU for SASK Alliance

The University of Saskatchewan has signed a memorandum of understanding with the University of Regina and Saskatchewan Polytechnic to create SASK Alliance, to collaborate on the internationalization of higher education in the province. The alliance will work to increase awareness of provincial post-secondary programs and create a recognizable Saskatchewan education brand.

### Stroke research funding renewed

Financial support for Saskatchewan Clinical Research Chair Dr. Michael Kelly of the College of Medicine at the University of Saskatchewan has been renewed through to October of 2022. The Heart & Stroke Foundation, Saskatchewan Health Research Foundation and the College of Medicine will each provide \$500,000 in funding over the next five years for Dr. Kelly, who has held the chair since 2012.

### WCVM opens new equine centre

The Western College of Veterinary Medicine at the U of S has established a new centre designed to allow equine specialists to provide the best possible care for mares and foals and other sick horses. The opening of the new Rae-Dawn Arabians Equine Intensive Care Unit and Foul Centre was funded by a \$200,000 donation from Murray and Shirley Popplewell, longtime clients of the WCVM.

# Digging into history at Wanuskewin

## U of S leads longest-running archaeological research project in Canada

CHRIS MORIN

University of Saskatchewan archaeologist Ernie Walker pores over a bison phalange, a piece from the front hoof that he estimates is nearly 5,000 years old.

The bone, weathered and brittle, is a piece of a very important story, according to Walker, a distinguished professor of archaeology and anthropology. It's one of many treasures that he, and hundreds of students, have pulled from the earth at the field school located at Wanuskewin Heritage Park.

In addition to providing a glimpse into the history of life on the plains—both of the First Nations people of the area and the creatures that found their demise at the bottom of valleys in the area—this piece of skeleton is part of the research that will help inform the park's formal submission as a World Heritage-designated site.

Earlier this year, Wanuskewin announced plans to expand the park in an effort to secure status as a United Nations Educational, Scientific and Cultural Organization (UNESCO) site. It's a title



U of S archaeology students are helping dig into 6,000 years of living history at Wanuskewin.

that, if accepted, would be a first for the province and one that U of S students played a pivotal role in.

Walker proudly beams at his students, who are busy documenting their finds in notebooks or gingerly dipping trowels into mounds of soil and clay. It's hard to believe that the site, brimming with invaluable

bones and artifacts, was once a cattle ranch, said Walker, who worked with the rancher who first began stewarding the land in the early 1930s.

"There were a lot of archaeological materials everywhere, literally eroding out of the slopes," he said.

The land was first sold to



the fledgling Meewasin Valley Authority, and then turned over to Wanuskewin when the organization was formed in the 1980s.

It was granted Provincial Heritage status in 1984 and designated a National Historic Site in 1987 during a royal visit by Queen Elizabeth II.

In addition to providing an interpretive centre for local history, the site became a second classroom for those enrolled in the archaeology program at the U of S. It has since become the longest-running archaeological research project in Canadian history.

"This research has been embedded in my department all these years and literally hundreds of undergrads students have taken the field school," said Walker.

In addition to heading up the site, Walker splits his time as a Special Constable of the RCMP and forensics expert for law enforcement agencies across Canada. Walker completed two undergraduate degrees and a master's degree at the U of S, and returned to his home province after earning a PhD at the University of Texas.

Now he and his students are producing archaeological finds dating back over 6,000 years.

Last month, U of S archaeology students Madison Friesen and Brynn Walker unearthed a 4,000-year-old knife head at Wanuskewin's Wolf Willow dig site, an artifact that was found about two and a half feet below the surface. That site will now be kept open for another year to see what else might be found there.

SEE MAKING, PAGE 15



# University bolsters senior leadership team

## Vice-Provost Indigenous Engagement position supports strategic priorities

The University of Saskatchewan has enhanced its senior leadership over the past few weeks by filling two dean vacancies and introducing a nationally recognized champion for Indigenous students.

The U of S announced the recruitment of deans in the Colleges of Dentistry and Engi-

neering, while also building on the commitment to supporting Aboriginal achievement with the hiring of alumna Jacqueline Ottmann as the university's first vice-provost of Indigenous engagement.

Ottmann will join the U of S on Oct. 1 from the University of Calgary where she is the Director

of Indigenous Education Initiatives and an associate professor in the Werklund School of Education, while also serving as co-chair of U of C Indigenous Strategy.

Ottmann, who is Anishinaabe (Saulteaux) and a member of Saskatchewan's Fishing Lake First Nation, said she is looking forward to returning to her home province and to the university where she earned her master's in education (2002) and her PhD (2005) in the Department of Educational Administration in the College of Education.

"I am very excited to be coming back to the University of Saskatchewan and to Saskatoon in general, to contribute to the Indigenous strategy at the U of S. It's a great privilege," said Ottmann, who is also a member of a number of national post-secondary organizations including a representative-at-large (Aboriginal) on the executive committee of the Canadian Association of University Teachers.

"Because I am an alumna, I have kept in touch with what was happening at the University of Saskatchewan in terms of their Indigenization and decolonization initiatives and processes and I have been encouraged by the leadership that they have taken in this over the years."

Here's a look at the other recent senior leadership appointments, as of July 10:

### Dr. Doug Brothwell Dentistry

Brothwell has been appointed to a five-year term as dean of the College of Dentistry.

Currently serving as the associate dean (academic) in the College of Dentistry at the Univer-



Ottmann



Brothwell



Kresta

1984 from the U of S, this post is a homecoming of sorts.

"I am a U of S grad, and I started my career as a dentist in Saskatchewan," said Brothwell, who also earned a Bachelor of Education degree at the U of S before pursuing his Master of Science and diploma in dental public health training at the University of Toronto.

"This is full circle and I relish the opportunity to continue my career here and share what I've learned with future generations."

Brothwell will take over from Dr. Gerry Uswak, who is finishing his second five-year term.

### Suzanne Kresta Engineering

Kresta will begin a five-year term as dean of the College of Engineering on January 1, 2018.

Kresta comes to the U of S from the University of Alberta where she is currently serving as a professor in the Department of Chemical and Materials Engineering, and associate dean in the Faculty of Graduate Studies and Research.

"The reputation of the College of Engineering at the University of Saskatchewan is outstanding, both in terms of research and student experience," said Kresta, who earned a Bachelor of Science degree at the University of New Brunswick, a Master of Science at Leeds University and a PhD from McMaster University.

"I was inspired by the people in the college, and taking on this leadership role is an opportunity I am very excited about."

Kresta received the Engineers Canada Medal for Distinction in Engineering Education in 2014. She replaces Donald Bergstrom, who has served in this role on an interim basis since January 2016. ■



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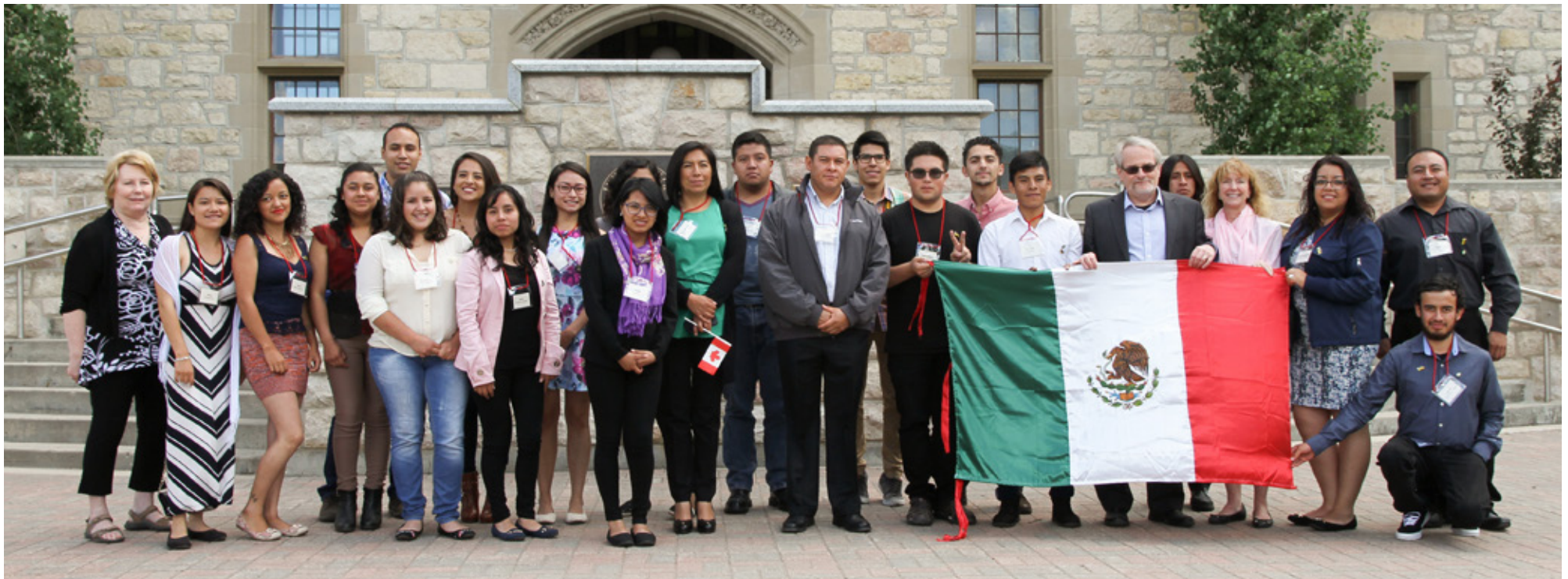
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Students in the Proyecta 10,000 program pose in front on the Peter MacKinnon Building, alongside Vice-Provost Teaching and Learning Patti McDougall (third from right), Language Centre Director David Wilkinson (fifth from right) and Director of International Research and Partnerships Diane Martz (far left).

LESLEY PORTER

# U of S welcomes Mexican summer students

LESLEY PORTER

A new language initiative is bringing Mexican students to the University of Saskatchewan this summer to help them learn English.

Proyecta 10,000 (Project 10,000) is an ambitious program that aims to have 10,000 Mexican learners studying English as a second language (ESL) in Canada by 2018. Funded by the Mexican government, it was born out of a similar proposal with American universities—Proyecta 100,000—with a goal to attract 100,000 Mexican learners to pursue ESL studies in the United States by 2018.

Twenty students arrived on the U of S campus June 12 to start the ESL course held at the Language Centre, located in the Williams Building on Cumberland Avenue. The program concludes July 15.

In addition to the obvious learning benefits for the students, the program bolsters relationships with other institutions and communities while contributing to the university's overarching internationalization mandate.

"Programs like this will enhance the diversity that we, as a university, would like to have," said Alison Pickrell, director of enrolment and student affairs.

"It's also part of building stronger academic and research relationships between Mexico and Canada while providing realistic opportunities for Mexican students and faculty to interact with our campus, and foster future relationships and connections."

These types of relationships may also encourage Saskatchewan students to undertake education experiences in Mexico and elsewhere, she added.

Additionally, connections and partnerships may also exist between post-secondary institutions in Saskatchewan and Mexico, in their shared commitment to Indigenous populations. In addition to fostering international diversity, Pickrell said she is thinking about what else Mexican students, and post-secondary relationships between the two



Edgar Martinez enjoyed his time in the ESL program and is now a graduate student in the College of Engineering.

LESLEY PORTER

countries, can bring that is relatable to our community.

"The Mexican post-secondary sector is having similar conversations to those we're having here," she explained, adding that although the history and experiences are varied, the impact of imperialism

on Indigenous populations is acknowledged in both countries. "We're both talking about reconciliation, inclusion, Indigenous student success, and incorporating Indigenous ways of knowing and learning in the curriculum and institutional culture. There are defi-

nately opportunities to learn from one another and develop productive collaborations in this area."

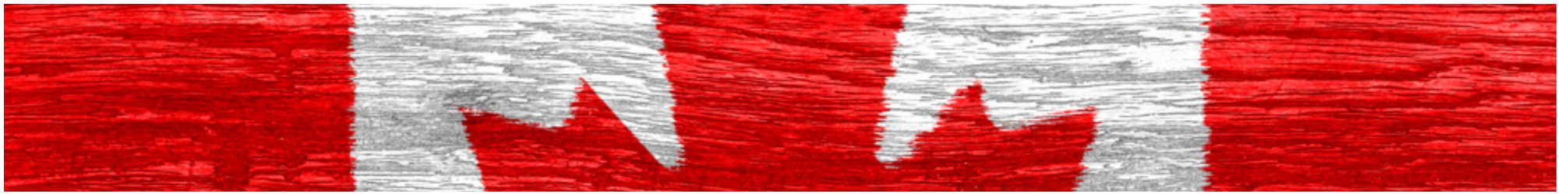
On June 19, a welcome lunch was held for the visiting students. Edgar Martinez, a former ESL student and current U of S graduate student in the College of Engineering, spoke about the challenges he faced when he moved to Saskatoon from Mexico City in 2012 to begin his ESL studies.

"A big part of it was just culture shock—it's completely different from Mexico," he said, noting that the changes in food, weather and people were a lot to deal with.

However, the support he received from the Language Centre and his ESL cohorts helped him adjust. He completed his master's degree and is now pursuing his PhD in mechanical engineering.

"You have the opportunity to share with people from a lot of countries," he said. "You can see different ways of thinking, different perspectives and you make friends with everybody." ■





# 150 years, countless stories

## U of S alum's photographs celebrate Canadian people and places

 HENRYTYE GLAZEBROOK

It's not unusual for Jannik Plaetner to wake up at the crack of dawn, pack his camera, lenses and other photography equipment into his car and put rubber to road, his only target a dash on a map of Saskatchewan's hidden gems.

One trip might have him trekking the magnificence of the

“A general arts degree is very versatile. It gives you some new ideas, and that's exactly what I was looking for. I wanted to do some new things with my life.”

Jannik Plaetner

Athabasca Sand Dunes, while another beckons him to near-ghost town desolation of Uranium City. But in each new place he waits patiently to capture on film even a fleeting glimpse of the relationship people have with the boundless, unfathomable Canadian expanse.

“I like the landscape, of course, but I'm also fascinated by how people ultimately interact with it, what it is they do when they get out there and how they do it,” said the graduate of the University of Saskatchewan's fine arts program.

Plaetner's travels are high-

lighted in his new photography collection entitled *Canada Three Sixty*, which was on display in the Gordon Snelgrove Gallery at the U of S earlier this month. Although he lives in Saskatoon, and thus can highlight his home province with greater ease, the exhibition dovetailed with Canada 150 celebrations as an exploration of the country's great western terrain, from the coastal shores of British Columbia through to Manitoba's infinite lakefronts.

Born and raised in Copenhagen, Denmark, Plaetner first fell in love with Canada during a cultural exchange he took part in at the age of 19. Today, his time immigrating to an unknown country and exploring its boundaries lies at the heart of *Canada Three Sixty*, which he hopes shines a light on others' similar experiences.

“The way that people interact with the world really is determined by their cultural roots,” he said. “A lot of people come from countries where we don't have this vast landscape that we have here, and so people behave very differently once they get out into it. They'll drive for thousands of kilometres to go and see something and to be immersed in it.”

Plaetner has always held an interest in photography, and fondly recalls a youth spent hopping trains from Copenhagen to Paris and



U of S fine arts alumnus Jannik Plaetner with one of his photos of the old Victoria Bridge in Saskatoon.

 JANNIK PLAETNER

beyond, only returning home to transform the family bathroom into a makeshift darkroom.

As an adult, Plaetner said a general sense of malaise inspired him to chase his lifelong passion and enrol in a few art classes at the U of S. Before he knew it, he was “entrenched in a BFA.”

“A general arts degree is very versatile,” he said. “It gives you some new ideas, and that's exactly what I was looking for. I wanted to do some new things with my life.”

As a former member of the

merchant marine, a fleet of import and export ships in Denmark, Plaetner had traversed more than 50 countries before deciding to call Canada home.

“I'd been to Australia already and to the Middle East and all over Europe, and I came here and I thought this was a really interesting place,” he said. “It's so large and there's so much of it that we tend to forget that the East Coast looks and is very different from the West Coast.”

Plaetner is planning to expand

*Canada Three Sixty* into an ongoing project over the next several years, beginning with some new adventures into the country's eastern half and perhaps one day dipping a toe into the northern territories.

“I started out with the idea of staying close to home,” he said. “So many Canadians like to travel overseas and abroad, sometimes neglecting what's here. There's a lot here—just about every geography you could want and a lot of very interesting places full of interesting people.” ■



# Going viral: VIDO-InterVac director discusses diseases, anti-vax movement

HENRYTYE GLAZEBROOK

Maybe it starts with a mild fever, a scratch at the back of your throat or a cough you just can't shake. Nothing a few days of bed rest won't fix, hopefully. But for an unlucky few, these are the first signs of a measles infection.

Measles is just one among a list of diseases that includes whooping cough, mumps and chickenpox, each of which was long considered nearly vanquished but has had a resurgence, as the anti-vaccination movement has grown.

"Measles we got two years ago, down in Regina, especially, but also a number of people in Alberta," said Andrew Potter, director and CEO of Vaccine and Infectious Disease Organization – International Vaccine Centre (VIDO-InterVac) at the University of Saskatchewan. "Measles in Canada is exceedingly rare. They managed to trace it to somebody who went to Disneyland. You go to Disneyland and there's a bunch of kids and, bingo, it just spreads like wildfire."

Vaccines, which stimulate the immune system with a micro-dose of a communicable disease to spark a response that leaves the human body better equipped to handle future encounters, are facing growing backlash in some circles. For Potter, who is also a professor of veterinary microbiology, this trend brings to mind worrisome memories of his own life prior to widespread



VIDO-InterVac director and CEO Andrew Potter leads cutting-edge life-saving vaccine research.

HENRYTYE GLAZEBROOK

immunization.

"When I was kid I had mumps, I had measles, I had whooping cough, I had them all," he said. "The whole principle behind vaccination is that you end up essentially immune, not for life but for many, many years—sometimes decades."

Potter sees two main drivers behind the rise of the anti-vaccination movement. The first, a marketing push from parties aiming to make an easy buck off a trendy topic, he is quick to brush off.

The second driver, however, comes from a much more familiar

**“ Vaccines have saved more lives than any other medical intervention in history. It's that simple.**

Andrew Potter

place of fear, even love: those with family diagnosed with autism, desperately searching for answers.

"They're looking for something to hang their hat on, and vaccines are as good of a thing as any," Potter said. "If you imagine having a child who's anywhere from one year old up to four years old, autism is usually diagnosed at that time. And what else has happened at that

time? They've had a ton of vaccines. Making that correlation is a real easy thing for people to do, and I understand that fully."

Potter largely attributes the trend to a confusion of correlation and causation, with many people watching the rise in both the number of vaccinations and diagnoses of autism as linked, simply because of their similar trajectory. He points to a similar pairing he likes to highlight in response, stressing there's no confirmed link between cases of autism and vaccines.

"If you plot the number of cases

of autism, you have an absolutely perfect match with the consumption of organic food—and most people I think would probably agree organic food is not a bad thing."

The reality is that not all people are going to get vaccinated, sometimes due to their own issues of health, religion or other circumstances. But Potter emphasized the importance of retaining what's known as herd immunity.

"If you vaccinate a certain percentage of the population, it protects all the others," he said. "You have kindergarten, the classic breeding ground of disease. If you have 85 per cent of those kids vaccinated, you're not going to have a problem, if you throw an unvaccinated kid in there. However, if that goes down to, let's say, 60 per cent, suddenly you've got yourself an issue. The percentage varies for each disease."

The solution, Potter said, is to open a dialogue around the importance of vaccinations and to simplify the process of getting immunized, pointing to non-injection implementation methods and greater accessibility as ideas that have helped curb disease resurgences in the past. And disease reduction is ultimately what's most important. What's at stake, he said, is more than most people realize at first glance.

"Vaccines have saved more lives than any other medical intervention in history," he said. "It's that simple. They are the single most cost-effective way. Preventing disease is way cheaper than treating disease." ■



# Land and language intertwined for SENS student

 HENRYTYE GLAZEBROOK

Exploring the woods surrounding her Yukon home, Jocelyn Joe-Strack had an epiphany about her Western and Indigenous worlds.

She came to realize how her ancestors only spoke of, and viewed, the forest, animals and air as alive and with spirit, how they might greet a flame with a friendly “Oh fire, you’re hungry. Let me feed you.” It was the harmony of the way her language, Southern Tutchone, implies life, rather than objectification, that spoke to her.

“The only things objectified were those that were made—so a knife, a bag, shoes, clothing—and everything else is regarded as alive, honoured and acknowledged as with spirit,” Joe-Strack said.

“I had this kind of reckoning: I walked through the forest and I felt so much more love and support than I’d ever felt before. The forest is alive and it loves us and it’s there for us.”

Joe-Strack is a PhD candidate with the University of Saskatchewan’s School of Environment and Sustainability, and one of four U of S recipients of the 2017 Vanier Canada Graduate Scholarship. The award, valued at \$50,000 per year for three years, recognizes top-tier PhD students who demonstrate excellence in academia, research impact and leadership at Canadian universities.

But for students like Joe-Strack, the scholarship is about more than the money or the prestige that comes with winning one of the nation’s most-coveted prizes. Instead, she’s more excited about how it will help her research thrive.

“I’m a mother and I have a family, and if it wasn’t for this schol-



**U of S PhD candidate Jocelyn Joe-Strack is researching her community’s journey to self-determination and Indigenous-led reconciliation.**

 SUBMITTED

arship, I think I would have had to continue to work as a consultant throughout my PhD and it likely would have prolonged and suffered because of it,” she said.

“Now I’m provided the opportunity to just dedicate myself and I’m really excited for that.”

The Southern Tutchone language is intricately entwined with Joe-Strack’s thesis, a three-year project that has taken her to Saskatoon and home again, where she is working with her First Nation of Champagne and Aishihik to develop a land use plan.

Joe-Strack is hoping to forge new paths in academic storytelling with her work, weaving her experience growing up in the Yukon

and with her time helping plan her First Nation’s future in a first-hand, scholarly account of the community’s journey toward self-determination and Indigenous-led reconciliation.

The finished product, she hopes, will be a contribution to the emerging field of Indigenous research.

“I am keeping a journal of my time with my nation and the lessons that I’m learning and reflecting upon, and preparing my thesis is going to be more of an autoethnography,” Joe-Strack said. “It’s going to be a recount of my place in this collective journey and in fulfilling my role in contributing a land plan for my people and what that means in the significance of our extended journey.”

The First Nations of the Yukon are a unique case study among Indigenous communities in that they have implemented their own self-government that exists at the same level as the Yukon Government, under the Canadian Constitution. The result is a governing body by First Nations and for First Nations that holds a higher level of autonomy than Indian Act Nations—and one that, to Joe-Strack, is worth studying and shining a light on.

“I would like to try and do my best to tie (my research) back to the global Indigenous journey of overcoming oppression, because we are one of the most successful, progressive Indigenous nations in the world.”

A land plan may seem like a rather singular project to be pulling in larger topics like language, history and governance—all while acknowledging the ongoing legacy of residential schools and the pursuit of reconciliation—but Joe-Strack would disagree.

“Our land means our culture, it means healing, it’s our connection to our language and our community and to each other,” she said. “It’s so much more than this swamp or that bay. It’s our livelihood and our identity, and a land plan should reflect that and should strengthen our community and our individual citizens’ ability to identify and find strength in being a First Nations person.” ■



## Pelletier looks into leadership for First Nations

As a former chief of the Cowessess First Nation in Saskatchewan, Terrance Pelletier is no stranger to the leadership of Indigenous communities. Now he's hoping to build on the experience for his PhD.

Pelletier, a U of S graduate student in educational administration who was recently awarded a 2017 Vanier Canada Graduate Scholarship, is exploring how the leadership models within First Nations have been influenced by the effects of colonization.

"It's looking at the historical influences of the residential school and Indian Affairs processes and the type of influences they had on our people as leaders," said Pelletier, who himself is a residential school survivor.

"It's more to understand why we are the way we are today, to understand how our leaders and institutions have become the way they are today."

Pelletier hopes that his research will help to create new leadership

models for First Nations communities, and is grateful that awards such as the Vanier scholarship have made it possible for people like himself to pursue their work with financial pressures eased.

"It's difficult, not just for First Nations people but for all graduate students, when we come here to tackle the academic rigour of each of the colleges that we're at—to meet deadlines and things like that, but also to meet the financial obligations that we have," he said. ■



Terrance Pelletier is researching Indigenous leadership.

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## Supporting Indigenous women in urban centres

When people think of Indigenous territories, a similar scene often springs to mind: paltry reservations or towns remotely located away from any city centre.

For U of S educational foundations graduate student Tasha Spillett, a Cree and Trinidadian woman from Manitoba, this idea presents a problem.

"We need to challenge the idea that urban environments and areas are not also Indigenous territories," said Spillett, who was awarded a 2017 Vanier Canada Graduate Scholarship to pursue her PhD research.

"It's important to reconnect the people who have always been living in the city or who have been displaced from their communities, to reconnect those relationships between our land bases and our identities and for non-Indigenous people to be invited into the understanding that these urban areas continue to be Indigenous territories, regardless of what infrastructure has been built overtop of them."

Spillett's work is specifically focused around the well-being of Indigenous women in urban centres. Through a series of interviews with Aboriginal Elders and teenage girls

in these areas, she's hoping to curb the systemic violence against Indigenous people.

For Spillett, the Vanier scholarship is an honour that will lend greater support for her research while she supports those who she's hoping to help most of all.

"While I did my undergraduate and my graduate degrees, I also worked full time," she said. "This will be the first time that I can really focus on the work, the research and the study, and not also have to hold a full-time job. It means the freedom to do the work that my community has said it wants done." ■



Tasha Spillett is studying the well-being of Indigenous women.

SUBMITTED

## Studying steel safety in critical construction

In the event of an explosion, the protective steel that is used in the construction of chemical and nuclear plants can fracture in unpredictable ways and create critical safety issues.

Ahmed Tiamiyu, a University of Saskatchewan mechanical engineering PhD student from Nigeria, wants to revolutionize the way that steel reacts when under pressure.

His research, which recently led to him being awarded a 2017 Vanier Canada Graduate Scholarship, is aimed at optimizing an

existing grade of stainless steel which would better hold up to high temperature and load-bearing circumstances.

"The aim is to improve safety," said Tiamiyu. "Even in Canada, we've had some chemical plant operation errors that lead to explosions.

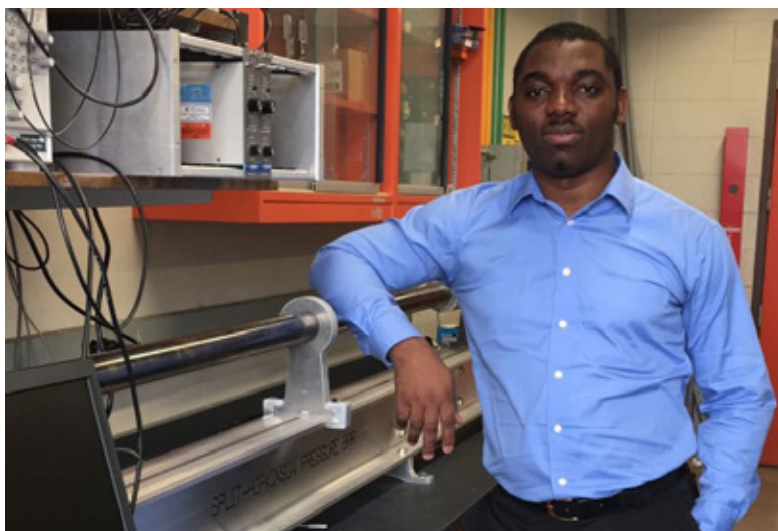
"This research has a good promise of improving the performance and reliability of this material in the event of an unanticipated explosion. In the long run, lives can be saved."

Winning the Vanier scholar-

ship has been uplifting for Tiamiyu, giving him the security of knowing his research is seen as vital beyond his own lab.

"Students do get just a little encouragement in what they do most of the time. However, this Vanier scholarship is for me a morale booster," he said.

"I am highly encouraged that my work is gaining recognition and that what I'm doing is very important to the scientific community, to society and to the nation at large." ■



Ahmed Tiamiyu is examining steel safety in construction.

SUBMITTED



# Shedding new light on dark matter

 HENRYTYE GLAZEBROOK

The tricky thing about spotting dark matter is, well, that it's impossible to see with the naked eye.

Instead, researchers rely on their ability to track the ethereal substance's effect on its surroundings—an unexpected shift in gravity's pull or seemingly inexplicable bending of the very light waves we rely on for sight.

"Light is impacted by gravity, it feels its influence," said Rainer Dick, a professor in the University of Saskatchewan's Department of Physics and Engineering Physics. "When light comes close to a very large mass, it's also bent in its path. There's actually a way to put galaxies and galaxy clusters on scales and to weigh them, by measuring the bending of the light around them. The larger than expected bending of light among galaxies and galaxy clusters is evidence of dark matter."

Dick is one of many researchers around the world who are on the hunt for dark matter, exploring new and exciting ways to try to pin it down and prove once and for all that it actually exists. The material, which experts estimate makes up roughly 80 per cent of the mass in galaxies, plays a vital role in keeping galaxies from ripping apart as they spin through the cosmos.

"It's the stuff that binds together



Rainer Dick is exploring the secrets of the universe and the effect that dark matter has on galaxies.  HENRYTYE GLAZEBROOK

galaxies through the effect of gravity," said Dick. "Without this dark matter, the outermost stars would actually leave the galaxy because they have such high velocities."

The substance draws its name from its unusual relationship with light, which renders it invisible to all but the most precise of instrumental measurements.

"It does not reflect light. It does not emit light, it does not absorb light and it does not reflect light,

so we cannot see it with our eyes," Dick said. "It's perfectly dark, from that perspective."

Dark matter straddles an unusual line in physics, Dick said, in that it technically has not been proven to actually exist, despite overwhelming evidence to the contrary.

"The outskirts of galaxies would not look the way they do without the existence of dark matter," he said. "The universe is close to 14 billion years old and it's filled with large-

scale structures like galaxies, huge structures of many galaxies and filaments of galaxies connecting each other. Ordinary matter would not have the time, even in 14 billion years, to generate these large-scale structures. It needs a large amount of dark matter."

Any potential application for dark matter would be purely theoretical at this point, as it interacts with everyday matter only in extremely weak, barely noticeable

ways. But Dick is hesitant to write off technical uses entirely, citing electromagnetic waves as just one famous example of research similarly presumed useless prior to its confirmation by researcher Heinrich Hertz.

"Hertz had to write a funding application for that to the Prussian Academy of Science, and they wrote back that it would never be good for anything, but would be so important for science that it should be funded anyways," Dick said. "Twenty or thirty years later, people use that on a technical scale every day for radio and signal transmission across the Atlantic."

Dick has produced three peer-reviewed papers on quantum theory in the past 12 months and will lead a discussion on new dark matter research at an international conference later this month. For researchers around the world like Dick, who is currently in the process of publishing new results on dark matter research, the search for answers continues.

"There's actually dark matter in this room," Dick said. "Every now and then—very rarely—they interact with ordinary matter extremely weakly. They bounce off an atomic nucleus and generate a tiny little recoil in it. That's what people are looking for." ■



# Is there life after death?

## Religious studies course explores the afterlife in world religions

HENRYTYE GLAZEBROOK



Early in the 19th century, two young sisters convinced friends and family that they could communicate with the dead through an elaborate yarn involving knocking on the walls, popping their joints and other mysterious sounds.

Though these women—Kate and Margaret Fox—would later admit that their routine was a hoax, the trickery had already sparked the beginnings of a new religion: Spiritualism.

“People have believed that you could communicate with the dead and raise their spirits forever, as far as I can tell from the research I’ve done, but the way that Spiritualism has developed is much more optimistic,” said University of Saskatchewan religious studies professor Mary Ann Beavis. “The notion is that the dead are happy, they’re easily accessible, they want to help us, they want to communicate with us.”

The spectral works of the Fox sisters are one small slice of what’s covered by Beavis in *Life after Death* in *World Religions*, a class she offers through St. Thomas More College. The course, currently in its second year, explores afterlife beliefs in relation to world religions, both ancient and contemporary.

What surprised Beavis, who designed the course herself, was just how infrequently the topics of religion and death are tied together academically.

“In the popular mind, religion and afterlife kind of go together,” she said. “We have on this campus, I think, three different courses in three different departments

on death and dying, including in religious studies. But nothing on afterlife—which is so funny, because you start talking about religion with just about anyone casually and within five minutes the conversation turns to afterlife.”

Lesser-known religions such as Spiritualism and Mormonism are briefly touched on at the course’s tail end, Beavis said, while larger faiths make up the bulk of the course outline.

One of Beavis’ favourite parts of teaching the course is the way it “explodes stereotypes” about major world religions. She cited Christianity as one example, explaining that there are huge variations in views of the afterlife beyond the pearly gates and heralding angels pictured in Sunday school.

Others, such as ancient Israelites, held views some might find macabre.

“The ancient Israelites really didn’t have any optimistic afterlife expectations at all,” she said. “There’s no angels, no heaven, no seeing the face of God. The archaic notion was that at the time of death the spirit departed from the person and sunk down to this nondescript kind of netherworld called Sheol. It didn’t matter if they were good or bad, rich or poor. It was sort of the great leveller.”

Other religions, such as

Hinduism and Buddhism that largely developed in Asia, focus much more heavily on the inevitability of the afterlife and what comes next, Beavis said.

“In the larger Asian religions ... you’re going to reincarnate in some form or another, depending on your karma and the way you live your life,” she said, explaining that Westerners often romanticize the notion, imagining glamorous past and future lives while wholly missing the core point of the faith.

“In the Asian perspective, if you’re reincarnated you’ve actually done something wrong. It’s not the ideal. What you want is ultimate release and blissful oblivion.”

Beavis encourages her students to explore religions beyond those outlined in the syllabus, and has had some tackle personal projects on areas such as the differentiations within Christianity, afterlife beliefs in Indigenous spirituality, and even Scientology.

The goal, she said, is to broaden students’ views on both their own religions and those they are less familiar with.

“I hope it will maybe bring them into more awareness of their own cultures and presuppositions, and to be more open-minded about the beliefs of others,” she said. “Even a tradition that’s as seemingly cut-and-dried and as afterlife-focused as the Christian tradition, is open to a wide variety of interpretations.”

On a grander scale, though, Beavis isn’t surprised that the class has turned heads.

“Whether or not there’s an afterlife is a matter of existential concern to just about everybody, whether they admit it or not.” ■



Religious studies professor Mary Ann Beavis stands in front of the stunning murals in the St. Thomas More College Chapel at the University of Saskatchewan.

HENRYTYE GLAZEBROOK



# Indigenous Studies launches PhD program

 HENRYTYE GLAZEBROOK

Over the past few years, the University of Saskatchewan's Department of Indigenous Studies noticed a trend of students flocking to their program. What's unusual is that they hadn't done anything to

specifically bring in new people.

The welcome upswing was one of the first signs that it was high time to push forward with new programming.

"Students are looking for us,

and we aren't really having a push in terms of recruitment," said Robert Innes, associate professor and graduate chair of Indigenous Studies. "Students are finding us and coming to us, and so we figured this is the time. The time is right for our department to grow."

That growth is taking the form of a new PhD program, which was passed unanimously by University Council in January. The initiative is the first of its kind for the U of S Indigenous Studies department, and sets the institution apart as one of only a small handful of universities in North America to offer similar doctorates.

"We see the PhD program as being fundamental to the growth of Indigenous Studies as a discipline," Innes said. "There are two, maybe three PhD programs in the United States. In Canada, Trent University has had a PhD program for a number of years, and that was the only one in Canada until the University of Manitoba's Department of Native Studies started offering one a few years ago and the Faculty of Native Studies at Alberta just started their new PhD program as well."

The step forward is not the first time that the Indigenous Studies department has accepted PhD candidates, but rather the first time that it has had the number of faculty and the resources necessary to launch a dedicated support system for their research.

In previous years, the department has taken on special case doctoral students. However, since accepting special cases includes a more intensive application process and a significant increase in paperwork, Innes is confident the



Associate professor Robert Innes is excited about adding a PhD program in Indigenous Studies.

 HENRYTYE GLAZEBROOK

new program will be more flexible for incoming scholars.

"It's a lot more involved," he said of the special case program. "The idea is that the departments that have the special case option

**“ Students are looking for us, and we aren't really having a push in terms of recruitment.**

Robert Innes

may not have the capacity for a full program, so they want to make sure that students coming in have everything lined up. This really frees up students."

The department has just admitted its first three PhD students, who will begin in September a five-year period of study, comprehensive exams, proposals and the intensive research typical of most doctoral programs. But what's really exciting to Innes isn't only what those students will

be learning, but what they'll eventually give back to the campus.

"Within the university, the department is well situated to have a leading role in intellectual conversations about Indigenous issues," he said. "PhD students are really the mechanism or the bread and butter of these new conversations that can emerge. Our students so far—and we expect this to continue—are asking new questions, thinking about things in different ways, and that will also influence the faculty. It's a symbiotic relationship, where faculty influence students and vice versa."

Looking forward, Innes is excited to start active recruitment for future years, bringing in fresh faces and developing an ongoing influx of bright young minds to learn and build a community together.

"What this new program allows us to do is have a cohort," he said. "We've never had three PhD students come in at the same time. They'll act as support for each other, and then support the students that come in the next year. That's a major development." ■

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# The best of both worlds

## U of S researcher supports both organic and conventional weed control

✍️ GLENN CHEATER

In the either/or divide between organic and conventional agriculture, Chris Willenborg refuses to take sides. Or rather, he picks both.

“Too often as growers, and sometimes as scientists, we get stuck in our own ideologies,” said the University of Saskatchewan weed scientist. “When I look to the future when it comes to weed control, I see using approaches from both worlds.”

That future has already arrived in Willenborg’s lab. He points with considerable pride to a body of work that includes expanding the range of herbicides for farmers, but also employing approaches such as using bugs and rodents to combat weeds.

Take, for example, his lab’s work on sulfentrazone. It’s one of those hard-to-pronounce chemicals that’s easy to vilify—it kills weeds by bursting cell membranes and persists in the soil for weeks. But it’s not carcinogenic and studies haven’t found toxic effects, until you increase exposure to 300 times what you would encounter while spraying.

Willenborg’s research team, in collaboration with industry, proved it was also safe to grow canola a year after applying sulfentrazone, which will potentially allow it to be used more often.

“A fairly significant part of what I do is finding new uses for existing herbicides,” he said. “Herbicides are—by far and away—the most effective form of weed control.”

But before pigeon-holing Willenborg, consider a comment he makes moments later.

“Farmers tend to view pesticides as the first line of defence, but I believe we need to flip that attitude around,” he said. “They should be the last line of defence—a tool you use to deal with those weeds that haven’t been taken out by other management practices.”

And for Willenborg, that



College of Agriculture and Bioresources professor Chris Willenborg and his research lab team are finding new ways to protect crops from weeds.

📄 SUBMITTED

starts with the weed seedbank—the countless millions of seeds that lie dormant on every field, waiting for the right conditions before germinating and starting a new cycle of infestation.

“It’s increasingly being recognized on a global basis that it all starts with the shedding of weed seeds,” he said. “I use the old saying: ‘One year seeding is seven years weeding’ to remind people that weed seeds can lie dormant for years and if you don’t deal with them now, you’ll have to do something about them later.”

And one of the things you can do comes straight out of the Mother Earth handbook: work with nature.

“There are a lot of seed predators: song birds, rodents such as voles and mice, and also insects,” he said. “We don’t usually think about invertebrates, but they are the greatest consumers of weed seeds.

Although it’s really hard to get real-world estimates of how much insects consume, some U.S. studies have found they can consume 40 per cent to as much as 80 per cent of the weed seedbank for certain weeds.”

One of Willenborg’s graduate students has zeroed in on carabid beetles, a voracious but little-known bug, which is highly effective at gobbling up seeds of common weeds such as volunteer canola and stinkweed.

But once again, Willenborg’s research efforts transcend the dividing line between organic and conventional. Another way to manage the weed seedbank is to spray herbicides on crops just prior to harvest. Conventional farmers use this process, called desiccation or harvest aids, because it causes crops to ripen evenly and earlier.

But the herbicides are also taken

up by weeds that “escaped” previous control efforts, and some herbicides can affect the viability of the seeds they are about to shed.

However, more spraying can also mean fewer insects. Then again, if you also grow cover crops—another favourite in the organic farming toolkit—it tends to significantly boost carabid numbers.

His approach, in short, is a mash-up—using both organic and conventional practices to build hybrid systems. It’s all driven by a pragmatism acquired on his grandfather’s farm in Wakaw, Sask. Save for when he was getting his doctorate, Willenborg spent every spring and fall that he could on the farm helping sow and harvest the crops. So he views all of his work through “the farmer’s lens”—the tight windows for getting the job done and the even tighter economic margins.

But he also looks at the rise of herbicide-resistant weeds—there are now more than 60 in Canada alone—and sees that a new approach is needed.

He’s not alone. Earlier this year, Saskatchewan Pulse Growers donated \$2 million to his weed science program, praising both his work on herbicides and his efforts to develop a “robust strategy for long-term weed management.”

“There’s a growing number of people who are realizing we can blend the philosophies of organic and conventional,” he said. “We can draw from both systems, and that’s where the real long-term sustainability of agriculture lies.” ■

**Glenn Cheater is a freelance writer and regular contributor to the *Agknowledge* magazine produced by the College of Agriculture and Bioresources.**





# COMING EVENTS

## COURSES / WORKSHOPS

### Language Classes

For information, or to register, visit [learn-languages.usask.ca](http://learn-languages.usask.ca) or call 306-966-4355.

- ESL Evening Classes at the Language Centre
- Summer term, July–August. Classes include advanced writing and speaking, graduate-level writing, pronunciation.
- Summer Non–Credit Conversational Language Classes
- Learn, improve, maintain and master your French and Spanish speaking, listening and grammar skills. Classes begin the week of July 4 and are limited to 16 places.

- One–week Intensive French Immersion
- Aug. 14–18; 8:30 am–5 pm (one-hour lunch break). All levels offered (beginner to advanced). This week-long program consists of 40 hours of learning. Highlights of the program include: themes, vocabulary and grammar taught with the communicative method. Language lab exercises and group projects and excursions. Guided conversations, discussions and debates. Friday final luncheon will be provided.
- Four–day Intensive Cree Immersion
- Aug. 14–18; 10 am–3 pm (one-hour lunch break). This program offers 16 hours of learning over four days. Highlights of the week include: instruction using the

communicative method, experienced teachers, group projects, guided conversations and discussions, and socio-cultural activities. Learn nēhiyawēwin (Cree language) through a practical approach. The lessons inspired by Dr. Stephen Greymorning will provide you with the skills and appreciation to speak and understand the nēhiyawēwin language through total immersion techniques. This beginner course will enhance your professional and personal relationships. It is ideal for those who have little or no Cree language skills. Must be 18 years old. The textbook is included.

### Research Computing Summer School

July 24–27, 9 am–noon and 1–4 pm, Arts 102 and 133. Research associates are invited to expand knowledge of high performance computing, get familiar with largest Canadian HPC infrastructure, and learn something new about application of computational methods in your area of expertise. Co-hosted by Research Computing, University of Saskatchewan and WestGrid, the Research Computing

Summer School that will explore introductory and advanced topics in:

- High performance computing
- Introduction into WestGrid/ComputeCanada HPC infrastructure
- Parallel programming in Chapel
- Scientific computing with PETSc
- GPU programming
- HPC in Bioinformatics
- HPC in Material Science
- Scientific visualization
- Globus Connect for large data transfers

For a single registration fee (\$35–\$55), participants can attend multiple classes. To register, visit [eventbrite.ca/e/westgrid-research-computing-summer-school-uofstickets-34271800879](http://eventbrite.ca/e/westgrid-research-computing-summer-school-uofstickets-34271800879)

### Training sessions for new online conferencing tool

The Information and Communications Technology (ICT) division is offering training sessions for academic instructors on the new Cisco WebEx system, which will replace BlackBoard Collaborate as of

Aug. 1. The new system, which was tested in a pilot project during the past academic term, will be used to broadcast lectures, to host meetings and for one-on-one video and audio conversations. ICT is offering in-person and virtual training sessions for instructors throughout the spring and summer. To register for a WebEx session, visit [training.usask.ca](http://training.usask.ca) or contact the ICT Service Desk at [servicedesk@usask.ca](mailto:servicedesk@usask.ca) or 06-966-2222.

## MISCELLANY

### Sunday Mass at STM Chapel

Each Sunday until Oct. 22, 11 am–noon, join the campus ministry team for the celebration of the Eucharist! Come worship God in a welcoming environment with people from the campus community. For more information, visit [stmcollege.ca](http://stmcollege.ca).

**Next OCN: Friday, Aug. 11  
Deadline: Tuesday, Aug. 1**

## 2017 Long Service Award Recipients

The university would like to recognize the following employees for their 25 years of hard work and dedication to the University of Saskatchewan.

Gregg Adams  
Alec Aitken  
Cameron Alexson  
Jason Anspach  
Jacqueline Bantle  
Trent Bollinger  
Lorriisa Budz  
Brent Burbridge  
Monique Burmester  
John Campbell  
Kim Cherry  
Marie-Diane Clarke  
Ron Clemens  
Helena Da Silva  
Kalowatie Deonandan  
Gordon DesBrisay  
Cheryl Ector  
Brock Evans  
Darlene Fichter  
Shirley Fredeen  
Darryl Friesen  
Brian Gavlas  
Vern Gerein  
Kenneth Glover  
Christine Harris  
Leslie Ann Irwin  
Kathleen James–Cavan  
Brenda Kalyon  
Alexandre Koustov

Patrick Krone  
Sandra Lazar  
Carol Lockhart  
Stephen McLeod  
Dirk Morrison  
Paul Myasnikov  
Carol Paetsch  
Frances Robson  
Paul Rogal  
Maryann Ross  
Rajendra Sharma  
Tracy Sieffert  
Vipheth Sisouvong  
Verna St. Denis  
Thomas Steele  
Jacek Szmigielski  
Marlow Thue  
Denise Thul  
Rosemary Venne  
Valerie Verge  
Brent Wagner  
Brent Wellman  
Allan Wilde  
David Williams  
Dean Yurkowski  
Gordon Zello



## Around the BOW



Jansen

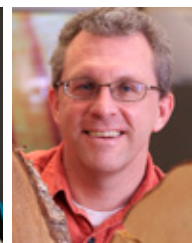
**Ken Belcher** appointed the head of the Department of Agricultural and Resource Economics for a five-year term, effective July 1, 2017.

**Dirk de Boer** appointed as the acting head of the Department of Indigenous Studies for a one-year term, effective July 1, 2017.

**Moira Day** appointed as head of the Department of Drama for a one-year term, effective July 1, 2017.

**Liz Harrison** re-appointed to the position of associate dean, Physical Therapy and Rehabilitation Sciences in the College of Medicine for a five-year term, effective July 1, 2017.

**Beth Horsburgh's** term as interim dean, College of Nursing, extended to August 31, 2017.



Laroque



Rigby

**Lynn Jansen's** term extended as associate dean, Southern Saskatchewan Campus and Advancement of Global Health Strategies, for six-month term, effective January 1 to June 30, 2018.

**Kent Kowalski** appointed to the position of associate dean, academic, College of Kinesiology for a five-year period, effective July 1, 2017.

**Colin Laroque** appointed as acting head of the Department of Soil Science for a three-month term, effective July 1, 2017 to September 30, 2017.

**Xiao Qiu** appointed the acting head of the Department of Food and Bioproduct Sciences for a six-month term, effective July 1, 2017.

**John Rigby's** term as associate provost, Institutional Planning and Assessment, extended for the period July 1, 2017 to



Roy



Soteris

June 30, 2018.  
**Wendy Roy** appointed as head of the Department of English for a three-year term, effective July 1, 2017.

**Chris Soteris** appointed the acting head of the Department of Mathematics and Statistics for a one-year term, effective July 1, 2017.

**Kevin Stanley** appointed as head of the Department of Computer Science for a five-year term, effective July 1, 2017.

**Gerry Uswak's** term as dean, College of Dentistry, extended to August 3, 2017.

**Rosemary Venne** re-appointed as head of the Department of Human Resources and Organizational Behaviour for a six-month term, effective January 1 to June 30, 2018.



# Taking back control from online technologies

MICHAEL ROBIN



Julita Vassileva is an expert in online social media technology and a professor in the computer science department.

SUBMITTED

Julita Vassileva wants to liberate us from the siren call of technologies such as smartphones that have some of us missing assignments, souring relationships, walking into walls and worse.

Vassileva, a professor of computer science and expert in personalization and persuasion technology at the University of Saskatchewan, wants to help us live healthier and more fulfilled lives. Right now, that power often rests with online social media giants who want your attention—and they're very, very good at getting it.

"They have a very accurate model of your interests, based on where you are, what you have been searching for and they correlate it with models of millions of other people," she said. "They know how to show you exactly what you want to see, what will please you, and what will keep you coming back for more."

Online companies, big or small, depend on catching people's attention. Attention, and action, is their main source of revenue,

whether it's downloading a new app or simply staying on Facebook longer to be exposed to more ads. People obsessively check their online status, even when they know it affects personal relationships and work performance.

"People know it is bad; they feel guilty about this behaviour and still they do it," Vassileva said. "It's like an addiction, like alcohol or cigarettes. For employers, it is like having an employee that goes every half hour to smoke for 10 minutes. With Facebook or game addiction, it may become hard to keep a job."

But what if we had the power to use our computing devices to help achieve our goals rather than those of outside interests? Vassileva and her team aim to do exactly this, with strategies and software tools that allow users to decide what is important to them.

Such tools already exist, particularly in the area of fitness. There are apps that count steps, monitor heart rate, as well as track calorie intake and sleep quality. Other apps track the use of time-hungry social media sites and issue warnings or lock these out during business hours. Vassileva herself tried an app that would alert her to how much time she was spending daily on social media sites.

"In the beginning it was cool, but in the end, you switch it off,"

she said. "It makes you feel guilty, but it really doesn't change your behaviour."

This underlines how hard it is to design tools that try to change behaviour: people must want to use them. Backed by an NSERC Discovery grant, graduate students Shi Shi, Sayooran Nagulendra and Wesley Waldner developed different ways to give users control over the filtering of the personal newsfeed on Facebook, Twitter, and other similar sites.

A program that blocks certain sites can elicit annoyance and resentment, or be seen as a partner to help the user. Vassileva likens it to being an effective parent or teacher. It's not enough to tell the user what is in their best interests; they must be persuaded to do it.

"Persuasive technologies inform, explain, persuade, monitor and cue the user to engage in desired behaviours," she said. "They use models of the user to personalize the appearance, tone and content of their messages to maximize effect. They often have elements of games to make them more engaging, and

use incentive methods based on principles from social psychology and behavioural economics."

Persuasion also has an ethical aspect. The tools Vassileva and her team are developing are intended to help people change their own behaviour for good. But she explained companies are already mining user data and using behaviour modification tools for their own ends. For now, their purpose seems to be mostly commercial, but these tools could be used by political interests, governments and special interest groups.

"These behaviour change techniques, they're dangerous if they're in the wrong hands," Vassileva explained. "They can make us purchasing zombies, voting zombies. It's a huge ethical issue with this kind of technology.

For what purpose it is used? Very intimate motivations and patterns of individual behaviour can be discovered through datamining and manipulated to a great harm of individuals and societies as a whole."

By understanding how to effectively persuade people to take action, Vassileva hopes to put this power back into people's hands so that they can use it for their own ends. And perhaps, those same people will be willing to pay for that power.

"If we want our software to be commercialized, there will be companies that will make money with it," she said. "But maybe users will be willing to pay for honest software that allows them to achieve their own goals, realize their potential and do good, rather than use free software that exploits them." ■

## Making connections with First Nations communities

FROM PAGE 3

"Graduate student research is done here and there are valuable connections to First Nations communities made here," Walker said. "And these are relationships we want to see continue well into the future."

While there are plans in the works for future classes to dig at new larger sites, Walker aims to keep the relationship between Wanuskewin and the university flourishing alongside the park's growth.

Eventually he would like to see the park evolve into an institute that serves students beyond archaeology, and engages with all disciplines of academia with a focus on the Prairies and the First Nations of the area.



Walker

"It's a place where we would like to see art and science and history blend together." ■





There are fascinating statues, artifacts and fun objects located all over the University of Saskatchewan campus. Get to know them a little better with this year's *On Campus News* back page feature: Interviews with inanimate objects. If you know an inanimate object, tell us about it at [news@usask.ca](mailto:news@usask.ca).



## Little Stone School House

**LOCATION:**  
BETWEEN ST. ANDREW'S COLLEGE AND  
THE HEALTH SCIENCES BUILDING

■ **Tell us a bit about yourself.**

I am a one-room school house—the first in Saskatoon. Both the city and the province have designated me as a heritage property. I can seat about 40 pupils, and though some of my features—including a large wood stove, pull-down map and gas lamp—are a bit dated, it's neat to see how far education has come.

■ **How old are you?**

I was built by Alexander Marr in 1887, making me the oldest public building in the city.

■ **Where were you originally located?**

My prior location was in the heart of the Nutana neighbourhood—Broadway Avenue and 12th Street—as the original Victoria School. Besides my scholastic function, I served as a multi-purpose centre in the community as a meeting house, election centre and dance hall.

As time went on, however, Victoria School grew and my space was no longer needed. I was disassembled, piece by piece, each of my stones numbered so that I could be reassembled on campus in 1911.

■ **Where are you located now?**

I'm nestled between St. Andrew's College and the new additions to the Health Sciences Building.

■ **What do you like best about being on campus?**

It's very scenic here. There's a small pond out back and I get lots of sun—perfect for photoshoots or just taking a break from the workday.

