



MIND THE GAP

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### **GREAT GRADS**

On May 30, the university's annual Graduation Powwow was held to celebrate the accomplishments of Indigenous students from the U of S and high schools from across the province. Laryn Oakes (left) and Brooklyn Neveu both took part in this year's powwow: Neveu was honoured as a graduate while Oakes was the head woman dancer for the event. Both are from the Indian **Teacher Education Program.** The following week, many other students who participated in the powwow walked across the stage at TCU Place to receive their degrees at Spring Convocation ceremonies from June 4-7.

FOR COVERAGE OF CONVOCATION, SEE PAGES 3-6.

**MASTER CLASS** 



GAME CHANGERS



### UNIVERSITY OF SASKATCHEWAN

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Métis. We pay our respect to the First Nation and Métis ancestors of this place and reaffirm our relationship

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UNIVERSITY OF SASKATCHEWAN MARKETING AND COMMUNICATIONS G16 THORVALDSON BUILDING **110 SCIENCE PLACE** SASKATOON, SK S7N 5C9

## Native Law Centre honoured with Indigenous name

CAT BONNER

At a May 18 ceremony, the U of S Native Law Centre (NLC) added the Cree words "Wiyasiwewin Mikiwahp" meaning "law lodge" to its current name.

The change is part of a broader revisioning process for the centrenow known as Wiyasiwewin Mikiwahp Native Law Centre-which has reimagined its vision, mission and goals in a new strategic plan. The renaming also sends a special message to Indigenous communities that the centre respects Indigenous laws as well as Canadian laws.

Larry Chartrand, academic director of the centre, led the revisioning committee and said that the centre's new name reflects a commitment to the next level of engagement with the Indigenous law community.

"We felt it shows the NLC takes its mission of Indigenization seriously by engaging more fully and respectfully with the languages of the territory on which it is situated," he said, adding that the addition of the Cree component to the original name honours the centre's long history and global reputation as a leader in its field.

"The name of the Native Law



Centre is significant, it represents the vision of (founder and former College of Law dean) Roger Carter and his belief in the intellectual capabilities and resiliency of Aboriginal students to succeed in law school," said Sákéj Henderson, research fellow at the College of Law. "The centre has been gifted many honours by the Aboriginal elders, knowledge keepers and community, but none was more important than earning an Indigenous name."

The new strategic plan focuses on the protection and promotion of Indigeneity, advocating a trans-systemic approach to legal education and research, and challenging colonial mindsets in both Indigenous and non-Indigenous communities. The centre's new mission is to advance deep reconciliation through legal research and education that promotes to the fullest Indigenous peoples' rights to self-determination.

The plan also supports the implementation of several Truth and Reconciliation Commission (TRC) Calls to Action, including TRC 27, which calls on lawyers to be trained in areas such as cultural competency and anti-racism.



Chartrand

"Small steps to reconciliation are occurring, but we still need to push law schools to be more inclusive," said Chartrand. "Our mission is to defend Indigenous legal rights and promote true reconciliation, and remove the colonial barriers that devalue these objectives."

The NLC was founded in 1975 to fulfill the need for a multi-functional centre specializing in legal education for Indigenous people, that also advances the interests of Indigenous people in the development of Canada's laws and legal system, and spreads knowledge on Indigenous peoples and the law.

The centre has played a huge part in increasing the number of Indigenous lawyers in Canada through its internationally renowned summer program (formerly the Program of Legal Studies for Native People), which prepares students to succeed in law school. Close to 1,300 students have graduated from the eight-week program to date, with another 53 enrolled this year. Around 75 per cent of summer program graduates have gone on to enrol in law schools across Canada.

With an exceptional legacy and an exciting future, the NLC is entering the next stage of its evolution, one that seeks now more than ever to empower Indigenous people.

"The centre has turned into legal warriors, scholars and diplomats that continue to lead communities into a new era of reconciliation and justice," said Henderson. "The new Cree name is a message for the generations of youth to become self-determining and protect the rights of the Indigenous peoples."

> **Cat Bonner is a communications** officer in the College of Law.

## 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:

### **Healthy space**

With more than \$700,000 in funding from two Canadian granting agencies, U of S researcher Gordon Sarty is building new magnetic resonance imaging (MRI) technology for use on space missions to monitor the health of astronauts. Sarty was awarded a \$100,000 contract by the Canadian Space Agency to design and engineer an ankle-sized MRI device for the International Space Station to monitor the bone health of astronauts during prolonged space trips.

### Driven to succeed

The U of S Huskie Formula Racing (HFR) team placed 20th out of 116 student design teams from around the world, the team's best finish at the Michigan Formula SAE (Society of Automotive Engineers) Collegiate Design Series in May. The HFR includes students from each of the engineering disciplines, as well as the College of Arts and Science, the Edwards School of Business and a variety of other colleges across campus.

### **Improving health**

Three U of S researchers received Patient-Oriented Research Leader Awards funded by the Saskatchewan Health Research Foundation and the Saskatchewan Centre for Patient-Oriented Research. They will receive up to \$250,000 over three years for projects on working with patients in rural and remote communities, providing evidence-informed improvements for the health-care system, and improving patient outcomes with research.

### Super support

The Super Dual Auroral Radar Network of Canada (SuperDARN) at the U of S will receive \$1.58 million through Innovation Saskatchewan's Innovation and Science Fund over four years. U of S physicists Kathryn McWilliams and Jean-Pierre St-Maurice lead Canada's participation in the SuperDARN program, a global network of high-frequency radars operated and maintained by multiple universities and research institutions to monitor space weather.

FOR MORE UP-TO-THE-MINUTE NEWS, VISIT: news.usask.ca 🖪 🎔 @usask

# Rain or shine Graduation Powwow participants on path to success

The skies were grey, threatening rain all day, so the plans to hold the Graduation Powwow in The Bowl had to change, but that didn't stop thousands of visitors from packing the University of Saskatchewan's Education Gym to take in the sights and sounds of the annual celebration honouring Indigenous graduates on May 30.

In total, 384 Indigenous students graduated at Spring Convocation in addition to 116 more at Fall Convocation in 2017. Of those, 55 students—46 undergraduates and nine graduates—were honoured at this year's powwow. Hundreds of singers, drummers and dancers also competed throughout the day for nearly \$20,000 in prize money in a range of categories and age groups. Dallas Pelly, Ashley Laprise, Carson Magnuson and Jade Roberts, all from the College of Education (pictured above, left to right), were among the graduating U of S students who took part in this year's powwow. Hosted by the U of S since the '80s, this celebration of culture and academic achievement has a long and proud tradition of honouring the university's connections to and engagement with Indigenous communities throughout Saskatchewan.

### UNIVERSITY OF SASKATCHEWAN

## 22ND ANNUAL U OF S APPRECIATION PICNIC



Areeb Salim placed in the 99.8 percentile on the Law School Admissions Test and will attend Harvard Law School this fall.

📸 JAMES SHEWAGA

## **WEDNESDAY, JUNE 27, 2018** 11 am – 2 pm

# Thank you to staff and faculty for all their work and effort this past year.

Employees are encouraged to bring their families for treats and activities.

Students are welcome to join the fun.



# U of S political studies student heading to Harvard Law School

### 🖉 JAMES SHEWAGA

When Areeb Salim first began classes at the University of Saskatchewan four years ago, he wasn't sure whether he wanted to eventually study medicine or law.

But his remarkable performance on the Law School Admissions Test (LSAT) quickly settled the issue. The 21-year-old student from Regina scored an astounding 177 on the LSAT, placing him in the 99.8 percentile, essentially finishing in the top two out of a thousand students.

"My plan was to write the LSAT in the summer of my second year and write the MCAT (Medical College Admission Test) in the summer of my third year," said Salim, who received his Bachelor of Arts (majoring in political studies) at U of S Spring Convocation on June 5. "But after I got my LSAT score back, I thought that it was a sign that I should study law."

Indeed. Salim's LSAT score and academic achievements at the U of S opened up a world of opportunity, with Ivy League schools in the United States offering scholarships of up to \$150,000. After weighing offers from the likes of Duke, Columbia, Georgetown and New York University, Salim selected Harvard Law School and will proudly represent his home province and the U of S at one of the world's most prestigious law schools this fall.

"After visiting Harvard I knew that is where I wanted to be and I want to show that U of S grads can make it there," said Salim, who had an overall average of 84.63 per cent in his undergraduate studies. "When I visited Harvard, everybody was graduating from Yale or the University of Chicago or schools like that, and I was from Saskatchewan and everyone was asking me where that is. So, I want to go there and show that somebody from Saskatchewan, who is a minority, can go and succeed at Harvard."

U of S political studies professor Kalowatie Deonandan said Salim has been one of the most impressive students that she has had the pleasure of teaching in her career.

"He has superb analytical and writing skills and I would say he is amongst the top one per cent of students that I have had in over 25 years," said Deonandan, who is bringing in Salim as a research assistant for the summer.

A former two-time national debating champion in high school, Salim said he thoroughly enjoyed his time on campus and credits the education that he received, and the U of S professors that he grew to admire, with helping him get into Harvard.

"I am really confident that my studies here at the U of S have prepared me well for Harvard," said Salim. "When I came here, I wasn't sure if I wanted to pursue law or medicine, so the arts and science degree was perfect for me because it allows you to take a broad spectrum of classes.

"So, the fact that I could get a

# **Innovation in horse rehabilitation** Student is engineering equipment to improve treatment options

#### JAMES SHEWAGA

Samantha Steinke was born to ride. In fact, the University of Saskatchewan student essentially rode her first horse before she was even born.

"My mom was riding when she was pregnant with me, so it started before I was born," said Steinke, who graduated with a Bachelor of Science Honours (physiology and pharmacology) degree at U of S Spring Convocation on June 5 at TCU Place. "I was led around on a horse when I was an infant and I took my first riding lessons when I was just six, so it was a big part of my childhood. If I was ever stressed about something, I would just go for a ride, so you develop a very special connection with your horse."

It was that connection with her horse Cash that made the spring of 2016 so devastating. While writing her final exams at the U of S, Steinke learned that her horse had stepped on a piece of metal on the family farm located 220 kilometres southwest of Saskatoon—puncturing the sole of his left front hoof and cutting through the tendon. Despite the best efforts of veterinarians, and due to the very poor prognosis and complicated nature of the injury, Steinke was forced to make the agonizing decision to put him down.

"It was one of the hardest decisions that I have ever had to make, and that all occurred during final exams, so it was pretty stressful," she said. "I was trying to find anything that I could to save him. But the only option was surgery followed by a very long recovery period and a very high likelihood of never fully recovering. He would have always suffered. So, there was just nothing we could do."

That devastating loss has driven Steinke to find a better way to treat injured horses. She began working with Dr. Julia Montgomery in 2016 in the Western College of Veterinary Medicine (WCVM), helping a WCVM research team design a weight-supporting harness to better rehabilitate horses with limb injuries. Local firm RMD Engineering Inc. also helped with the project and Steinke is working with the company for the summer to create a breast plate to prevent pressure sores as horses heal.

"I want to develop equipment

to help horses recover from severe injuries, keeping their comfort and welfare in mind," said Steinke, who competed on the Saskatchewan Horse Federation show circuit in high school and now volunteers with the U of S Rodeo Team. "So, a really bad situation has given me a new outlook and the drive and passion to do all that I can to help in the future. Even though it was really, really hard and is not something that I would want to go through again, it also helped me find my way because I didn't know what I wanted to do and now I do.'

Steinke, who posted an average of 82.33 per cent in her final year of classes, has now been accepted into graduate studies at the U of S and wants to continue to develop better equine rehabilitation equipment while working on her master's in the College of Engineering's biomedical engineering graduate program.

"When a horse suffers from a leg injury, complications often arise in recovery, resulting in euthanasia, so this equipment would take the weight off of their legs, allowing them to heal," said Steinke. "Right now, we are able to take about 40 to 50 per cent of the weight off their legs for the short term. The target would be to take 50-60 per cent of the weight off their legs long term, to help them heal."

Steinke hopes to present her research at the International Conference on Equine Exercise Physiology in Australia in November. In the meantime, Steinke is preparing for grad school and reflecting on her time on campus.

"I have tried a little bit of everything here. I have taken some business classes and I have taken some arts classes and just kind of dipped my toes in a little bit of everything and it's a great experience to be able to do that," said Steinke, whose time at the U of S has also included serving as a speakers co-ordinator for the Global Health Conference committee, volunteering as a team leader for U of S Orientation, and a trip overseas to Africa following her first year of studies to work as a humanitarian mission volunteer in Tanzania.

"It has been a long time coming and to have finished my first degree is great," said Steinke. "It's the first milestone, so it's very exciting to have that completed and to move on to something new. I cannot wait to continue my studies and see what the future holds." ■



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Samantha Steinke riding her beloved horse Cash.

👸 SUBMITTED

# Mastering the art of teaching

Political studies professor Joe Garcea receives Master Teacher Award

🖉 JAMES SHEWAGA

The university is paying tribute to Joe Garcea for three decades of dedication and exemplary service to students. But if you ask Garcea, he is the one who is truly grateful.

Honoured with the Master Teacher Award at Spring Convocation—the highest teaching honour at the U of S and presented to only two faculty members each year— Garcea is also celebrating 37 years of marriage with his wife Laurie (who holds a master's in education psychology and special education from the U of S), as well as 31 years of educating and mentoring political studies students at the university, where he has proudly watched his own children Giustino, Michele and Maria excel in their courses.

For Garcea, who has battled health issues for years since being diagnosed with stomach cancer in 1991, there is plenty to be thankful for.

"It puts things into perspective, that's for sure," said Garcea, a professor in the College of Arts and Science. "I had two related things, cancer and heart valve replacements, and in both cases leading-edge university research changed my life and I consider myself lucky to be alive because of medical science research. One innovative experimental procedure that kept me alive was used at the University of Alberta, at the Mazankowski Alberta Heart Institute, and the other was an innovative procedure involving nanospheres and nuclear isotopes used here at Royal University Hospital."

Garcea said those life-saving procedures are daily reminders of the value of university research in medical science, as well as in other fields.

"You realize that every day is precious and there are certain things that you can't put off," he said. "You realize how important it is to cherish your time with your family, but at But for me, the most rewarding aspect of teaching today, as it was at the start, is engaging and enlightening students. The greatest thing about teaching is watching the lights go on for these students and there is suddenly complete silence, when you really know that you have them thinking.



Joe Garcea has spent 31 years teaching political studies at the University of Saskatchewan.

the same time you also want to make a contribution to society and to the institution, because that's all what makes life worth living."

Garcea has spent more than half his life on campus, but still starts each semester with the same feelings he had in his first year at the U of S back in 1987.

"I get just as excited, and just as nervous, especially at the start of a term when you are just getting to know the new student group and you don't know quite what hand the gods have dealt you in that particular class," he said, with a chuckle. "So, until you get a feel for the class, there is a bit of anxiety because in order to be effective, you have to know your student group and at the start you don't, so you don't know how to be effective.

"But for me, the most rewarding aspect of teaching today, as it was at the start, is engaging and enlightening students. The greatest thing about teaching is watching the lights go on for these students and there is suddenly complete silence, when you really know that you have them thinking."

Over his time here, Garcea has become a pillar of the political studies department on campus and a committed contributor to the community in civic governance issues, provincial task forces and federal studies, as well as being much in demand as a media commentator, particularly during election cycles.

"I feel honoured to have been given the opportunity to contribute

to those kinds of things, those initiatives aimed at advancing the public good and the public interest," said Garcea, who was born in Italy and raised in Jasper, Alta. "We are here to educate, but we are also here to make a contribution to our communities. And that is why it is a privilege to be in a place like this university. We have to keep in mind that we are trying to produce mindful and productive citizens. And for me, that's the mission of this job."

**SUBMITTED** 

Garcea has watched the campus and student body change significantly in the past three decades. While much progress has been made, he believes the university needs to continue to focus on doing more to support students.

"I think we have a much more

diverse group that needs different things than they did 30 years ago, and that includes more students facing physical and mental health challenges today and more diversity in terms of learning styles," he said. "It also includes an increasing number of international students and increasing number of Indigenous students, and students from all socio-economic strata. I think we have to continue to make the educational experience a positive one for all our students."

Garcea's body of work confirms that he has done precisely that. Former students have gone on to prominence as provincial and national public officials, urban planners and academic leaders, with many crediting Garcea's guidance in playing a pivotal role in their career pursuits.

His efforts have earned him multiple distinctions, from the College of Arts and Science Teaching Excellence Award, the Provost's Award for Outstanding Teaching, the U of S Award for Distinction in Outreach and Public Service, and the James Pooler Award for contributions to regional and urban planning. The Master Teacher Award is just the latest in his long list of accolades.

"It's a great honour," said Garcea, who earned a bachelor's at the University of Victoria and master's degrees in political science and public administration at the University of Manitoba as well as a PhD in political science at Carleton University, prior to coming to the U of S. "I'm humbled because I know there are a lot of great teachers out there making great efforts, with a great commitment to the teaching profession. So, I feel like I have won, essentially, a lottery. And I just feel that others equally, and others even more worthy, are out there. So, it's humbling."

# **Clone wars: finding buggy code copies** Computer science researcher receives Most Influential Paper awards

RRIS FOSTER

Computer code makes the world go round, but it can also bring it to a grinding halt, like when a software bug in a selfdriving car resulted in a pedestrian fatality this past March.

Code is ubiquitous and most industries around the world rely on codebased software to keep day-to-day operations running, said Chanchal Roy, associate professor in the Department of Computer Science.

"The simplest functions use code, and bad code can have a massive impact," said Roy, who joined the College of Arts and Science in 2009. "Unfortunately, the way developers copy code can result in lots of bugs or errors, something my research addresses."

It is common practice for software developers to copy, paste and modify a fragment of existing code to suit the task or tool they are working on. This is called cloning, and the resulting code from the copy-and-paste process is, of course, called a clone. "There are valid reasons why cloning is so common," said Roy, whose research is supported by a Natural Sciences and Engineering Research Council of Canada Accelerator Grant. "It saves time, there is low risk in using stable code, and it results in faster development. There is no need to reinvent the wheel."

The problem, Roy is quick to point out, is that often cloning code results in cloning unknown "bugs" as well, and these errors can spread quickly.

"If you have a bug in the original code, you are copying errors over and over again," he said. "Even if you find one instance of the bug, it is nearly impossible to find all of them ... which results in a lot of industries using outdated code over new code that potentially has bugs." In part because of the issues related to cloning and the resulting buggy clones, up to 85 per cent of the cost of software development can go towards software maintenance, including clone detection.

"It is a double-edged sword," said Roy. "Cloning is common because of the benefits to programmers, but clones can carry bugs that are also really troublesome."

Clone detection, an area in which Roy has dedicated a lot of research time, means finding similar code fragments in order to resolve bug issues. In its simplest form, it is like doing a document search for specific words. In its most complex form, it is like searching for a needle in a haystack, especially if the original code has been modified (which is the most common form of cloning) and is in a program containing millions of lines of code.

To address this issue, Roy and his research collaborator James Cordy of Queen's University have developed a number of clone detection systems that search for similar fragments of code. There are two main criteria needed for a good clone detection system: precision, which is the ability to detect clones correctly; and recall, a term referring to the percentage of clones detected out of the total number of clones present. Roy and Cordy have developed the first clone detection system, called NICAD, that excels in both precision and recall.

"Once we define what similarities to search for, NICAD can detect modified clones," Roy said, noting that a great amount of human testing, including vetting over nine million cloned fragments, has gone towards ensuring the clone detection system is accurate.

Through his evaluation of clone detection, Roy has also become a world leader in the area of benchmarking clone detection tools with the development of the BigCloneBench tool. The potential of Roy's clone detection systems and benchmarking work is not going unnoticed. Roy and Cordy have recently received two Most Influential Paper awards, in recognition of the "lasting impact of contributions made within the previous 10 years." Their work on benchmarking and NICAD were recognized by the International Conference on Software Analysis, Evolution and Reengineering, and the International Conference on Program Comprehension, respectively.

Looking ahead to the next decade, Roy said he would like to develop a "safe cloning system" that not only detects corrupt clones, but is also able to advise on how to fix bugs in the system, or even remove them automatically.

"This has the potential to save a lot of time and money, but I am not sure I can do this even in the next 20 years," said Roy with a slight smile and laugh.





# New sport science and health hub

Grahams' \$2M donation further enhances features of Merlis Belsher Place

#### JAMES SHEWAGA

Merlis Belsher Place will not only become a new home of Huskie Athletics, but a hub for state-ofthe-art sport science and health research.

The new Ron and Jane Graham Sport Science and Health Centre will complement and enhance the features of the stunning new Merlis Belsher Place multi-sport complex, which will open this fall with two full-sized ice surfaces and two NBA-length basketball practice courts. For Chad London, the dean of the College of Kinesiology at the University of Saskatchewan, the addition of the new sport science and health facility will make the complex unique in the province.

"This is a dream facility that we never imagined we would have, because we are talking about a 6,000plus square-foot facility where we are going to be able to do research and practice in a shared space," said London. "And that is going to make a real difference for athletes of all levels, from Huskie student-athletes to athletes young and old in the community. I see it becoming the hub for sport science and testing and assessment of athletes to give them all the tools that they need to achieve."

The new facility will offer a

full spectrum of support services to enhance performance, conditioning and recovery for elite athletes, from Huskie Athletics to provincial and national team players in the community. The facility will also be a hub for leading-edge research in injury prevention and performance, as well as conditioning and nutrition, featuring the latest equipment and technology for testing and treatment.

"It is going to have a major impact for Huskie student-athletes because it puts researchers and our Huskie health practitioners into the same space to work side-by-side," said London. "So, an athlete can move seamlessly from a testing and assessment phase to a conditioning, treatment, recovery and rehabilitation phase. It becomes a one-stop shop of the best leading-edge sports science for athletes.

"A facility like this doesn't exist in the province, so it is also going to attract athletes from across Saskatchewan who compete nationally or internationally. They will now be able to stay here at home and have access to the right facility with the right professionals to help them achieve. This will be another door open to the community for the U of S."

Construction of the state-of-



London

the-art facility was made possible by a donation of \$2,068,000 from long-time donors and U of S alumni Ron and Jane Graham. The Grahams have provided almost \$22 million in funding over the years, making them the largest cumulative alumni donors in the history of the university.

"I think Ron and Jane saw this as another great opportunity to make a difference, and when we started talking to them about what this facility could do, they were behind the project 100 per cent," said London. "They want to help our athletes receive the best possible training and support. And they really appreciate the community involvement and the research aspect of this new facility. And without their visionary support, we couldn't have made this happen."

The Grahams previously donated \$4 million to build the two new basketball practice facilities added to Merlis Belsher Place and were thrilled to further enhance the complex with the new sport science and health facility.

"Jane and I are proud to help establish this brand-new sport science and health centre," said Ron Graham. "The collaborative work that will help researchers gain more insight is something we're thrilled to support."

"Through our commitment to Huskie athletes through the years, we understand the importance of long-term health and quick returnto-play for our student-athletes," added Jane Graham. "We're excited about the potential breakthroughs that can be uncovered by the research that will be done at this new facility."

"We are immensely grateful for Ron and Jane Graham's enthusiasm for student learning, wellbeing and athletics at the U of S," said Peter Stoicheff, U of S president and vice-chancellor. "The Grahams' history of generosity and support for a variety of significant initiatives campus-wide is unparalleled. Our university is fortunate to have Ron and Jane continuously champion projects that make a lasting difference for their alma mater and the community."

Among the features of the new facility will be dedicated space to diagnose, treat and research concussion and related brain injuries.

"For proper concussion testing, you need a space with the right kind of lighting, the right kind of sound dampening and with the right type of practitioners to be able to do those types of assessments," said London. "Concussions and head trauma is really becoming an epidemic in sport these days, so the ability to better assess and treat athletes is extremely important. I can see us developing partnerships in the area of concussions with researchers from across the province, nationally and beyond."

The new facility—to be completed in early 2019—will also house an engineering impact area to test helmets and other equipment to better protect athletes in contact sports.

"We will be collaborating with researchers in engineering to look at





The new Ron and Jane Graham Sport Science and Health Centre is a 6,000-plus square-foot facility featuring a full spectrum of support services to enhance performance, conditioning and recovery for elite athletes, and will be a hub for leading-edge research in injury prevention and performance, as well as conditioning and nutrition.

sports impact testing and equipment impact testing, studying helmets in particular," said London. "In the drop zone section of the facility, we will be able to test new helmets for sports impact to engineer better-designed equipment to help prevent concussions. So, we will be combining the equipment side of it and the human-physical side of it, in this new facility."

The addition of the sport science facility in Merlis Belsher Place will further enhance the university's ability to host major events, from the annual Saskatchewan Roughriders training camp to provincial and national team sessions and competitions.

"I can see us hosting national team training camps in a variety of sports," said London. "When they host those camps, they want a training facility, but they also want a recovery facility and they also want a testing facility. Here it will all be in one spot."

While many of the services will be geared to elite-level athletes, London said the facility will also have a strong connection to the community, through injury rehabilitation to health and nutrition research.

"Merlis and the Grahams felt it was very important to have that community component and that was important to the university as well, so Merlis Belsher Place is built in a way that the community is invited in," said London. "And I see this sport science and health centre operating along the same lines, where community members will be able to access it as teams or individuals. So, we're very excited about its potential and its impact in the community."

## **Game-changing donations**

Ron and Jane Graham continue to be the largest cumulative donors in the history of the U of S, with their most recent donation to establish the Ron and Jane Graham Sport Science and Health Centre bringing their total giving to almost \$22 million.

The Grahams' impact on student success can be found campus-wide through a variety of initiatives. Here are some of the projects and initiatives at the U of S made possible by the Grahams:

- In 2016, the Grahams committed \$4 million to develop Merlis Belsher Place into a multi-sport complex, complete with two practice gymnasiums, dressing rooms and team rooms for Huskie basketball.
- In 2006, Jane and Ron supported a new clubhouse for the Huskies football team at Griffiths Stadium, featuring lockers, meeting and office rooms, laundry facilities and ticket windows. In 2010, they donated another \$3 million to expand the Graham Huskie Clubhouse to help provide more meeting rooms and a workout facility for the Huskie football team.
- Recognized as one of their proudest contributions, the Grahams established the Ron and Jane Graham Centre for the Study of Communication in the College of Engineering in 2007, with a donation of \$3.27 million. The centre was made a school in 2013, and today it focuses on preparing undergraduate students to present themselves as professional communicators and provides opportunities for graduate study.
- Numerous student awards have been founded and funded by the Grahams, including \$246,000 for the Ron and Jane Graham Undergraduate Student Awards, more than \$130,000 for the Ron and Jane Graham Engineering Virtual Reality Teaching and Cloud-based Learning project, and they continuously support a variety of Huskie Athletics student awards.



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# The data gap

MARI-LOU ROWLEY

All scientific research depends upon reliable data, but it can be difficult to obtain and is often incomplete or flawed. Juxin Liu uses statistical tools to help health science researchers account for and analyze imperfect data.

We've all likely done it—skewed the truth when asked about our weight, exercise or drinking habits. When trying to obtain accurate information on public health risks, however, these fibs can adversely affect the outcome of a study. Case in point, smoking while pregnant is underreported on health surveys, despite the increased risks of premature delivery and low birthrates that can lead to infant mortality.

Statisticians understand the world in terms of data: information gained by measuring or observing variables. The smoking status of pregnant women, long-term nutrition intake and physical activity are examples of variables that are difficult or costly to observe. Other variables in health science research are impossible to observe, such as depression or quality of life.

"These are more complicated problems," said Juxin Liu, professor in the Department of Mathematics and Statistics. "Conceptually you can define these things, but how do you quantify them?"

Unveiling the "truth" masked by imperfect data is a vital area of research for statisticians like Liu.

Breast cancer is the most common cancer in women worldwide, and although early screening programs have reduced deaths from the disease, proper diagnosis—particularly of hormone receptor (HR) status—is crucial to effective treatment. For example, post-surgery drugs that are highly effective in estrogen-receptor positive tumours are not nearly as effective in tumours that are estrogen-receptor negative.

But HR status is difficult to measure. It is also costly and depends on multiple factors, including specimen handling, tissue fixation, antibody type, staining and scoring systems—all of which are subject to error. Liu was lead author on a study of HR misclassification errors, working with her former PhD supervisor at the University of British Columbia and clinicians from the University of Chicago.

Until 2010, the guidelines used by clinicians called for a tumour to be diagnosed with a positive HR status if 10 per cent of the sampled cells tested positive. Since then, the cut-off has been reduced to one per cent. Intuitively, one would think this a good thing, because the change increases the test's sensitivity-the chance of correctly identifying HR positives. However, reducing the cut-off also decreases the specificity, meaning there is a greater chance of falsely identifying negatives as positives. The Bayesian methodology proposed by Liu and her colleagues takes this "tug-of-war" relationship between sensitivity and specificity into account in adjusting for misclassification errors.

Bayesian tools use historical information, or prior knowledge, in addition to the empirical data being analyzed. In the breast cancer study, the professional knowledge of clinicians was combined with the cut-off change to create a more accurate statistical analysis. It is one of the ways statisticians such as Liu assist other researchers in analyzing data that are misclassified, unknown or incomplete.

"For this study, the prior information about sensitivity and specificity comes from the clinicians' expertise," said Liu.

It's her job to fill in the gaps. ■

Mari-Lou Rowley is a freelance writer in Saskatoon.



Ian Stavness, associate professor in computer science, is developing speech synthesis using simulations of the human voice. He uses ArtiSynth, a 3D biomechanical simulation platform to model facial muscle anatomy.

# Talking tech

Teaching computers to speak using medical imaging technology

CHRIS MORIN

If you own a phone, odds are you've used the voice-activated digital assistant to answer basic questions, provide directions, tell a joke or even order a pizza.

There are a number of tech companies developing these vocal assistants in one form or another, and these types of digital-human interactions are increasingly becoming the norm. But for all the technological advances, the conversation still manages to fall short of those conversations with another human. While many of these services provide helpful advice and nudges in the right direction, the sentences are often choppy and robotic.

Ian Stavness, an associate professor in computer science at the University of Saskatchewan, believes this literal conversation with technology is only going to get more complex. Now, along with a team of collaborators, he is helping to develop the next generation of speech synthesis using simulations of the human voice.

Currently, if you hear a computer speaking, for example, Siri on your iPhone, Stavness said the process used is called concatenative speech synthesis. This conversation is constructed using a voice actor recording snippets of speech which are then pieced together to form sentences.

That's something Stavness is working to improve.

"We use investigate articulatory speech synthesis, which builds these interactions based on how humans actually generate speech," said Stavness. This could help someone with a speech disorder or aid in education for those learning a second language.

— lan Stavness

By studying the anatomy that produces speech, such as lungs, tongue, mouth and lips, Stavness and his collaborators are attempting to reproduce the natural way humans talk.

"If we are successful, we will be able to build interactions that are quite expressive. There will be more human-like emotions and tones and characteristics of speech that are more real-to-life," said Stavness.

"This application also adds a personalized element to synthesized speech. If you have a scan of your own anatomy, for example a medical scan of your neck and head, we can reconstruct a synthesis of your voice that should sound exactly like you."

While much of the work—a decade-long collaboration with a team of linguists and engineers from the University of British Columbia— is still in the research phase and not yet being used on smartphones, the techniques aren't just limited to teaching computers.

Building his 3D simulations of human anatomy using medical imaging techniques, Stavness—one of 25 worldwide experts in musculoskeletal modeling and simulation said these speech applications can also be used in educating humans and even treating serious injuries.

"Since we create the sound by moving a 3D model of the vocal tract, we are able to see this rendering of how the tongue moves in the mouth in order to make sounds," said Stavness. "So this could help someone with a speech disorder or aid in education for those learning a second language, where there is a certain emphasis on where the tongue is placed in order to create a specific sound.

"It's often quite difficult to just tell someone how to do this, but computer animation is shown to be successful when it comes to speech rehabilitation."

# Time to take the lead in Indigenization

#### 🖉 MEGHAN SIRED

Improving access and quality of education were central themes at the University of Saskatchewan's Teaching and Learning Today conference, which took place May 1-2 on the Saskatoon campus.

"I think pretty much everybody there saw that we need to change academia and that those interested in open resources and Indigenization have more in common than differences," said Heather Ross, an educational developer at the Gwenna Moss Centre for Teaching and Learning and one of the conference organizers. "Like all post-secondary institutions across Canada, we need to find ways to work together to improve access and learning for everybody-and from what I saw at the conference, the U of S is ready to take the lead in that."

College of Kinesiology PhD candidate Erin Barbour-Tuck said she appreciated that the conference was a safe place to talk through how she can improve her teaching through Indigenization.

"I felt like everyone there wanted to move forward and because we all accepted that we had this in common, I was free to share some of the things that I was wondering or things I didn't understand that I was afraid might come across as ignorant," said Barbour-Tuck.

Barbour-Tuck, who is teaching

her third class this spring, wants to learn as much as she can about indigenizing her teaching and course material to help her prepare for the future.

"From a self-interest perspective, I know that understanding and championing the main values and initiatives of the university and of the college will be important to be considered for a future academic position," said Barbour-Tuck. "From a more altruistic perspective, having a better understanding of the history of this place, as well as the perspectives of Indigenous peoples on what's happened and where we are now, is important."

Days after the conference, Barbour-Tuck was able to incorporate some of what she learned in her spring term class. She asked her students to sit in a circle and engaged in conversation with them instead of disseminating information at them.

"Many of the pedagogical methods discussed as being in-line with an Indigenous way of knowing really overlapped with some of the pedagogical literature I've already been reading and techniques I've been hearing about, so the fact that it meshed well was great," said Barbour-Tuck. "The message is that it's not just ethically and morally good to incorporate this because of our history and where we are with



**Barbour-Tuck** 

the TRC (Truth and Reconciliation Commission) Calls to Action—now we can say it's also effective teaching practice, and that might be the last piece of the puzzle that academics need to take the step and incorporate these new ways of teaching and learning."

More than 10 years ago, Ashleigh Androsoff was a PhD candidate, thinking about how to respectfully and ethically incorporate Indigenous knowledge in her teaching.

When she had the opportunity to teach her first Canadian history course, Androsoff thought very carefully about how she was going to present material in a balanced and fair way that integrated Indigenous content as thoroughly as possible.

Over time, Androsoff began to realize that she could do better. She began to think about how the way she was teaching reproduced western



Androsoff

ways of teaching, learning and knowing. She lectured at the front, with her students sitting in rows facing her, and her assignments were very writing focused.

Androsoff did her best to inform herself about how to indigenize her teaching approach. She was inspired by Mi'kmaq elder Albert Marshall who talks about using a two-eyed seeing approach, which focuses on weaving Indigenous ways of approaching teaching and learning, with western ways.

Now, Androsoff is an assistant professor at the U of S specializing in western Canadian history in the College of Arts and Science. She presented at the Teaching and Learning Today conference about using the two-eyed seeing approach. She specifically spoke about how she indigenized doing a midterm and a final in her second-year prairie history course by having students write journal entries reflecting on what they learned each week throughout the course.

"Students reported that they found those weekly journal entries to be time consuming and a lot of work, but they felt that they learned more, which is very important," said Androsoff. "Just as importantly, they also experienced less stress. Several students commented on how valuable it was to be tested on what they were learning as opposed to being tested on how they wrote tests."

Just like Barbour-Tuck is discovering, Androsoff said she's found that Indigenous ways of teaching are consistent with good teaching methods for all students—non-Indigenous and Indigenous.

"The overwhelming majority of my students specifically identify the techniques I'm incorporating as improving their learning outcomes overall, by which I mean, improving their grades, improving their understanding of the material and improving their engagement with and interest in their material," said Androsoff. "Those are all wins and you might almost think of it as a bonus that they are consistent of and reflective of Indigenous ways of learning and teaching. But they're of benefit to everybody."

Stryker Calvez, manager of Indigenous education initiatives at the Gwenna Moss Centre for Teaching and Learning, worked with Ross to organize the conference. Calvez has spent the last 10 years examining how to support constructive institutional changes that promote inclusive intercultural environments.

He said people are eager to change, but "they don't know what they don't know," so he provides them with learning opportunities to slow down and take their time to learn how to support Indigenous knowledge in the classroom without colonizing it.

University of Saskatchewan enrolment on the rise

The total number of students enrolled in University of Saskatchewan (U of S) classes during the 2017-2018 academic year has risen to almost 25,000—up about one per cent from the previous academic year.

"Our enrolment numbers continue to be strong in an increasingly competitive environment, which speaks to the excellent reputation of our university provincially, nationally and internationally" said Alison Pickrell, assistant vice-provost, strategic enrolment management. The number of self-declared Indigenous students choosing to attend the U of S jumped to just over 3,000 in the 2017-2018 academic year.

"Indigenous students from Canada now make up approximately 12 per cent of our overall student population, and a full 14 per cent of our undergraduates," said Pickrell. "The U of S is committed to fostering a welcoming environment that is grounded in the principles of reconciliation, and I am pleased that so many Indigenous students have chosen this university as a place to pursue their postsecondary education."

Pickrell said strategic enrolment planning is underway and revised enrolment goals will be released after the rollout of the university's new plan. Although the enrolment plan is still being finalized, Pickrell said the university has signalled a strategic growth agenda, with total university enrolment reaching 27,000 to 28,000 students by 2025.

"We are well positioned to serve the needs of this province and the growing population of Saskatoon," said Pickrell. "Our colleges are looking at new program opportunities, expanded off campus and distance delivery options, and maximizing capacity within existing degree programs. These continued developments will also make the U of S an attractive place nationally and internationally." ■

> More detailed academic year enrolment numbers will be available in late June.

# Willoughby works wonders with CFL picks

Dean of Edwards School of Business combines love of football and analytics

### JAMES SHEWAGA

Keith Willoughby has never been more disappointed to have been right, than he was last year.

The dean of the Edwards School of Business at the University of Saskatchewan caught the ire of football fans—not to mention members of the Saskatchewan Roughriders—when his Canadian Football League (CFL) analytics model correctly predicted that the Toronto Argonauts would not only beat the Roughriders in the playoffs, but also go on to upset the Calgary Stampeders in the 2017 Grey Cup game.

Willoughby's CFL computer simulator successfully crunched the numbers to silence the naysayers—not to mention Las Vegas oddsmakers who had picked the Stampeders as a seven-point favourite—and proved prophetic in predicting the Grey Cup champion for the third time in the last four years. But for a lifelong Roughriders fan, it was heartbreaking to have to announce that his system had picked Toronto over Saskatchewan.

"There were Roughrider players who were basically calling out the model and here I am, a Roughriders season ticket holder who bleeds green and white," said Willoughby, whose predictions have been posted on the CFL website for each of the past four years. "But as disappointing as it was, I sort of check one off for the professor here, since the model successfully predicted the Argos would be the Grey Cup champions, when no one else was picking them.

"And once the Roughriders weren't going to be in the Grey Cup, and Toronto went on to win it, it was satisfying because it proved the model to be right. And even looking back to the Eastern Final with Toronto and Saskatchewan, I take some comfort in the fact that the



Keith Willoughby developed a model to predict results of games in the Canadian Football League.

model was right."

Willoughby's fascination with football predates his appetite for analytics and his passion for post-secondary education.

"My real goal in life as a young boy growing up in Melfort was to play professional football," Willoughby said, with a grin. "I wanted to play for the Saskatchewan Roughriders, but genetics was not kind to me. I was not very strong, but I made up for that by being incredibly slow!

"But mom and dad took us to all the Rider games, so we always made the pilgrimage to Regina and I continue to do that now as a season ticket holder."

Willoughby first tackled his pet project back in 2013, inspired by a colleague's presentation on pinpointing the playoff probability of the NHL's Edmonton Oilers.

"I thought it would be nice to do something like that for the CFL, to apply a model that looked at the chances that a team makes

### **G** I don't want to give the Riders the kiss of death, but as a fan, I am very confident in the Roughriders this year.

— Keith Willoughby

the playoffs, finishes first, and wins the Grey Cup," said Willoughby. "I have some contacts in the CFL and the league was really interested in demonstrating analytics, so in 2014 they agreed to put it on the website."

Willoughby's spreadsheet system requires roughly half of the season to have been played to have enough data to accurately predict future results. It takes a team's win-loss record and factors in margin of victory and wins on the road, with more emphasis on beating stronger teams and heavily weighting more recent results. The model then simulates 10,000 replications of the remaining games to project first-place finishers in each division, pick playoff winners and the Grey Cup champion.

"It's not quantum physics," said Willoughby. "In essence, it's a spreadsheet model, but I think what really captures the attention of my colleagues in academia is when they see the public takes interest, whether it is media interviews or the CFL website. The model sort of bridges that connection to real-world understanding."

Willoughby has used the model in the classroom in business courses as an example of the successful application of analytics, and has also presented it at a number of conferences. Now entering his fifth season, Willoughby continues to fine-tune his system and would like to also incorporate in-game analytics.

"That's the next step: in-game analytics to determine the probability of your team winning, while you are watching the game," he said. "So, there's three minutes left in the game and the Riders are down by 10, can I turn off the TV?"

This summer, Willoughby is also kicking off his next project, analyzing the importance of Canadian talent in building championship teams, since CFL teams must have 21 nationals (largely Canadian-born players from teams like the U of S Huskies) on their 44-player rosters.

"Canadians are basically half of your team and such a key component, so how do you build through the draft? I am going to be doing some analysis this summer, working with a student to do 25 years' worth of CFL draft results to see how you can tease out some of the analytics," said Willoughby.

As for this CFL season, which begins June 14, it's too early to accurately predict whether his beloved Roughriders will make the Grey Cup. However, there's no question where his heart lies.

"I don't want to give the Riders the kiss of death, but as a fan, I am very confident in the Roughriders this year," said Willoughby. "I haven't done any modelling yet, but I think we're looking at a Saskatchewan-Toronto Grey Cup."

# Around the BOV



Innes

Korinek

Larre

Carolyn Brooks was appointed head of the Department of Sociology, College of Arts and Science, effective July 1, 2018 to June 30, 2023.

Joel Bruneau was appointed head of the Department of Economics, College of Arts and Science, effective July 1, 2018 to June 30, 2023.

Larry Chartrand was appointed assistant dean, Indigenous engagement, College of Law, until June 30, 2020.

Moira Day was appointed head of the Department of Drama, College of Arts and Science, effective July 1, 2018 to June 30, 2020.

Robert Innes was appointed head of the Department of Indigenous Studies,



Mahoney

College of Arts and Science, effective July 1, 2018 to June 30, 2023.

Valerie Korinek was appointed vicedean, faculty relations, College of Arts and Science, for a five-year renewable term effective July 1, 2018 to June 30, 2023.

Tamara Larre was appointed acting associate dean, academic, College of Law, from July 1, 2018 to June 30, 2019.

Noreen Mahoney was re-appointed associate dean, students and degree programs, Edwards School of Business, for a five-year term effective July 1, 2019.

Bram Noble was appointed as acting head of the Department of Geography and Planning from July 1, 2018 to June 30, 2019.



Schmidt

Maureen Reed's term as assistant director, academic, in the School of Environment and Sustainability, was extended from July 1, 2018 to June 30, 2019.

Debra Rolfes was appointed director of the Ron and Jane Graham School of Professional Development in the College of Engineering, effective July 1, 2018 to June 30, 2022.

Joe Schmidt was appointed head of the Department of Human Resources and Organizational Behaviour, Edwards School of Business, effective July 1, 2018 to June 30, 2023.

Craig Wilson was appointed head of the Department of Finance and Management Science effective July 1, 2018 to June 30, 2023.

SPL

# **COMING EVENTS**

### CONFERENCES

#### Saskatchewan Cancer Research Conference

June 13, Health Sciences Building. The conference will capture some of the exciting ongoing cancer research that is done exclusively in Saskatchewan and aims to bring all scientists and clinicians within the province together. This annual conference serves as a valuable networking and learning event for students, physicians and scientists that are driven towards one goal—finding breakthrough therapeutics. Registration is free and lunch is provided. For more information, visit usask.ca/~franco.vizeacoumar/scrc.html.

### Protein structure, function and malfunction

June 14–15, U of S campus. Many labs in Western Canada conduct research on protein function and structure. The aim of this two-day meeting is to provide a forum for up-and-coming researchers involved in the study of proteins and protein structure and function, from graduate students, post-doctoral fellows to faculty, to present recent results, engage in discussions about their research, and meet their peers. Registration is free and the Wednesday evening reception and light breakfasts and lunches are included. For more information and to register, visit cmcf.lightsource.ca/psfam.

#### **One Health Congress**

June 22–25, TCU Place. The university and the One Health Platform Foundation invite you to attend the 2018 One Health Congress—the world's premiere conference for the international one health community. This year's congress will focus on one health in underserved communities in recognition of the complex interplay of environmental, animal and human health in underprivileged or subsistent societies around the world. For more information and to register, visit onehealthplatform.com/international-one-health-congress.

### **COURSES/WORKSHOPS**

#### **Edwards School of Business, Executive** Education

Call 306-966-8686, email execed@edwards. usask.ca or visit edwards.usask.ca/exceed. Registration is open to the public and all university employees for upcoming programs:

- September 10–12, The Project Management Course – Saskatoon
- September 11–12, Conflict Resolution in the Workplace - Saskatoon
- September 13, Leadership Communication – Saskatoon
- September 18, Leadership Essentials for Supervisors – Saskatoon September 19, Type and Stress Manage-
- ment Saskatoon
- September 24–28, Labour-Management Relations Certificate Program - Saskatoon

### THE ARTS

### Emma

June 14–16, 7 pm, Fr. O'Donnell Auditorium, St. Thomas More College. A play by Jon Jory from the novel by Jane Austen and directed by lan Elliott. In this crisp, dynamic retelling of Austen's classic, matchmaker Emma Woodhouse has just moved on to her newest project—a sweet, but modest girl named Harriet Smith. Having played matchmaker for her long-time nanny, vivacious Emma is determined to find Harriet an impressive suitor in spite of her lacking social standing. But as Emma becomes entangled in the romantic lives of her friends and acquaintances, she unwittingly falls in love with the least likely of bachelors, in this lighthearted tale of gossip, matrimony, and misunderstanding. For more information, visit stmcollege.ca/newmanplayers/emma-june-14-16

**NEXT OCN: July 13, 2018 DEADLINE: July 2, 2018** 

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## **Embracing a leadership role**

FROM PAGE 12

Calvez said that as far as he's aware, there's nowhere in Canada working on Indigenization in such a well-rounded way compared to the U of S.

"We have been working on this for a long time and we have gotten so far," said Calvez. "If we don't embrace our strengths and recognize them and celebrate them, we won't feel confident enough to lead, and we need to lead because no one else is in

the same place as we are."

The Gwenna Moss Centre for Teaching and Learning provides assistance with inclusive pedagogical approaches, curriculum redesign, decolonization and intercultural competencies. For more information, email gmctl@usask.ca.

> Meghan Sired is a communications co-ordinator with the **Teaching, Learning and Student Experience portfolio.**

# **Provincial post-secondary education report released**

**KRIS FOSTER** 

For the first time ever, the province of Saskatchewan released a report highlighting metrics, trends and data related to the province's post-secondary education sector.

The U of S, as the largest higher education institute in the province, played a significant role-along with the University of Regina and Sask Polytech-in the pilot project to develop post-secondary indicators and resulting report, said Troy Harkot, director of institutional effectiveness in the office of Institutional Planning and Assessment.

"The idea to collaborate on common data, metrics and definitions was initiated by the Ministry of Advanced Education," said Harkot, who along with two other U of S employees represented the university on the pan-provincial working group. "We've worked the last couple years to develop common metrics around enrolment, research and finances so that this information can be reported in various ways to the government's stakeholders."

With the Ministry of Advanced Education's 2018-19 allocations post-secondary to education approaching \$730 million, Harkot said it is important that the publicas well as other branches of government-receive accurate information on activities within the post-secondary sector. This was the impetus for establishing the Saskatchewan Post-Secondary Education Indicators project and reports.

The first report resulting from this work was released at the end of May and is intended to provide insight into the higher education landscape in Saskatchewan, said John Rigby, interim associate provost of Institutional Planning and Assessment, and member of the steering committee that led this work.

"It was the aim of the steering committee to oversee the development of a series of metrics that will improve the understanding of the post-secondary education

sector and increase awareness of the activity that goes on in this area," explained Rigby. "Taken in whole, it sheds light on trends and activities of a very complex sector that has far-reaching benefit for the province and its people."

**FF** It was a great opportunity to get together and collaborate towards something very positive.

— Troy Harkot

One trend Harkot pointed to is the combined overall enrolment growth at the University of Regina, Saskatchewan Polytechnic and University of Saskatchewan, with student headcount increasing by an average of 1.9 per cent annually over the past five years to 42,500 total students in fall 2017.

Additionally, the demographic details of the student body at the three institutions has revealed that the number of First Nation, Métis and Inuit students has grown by 26 per cent since 2013, totaling 5,390 students in fall 2017, and international student enrolment, during the same timeframe, has grown by 29 per cent to 5,040 students in fall 2017.

The initial report is very centred on students as the government and all participating institutions share "a common interest in student support, engagement and success," Harkot said. "The ministry is very interested in understanding the student experience. Are they engaged, do they get a quality education and do they get jobs after graduating? These questions matter to all of us."

Other areas that are being tracked, and will eventually be reported on, include research revenue and outcomes, financial

information such as revenues and expenditures, and employment rates two years after graduation.

Harkot said the U of S, because of its U15 membership and participation in that organization's data exchange program, has been involved in processes for tracking and reporting on common data and metrics since 2011.

"Because of our membership in the U15 we have been able to share best practices with the working group and provide options for how this project could unfold," Harkot said.

Overall, Harkot said he has enjoyed the process and working with other provincial post-secondary institutions.

"It wasn't straight forward to identify common metrics and definitions, but the outcomes have been positive so far," Harkot said. "Effective collaboration and partnerships with the Ministry of Advanced Education, University of Regina and Saskatchewan Poly-



Troy Harkot, director of institutional effectiveness.

technic made this a strong project. It resulted in some really solid information, and that knowledge will prove to be very useful. It was a great opportunity to get together and collaborate towards something very positive."

Harkot said it is anticipated that future reports will be released with additional metrics and will eventually include all post-secondary education institutions in Saskatchewan, including regional colleges and technical institutes.

## Passion for social justice drives decision

FROM PAGE 4

political studies degree while being able to take electives that appeal to my interests, that was huge for me."

Salim said he was able to strike a balance between studying and socializing with friends and family, while helping tutor other students and also playing competitive soccer.

"I want to prove that a U of S education is as good as any education anywhere and I want to show that you can succeed without focusing solely on academics, that you can have time for a social life," said Salim, whose parents Najma and Muhammad are both doctors, with older sister Nitasha in the U of S College of Medicine and younger sister Ahmereen at the University

of Regina. "My family and friends have been huge for me and I wouldn't have got into Harvard without them. When I was stressing out over the decision, they were there for me."

Passionate about social justice causes, Salim said he would like to work internationally, but is also interested in returning to Saskatchewan to work on Indigenous issues.

"I want to be in a position where I can have a dynamic work life and be in a leadership role to maximize the impact that I can have, whether it's in law or politics or other areas," said Salim, who volunteered in the last provincial election as a campaign canvasser. "I believe that law is one of the mechanisms

in which you can achieve institutional change. And there are a lot of important issues, like the marginalization of minorities, refugee issues, Aboriginal issues, multi-national corporations exploiting workers. There is a plethora of issues that I am interested in."

But first, Salim is celebrating having completed his first degree.

"It's interesting to sit back and think about what a bachelor's degree really means, because I have been so busy focusing on exams and papers," he said. "It's important to appreciate the moment and know that what I have learned over these four years, both academically and otherwise, will help me throughout my life."

## TIME TRAVEL

Pack your bags and set your sights on memory lane, because this year's On Campus News back page features landmark moments and events from our storied 110-year history.

Have a particular event you'd like to see featured? Let us know about it at news@usask.ca. With files from University Archives and Special Collections.



## **JUNE 1973**

### THE PROGRAM OF LEGAL STUDIES FOR NATIVE PEOPLE

In the early '70s, Roger Carter (pictured left), dean of the College of Law, noticed a startling lack of Indigenous students entering the college. At the time, there were only four lawyers and five students of native ancestry in Canada.

Inspired by a trip to the New Mexico Law School, Carter studied what he believed to be a model that would work at the U of S. In June of 1973, Carter established the Program of Legal Studies for Native People, an eight-week course designed to prepare Indigenous students to pursue an education in law. The Federal Government provided financial support to both status and nonstatus students who were eligible for not only the course, but also any legal studies that followed.

Two years later, in 1975, the

program was transferred to the newly created Native Law Centre. In 2017, the program was renamed the Native Law Centre (NLC) Summer Program, but the objectives remain the same: prepare students for success in law school; provide an alternative means for Aboriginal students to be accepted to law school; increase the number of Indigenous professionals in the legal field; and integrate Indigenous issues into legal education.

To date, more than 1,300 students have completed the program, more than 1,000 have enrolled in law school and more than 820 have finished law school or are still enrolled. Around 75 per cent of all Indigenous lawyers in Canada started their legal education with the NLC Summer Program.

