UNIVERSITY OF SASKATCHEWAN

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GREEN&WHITE

ulla,



University of Saskatchewan

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GREEN: WHITE UNIVERSITY OF SASKATCHEWAN ALUMNI MAGAZINE SPRING 2017

EDITOR'S NOTE

There is a terrible irony that comes along with innovation. These incredible discoveries improve our lives. They become threads in the fabric of our lives. And then, with the passage of a bit of time, they become taken for granted.

Penicillin? Taken for granted. Cars and planes? Taken for granted. The ability to access information on any subject with a click? Taken for granted. We are living longer and better than ever before, and the miracle of that is met with a collective "meh."

In fact, "taken for granted" might be an understatement. In reality, some innovations, when perceived to be lagging—I'm looking at you, cell phone or Wi-Fi coverage—are met with resentment.

I'm guilty of taking progress for granted, too. I guess I've become so used to a life filled with continuous improvement that I barely notice any more. Those everyday things are easy to miss while looking at the big picture.

Maybe seamless integration is a mark of true innovation.

Take, for instance, this magazine and all that needed to be invented (and refined) in order for it to be produced and delivered: paper, ink, printing press, computer, graphic design programs, lasers to print mailing addresses, trucks to transport, and on and on.

I will do my best to appreciate all the big leaps—that now seem like small steps—that have made my life noticeably better.

Kris Foster (BComm'98) Acting editor

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The views and opinions expressed in the *Green & White* do not necessarily reflect the official position of the University of Saskatchewan or the University of Saskatchewan

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The U of S Space Team has a long history of highs in student competitions across Canada and around the world.



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HEALTH SCIENCE FICTION KRIS FOSTER

It sounds stranger than fiction, but between virtual reality, robots and three-dimensional printing, U of S research is changing the future of medicine.



FOR THE LOVE OF THE GAME

Following Merlis Belsher's historic \$12.25-million gift, support for a new ice rink is coming from all corners of the province.



"Those highlights, however, don't begin to scratch the surface of the innovative spirit found in every lab, classroom and library at the U of S. Innovation is at the heart of what we do."

MESSAGE FROM THE PRESIDENT



For more than 30 years—as a professor, dean and now president—I have had the privilege of seeing the tremendous things achieved by members of our campus community: we were the first to treat a cancer patient successfully using cobalt-60 radiation therapy; we created and improved more than 400 varieties of commercial crops; we developed multiple vaccines—including a couple of world firsts—to protect human and animal health; and we came together to lead the development of Canada's largest lab, the Canadian Light Source synchrotron.

Those highlights, however, don't begin to scratch the surface of the innovative spirit found in every lab, classroom and library at the U of S. Innovation is at

the heart of what we do. By necessity, innovation requires inquiry, because only through inquiry do we make discoveries that create innovation. At the U of S, we ask the right questions in a broad range of disciplines, and ensure the answers to those questions benefit the world.

For well over 100 years, our faculty and students have been asking meaningful questions, to inform themselves, to inform their disciplines and to drive innovation forward. Because of our long history of inquiry, we know the urge to find answers is instilled in every graduate of the U of S. Through our graduates and researchers, we show that part of the value of a modern university is how we help the world adapt through innovation.

In this issue of the *Green & White*, we tell stories about our alumni, researchers and students who have developed innovative ways to blaze trails, whether in agriculture, medicine, law, arts and science, or engineering. The innovations covered in these pages are as diverse as the disciplines whence they came. But what all innovation has in common is that it helps create a better world.

So continue asking questions, because doing so leads to information, innovation and inspiration. I do hope you are inspired by what your fellow alumni have accomplished.

Peter Stoicheff President and vice-chancellor, University of Saskatchewan uofs.president@usask.ca

REMEMBER WHEN

Alumni innovators and pioneers

Thousands of University of Saskatchewan graduates have advanced their fields, made discoveries and influenced their communities. Here are a few stories of such alumni discovered in university archives.

▶ UNIVERSITY ARCHIVES AND SPECIAL COLLECTIONS UNIVERSITY LIBRARY



Frances Hyland in The Doctor in Spite of Himself—part of the Greystone Theatre's first summer tour in 1948. Department of Drama fonds

Frances Hyland

Frances Hyland (BA'47, LLD'72) was one of | by English literature—but overwhelmed by the the first drama students at the University of Saskatchewan. Professor Emrys Jones, recognizing this exceptional talent, helped launch this young actor's career: he launched a scholarship fund to support Hyland's studies at the Royal Academy of Dramatic Art.

After starting her professional career in England, Hyland was recruited as part of the founding company of the Stratford Festival. Often dubbed the "first lady of Canadian theatre," she gained prominence in theatre, television and radio. Her former professor later lauded Hyland's decision to stay in Canada: "She turned away from the path of international fame and fortune she had already achieved, and went wherever she was needed—from Quebec to British Columbia and back again—to help companies, small and large, in their struggles to become truly professional."

She was also a leading voice for improved compensation and status for Canadian actors.

Henry Taube

Henry Taube (BSc'35, MSc'37, LLD'73) is, so far, the only graduate of the University of Saskatchewan to be awarded a Nobel Prize. He also remains the only Saskatchewan-born Nobel Laureate. Taube arrived at the U of S in 1931, a native of Neudorf, Sask. and recent graduate of Regina's Luther College. He recounted later that he intended to study a range of subjects and was especially taken

crowds at registration, registered for chemistry after a Luther College classmate helped him find his way. After his bachelor and master's degrees from the U of S, he headed to Berkeley for his PhD. Unable to find a faculty position in Canada, he stayed in the United States for his entire career. He started making his mark early: after a Guggenheim Fellowship in 1949, a "classic paper" in 1952 laid the foundations for the work recognized by the Nobel Prize. His 1983 Nobel Prize was awarded "for his work on the mechanisms of electron transfer reactions, especially in metal complexes."



Henry Taube in Saskatoon, 1935. Henry Taube fonds.

Lawrence Eldred Kirk

While he may not have "stopped the dustbowl in its tracks" as one newspaper report put it, there's no doubt that Lawrence Eldred Kirk (BA'16, BSA17, MSc'22, LLD'49) had a major impact on prairie agriculture and beyond. Kirk was born in Ontario; his family moved first to Manitoba and then homesteaded near Arcola, Sask.

Due to the lack of educational opportunities, Kirk did not complete high school until the age of 24. He made up for lost time, though, with the completion of a BA, BSA, and MSc from the U of S (all between 1916 and 1922) and then a PhD from the University of Minnesota in 1927.

It was as a graduate assistant that he first "became impressed with the special qualifications of Arctic sweet clover and crested wheat grass, as forage crops for Saskatchewan conditions." This led to Kirk's development of Fairway crested wheat grass, which was "used extensively during the Depression to reclaim blown-out fields."

He followed a few career paths, first at the U of S; becoming dominion agrologist in 1931; returning to the U of S as dean of agriculture between 1937 and 1947; and finally as chief of the Plant Production Branch of the Food and Agriculture Organization of the United Nations.



L.E. Kirk (in the back) as a member of the Better Farming Train's Field Crop Car, 1922. Photograph Collection, A-1403.



A-7688

Edith C. Rowles Simpson

A native of Manchester, England, Edith C. Rowles Simpson (BHSc' 32, LLD'32) was raised on a homestead on the Saskatchewan/Alberta border. She taught at a number of rural Saskatchewan schools prior to enrolling at the U of S where she won the Rutter Prize for most distinguished graduate receiving her bachelor degree in 1932.

She continued her education at the University of Wisconsin (MSc, 1939) and Columbia (EdD, 1956). Simpson joined the faculty of the U of S Department of Women's Work in 1932, serving in a number of positions throughout her career, retiring as dean of home economics. In her extension work she conducted Farm Girls' Camps and Extension Short Courses, and along with Bertha Oxner she is credited with establishing the Homecraft Clubs (precursor of the 4-H Homecraft Clubs).

Her academic speciality was in food science. She undertook some of the first Canadian research on freezing food; her publications on this topic as well as the preservation and use of fruit "were widely used throughout the prairies and beyond."



One of the earliest Homecraft Clubs, in Star City, ca. 1937. Instructor Edith Rowles is on the left. Photograph Collection, A-6353.



Mabel Timlin in her office, with a collection of journals being donated to the University Library in 1969. Photograph Collection,

Mabel Timlin

The university could not have known how well it had chosen when in 1921, the Board of Governors accepted the appointment of Mabel Timlin (BA'29, LLD'69) as a secretary, at a salary of \$90 per month. Determined to pursue her education, she earned her BA in 1929 from the University of Saskatchewan and her PhD in 1940—at the age of 49—from the University of Washington, all the while continuing full-time employment at the U of S.

By 1941 she was appointed assistant professor in economics-quite possibly the first, and certainly one of the few employees to have had a career progression from clerical staff to faculty. Her PhD thesis, Keynesian Economics, published by the University of Toronto Press in 1942, was a "pioneering theoretical study" which clearly established her as a scholar of note.

"It would have been easy to plough the field of her dissertation for life," but Timmie, as she was affectionately known, "was the kind of theorist... whose work related to the complex issues which faced humanity, rather than a refinement of breakthroughs already made."

She continued to publish, including two substantive studies, Does Canada Need More People? (1951) and The Social Sciences in Canada (1968). Among other honours, she was the first woman social scientist elected to the Royal Society of Canada and was elected to the executive of the American Economics Association.

ON CAMPUS NEWS



Revitalizing research

On Jan. 9, 2017, three unique-in-Canada research centres at the U of S were awarded almost \$69 million in federal funding from the Canada Foundation for Innovation:

\$48 million for the Canadian Light Source (CLS)

The CLS is using its brilliant synchrotron light to support ground-breaking research in health, the environment, materials and agriculture, including unique work done in biomedical imaging and therapy that holds promise in areas such as advancing cancer therapy and treating osteoporosis.

\$19.3 million for the International Vaccine Centre (InterVac), part of

the Vaccine and Infectious **Disease Organization (VIDO)**

InterVac is one of the most advanced containment level 3 facilities in the world and provides the infrastructure to safely study infectious diseases of animals and humans and develop vaccines to protect against emerging health threats.

\$1.56 million for SuperDARN Canada

SuperDARN is a U of S-led initiative operating five radar arrays across Canada that provide continuous mapping of "space weather" above Canada, data critical to being able to predict when electromagnetic storms above Earth could threaten technologies such as GPS, electrical grids and navigation systems.

Read more U of S news at news.usask.ca





Tony Vannelli new provost and VP academic

Tony Vannelli is set to join the U of S as its next provost and vice-president academic for a five-year term starting Aug. 1, 2017.

In this role, Vannelli will be the senior academic, planning and budget officer at the U of S. Vannelli most recently completed a second five-year term as dean of the College of Physical and Engineering Science at the University of Guelph.

"It's a privilege to step into this role. The U of S has always aspired to provide support to the development of individuals and the impact they can have in communities in the province, country and world," said Vannelli, who earned bachelor's and master's degrees in applied mathematics from Concordia University, and a PhD in electrical engineering at the University of Waterloo.

Prior to joining the University of Guelph in 2007, Vannelli spent almost 20 years at the University of Waterloo as a professor of electrical and computer engineering, serving as chair of the department (1998-2006), and later as associate dean of research and external partnerships.

"Smart" cancer drugs

Eric Price (left), a new Canada Research Chair in Radiochemistry at the U of S, is leading work on developing a new generation of medical imaging technology and "smart" drugs for cancer treatment.

Selective in their targeting of cancer, these new drugs hold promise to reduce side effects compared with traditional chemotherapy, said Price, who was recruited to join the chemistry department.

"These new radioactive drugs will be like sniffing dogs," said Price. "They will be able to select specific cancer cells and kill them, while sparing healthy ones."

Price's research will help address bacterial infections that have become resistant to drug treatments.



Justin Trudeau visits

The university played host to Prime Minister Justin Trudeau on the evening of Jan. 25, 2017.

Speaking to a full room in the Leslie and Irene Dubé Lecture Theatre in the Health Sciences Building, Trudeau took audience questions ranging from the economy and mental health issues to relations with Indigenous communities and the United States.

"It really shows that people are interested in engaging in the political process," he said, following a welcome from MP Ralph Goodale and subsequent standing ovation.

Saskatoon was the ninth stop on the prime minister's cross-Canada town hall tour.

New immunotherapy technique holds promise for curing food allergies

U of S scientists have developed a new immunotherapy technique that nearly eliminates the allergic response to peanut and egg white proteins in foodallergic mice, reducing the anaphylactic response by up to 90 per cent with only one treatment.

"If we can reliably 'cure' food allergies, or related conditions such as asthma or autoimmune diseases such as multiple sclerosis with this new therapy, it would be life-changing for affected individuals," said U of S professor John Gordon, lead scientist behind the discovery.

With Health Canada approval, the first human trial could begin in about one year, Gordon said.

"We predict the treatment could be on the market within the next five to 10 years," said Gordon.



From the U of S to outer space

Two U of S alumni are on the short list of 72 candidates selected by the Canadian Space Agency for its National Astronaut Recruitment Campaign.

Shane Journeay and Jason Leuschen were chosen from an original recruitment pool of 3,000 and have spent several months undergoing medical exams and physical and skills test to meet the stringent demands of astronaut training and space flight. They will find out this summer if they will be selected to join Canada's astronaut corps.

Journeay completed his PhD in toxicology/ nanotoxicology in 2008 at the U of S, while Leuschen graduated from the College of Engineering in 2000.

U of S secures silver sustainability rating

When the university's third integrated plan was first unveiled, campus leadership committed to improving the institution's Sustainability Tracking, Assessment and Rating System (STARS) ranking from bronze to silver by 2020. In February, that goal became a reality, three years ahead of schedule.

STARS is a transparent, self-reporting framework used by more than 700 universities and colleges.

"The U of S is three years ahead of schedule in hitting its silver rating, which is great news," said Toddi Steelman, executive director of the School of Environment and Sustainability and the chair of the President's Sustainability Council.

Read more U of S news at news.usask.ca



A lot goes on between issues of the Green & White...





Keep up to date and ioin the conversation on official U of S social media channels to stay connected.

U of S reacts to provincial budget cut

On March 22, President Peter Stoicheff expressed deep concern over the 5.6 per cent budget cut to the university in the 2017-18 provincial budget the largest percentage decrease in the university's history—but affirmed the U of S is committed to serving the people of the province in ways that continue to promote economic growth and a better quality of life.

Adding to the difficulties this reduction poses, the province is requiring the university to provide \$20 million from its base budget to support the College of Medicine.

"We have been preparing for a substantial budget reduction for many weeks. Even so, today's budget is deeply troubling to the U of S, and to the people we serve throughout Saskatchewan," Stoicheff said. "The people of this province deserve to have one of Canada's top universities, and we will not be deterred by this budget; we are determined, as a community,

London calling for healthy campus community

Chad London, the new dean of the College of Kinesiology, wants to hit the ground running—or walking—whatever gets you moving on campus.

London, who earned his bachelor's at the University of Lethbridge, a master's in human kinetics at the University of Windsor and a PhD in educational leadership from the University of Calgary, began his five-year term as dean on Nov. 1 and has set a lofty goal for the campus community.

"I would really love to see the U of S be the healthiest campus in the country and I think the College of Kinesiology is perfectly placed to be a leader in championing healthy living across campus," said London, who came from Calgary's Mount Royal University where he was dean of the Faculty of Health, Community and Education.

that it will neither define us nor diminish us. As we have always done during our 110-year history, we will find a way to provide what our province needs."

Stoicheff noted that the U of S is one of the best financially managed universities in Canada, and that these reductions will deplete the university's reserves and weaken its ability to serve the province.

"Investment in education and our students is one of the most critical areas for the province to support as it plans for a strong future," Stoicheff added. "Our university is a major economic driver in Saskatchewan and contributes more economic benefit to its region than almost any other university in the entire country. In 2015, about \$1.3 billion of Saskatchewan's economy was tied to the U of S. Continued reductions to our university will jeopardize the long-term economic future of our province."

From student to chancellor

LESLEY PORTER

From his time as a student leader to the provincial legislature back to campus as a public policy professor, Roy Romanow's enthusiasm for the University of Saskatchewan has always been steadfast.

Now the university's 15th chancellor—a role he assumed on Nov. 1—Romanow (BA'60, LLB'64) is honoured to continue serving the campus community that means so much to him.

"This is my university," he said. "This is where I dreamt I would attend when I was a young student." He explained that the value of attaining post-secondary education was instilled in him at a young age. From there, it was something he built his life around.

"I think I can quite safely say, without university education, I probably would not have been fortunate enough to experience the various things which life has provided for me," he said. "My father, who came to Canada from Ukraine, always wanted his children to get higher education, something which he was not fortunate to receive. So I am very honoured and very indebted and very much an admirer of this great institution."

As executive and ceremonial head of the university, the chancellor has a de facto seat on the Board of Governors. Other duties

include, but are not limited to, conferring degrees at convocation ceremonies and acting as a university ambassador to the external community.

"I would say that the chancellor's role is to make sure that he or she is both a shield and a sword in the sense of a protector and a promoter of academic excellence and academic freedom," said Romanow, who will be installed at the June 5 convocation ceremony.

His wealth of experience ensured for a smooth transition to this new role. Born and raised in Saskatoon, Romanow completed his political studies and law degrees at the U of S. His involvement in student government was perhaps a foreshadow for a robust career in public office, one that spanned over 30 years. He was first elected to the provincial legislature in 1967. From 1971 to 1982 he served as deputy premier and attorney general of Saskatchewan. He played a key role in the federal-provincial negotiations that resulted in the *Constitution Act 1982*, which includes the Canadian Charter of Rights and Freedoms. Romanow was leader of the opposition from 1987-1991, when he became premier of Saskatchewan—a title he would hold for nearly a decade.

After retiring from politics in 2001, he was appointed by then-Prime Minister Jean Chrétien to lead the Royal Commission on the Future of Health Care in Canada, resulting in the final report entitled *Building on Values*. In 2004, he became a member of the federal Privy Council through a five-year appointment to Canada's Security Intelligence Review Committee. Most recently, Romanow was a senior policy fellow in the College of Arts and Science.

"Every one of those activities, in some way has—at least in my case—enriched me, expanded my vision, my concept of life, how precious it is and how short-lived it is," he said.

While he works through a list of priorities for his tenure as chancellor, one objective for Romanow is to ensure that the spirit of learning and discovery—the same one that has played such a pivotal role in his life—is maintained.

"We rank up there as one of the top universities in the country, and I would even say beyond, so it's a great base that we stand upon," he said, highlighting the university's rich history, bright students, dedicated alumni and extensive research outputs.

As time passes, however, the university must work hard "to make sure that that base isn't weakened.

"The makings are here to keep moving onwards and upwards in our contribution to our province and perhaps even more importantly, our great country."





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FROM STUDENT TO CHANCELLOR



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Become a Nurse. Make a difference in the world

Through innovation, entrepreneurial spirit and a lot of persistence, U of S grads are proving that there actually is an app for that. Here are a few stories of apps our alumni have had a hand in developing, marketing and selling over the past couple years.

N KATHY FITZPATRICK

From farm to phone to fork

When Kim Keller met with some other U of S alumni for drinks one evening, little did she know the entrepreneurial adventure it would lead to.

Following graduation, Keller (BA'06), who majored in Native studies, started working at SGI. That career path took a sharp turn in 2011 when, upon returning from helping with harvest at her family farm in Gronlid, Sask., north of Melfort, she met her future business partner.

Himanshu Singh, who was working on an MBA and knew next to nothing of farming, asked "a ton of questions," Keller recalled. Fatefully, he asked her how farmers keep track of what's in their bins.

Keller explained it was all written down by hand on "a white sheet of paper on the kitchen island and all the bins are drawn out as circles and every time you change whatever's in the bin you've got to run into the house, erase it and rewrite it. And he goes, 'Oh my God, you've got to be kidding me."

Appetite for innovation

Singh, who had already started a small software development company, asked her if she wanted to build an app for her farm, and she readily agreed. Neither one of them were software developers.

They came up with Farm At Hand, which enables farmers to digitally store all data related to their operation and call it up on their mobile device-all of their equipment, part numbers, what they had seeded, what they had in their bins, what they had contracted and delivered.

"It brought their entire farm into one place," said Keller.

"They didn't have to be at the house or at the shop when they conducted their farm business. They could pull it up on their phone and it would be right there."

After receiving positive feedback from family and friends, the pair put Farm At Hand on the App Store. Within two months they got 500 downloads. Then came a call from a grain marketing consultant, asking how he could use the app to communicate with his farmer clients.

"He said, 'I need to know what's in their bins all the time. They already share that information with me. If you could make it easier through your platform, like, how do we do this?" Keller recounted.

"We thought, 'holy smokes,' we actually have a really big opportunity here."

Their plan was to provide the app to farmers for free, and charge agronomists and market consultants for access. A vital feature was to enable farmers to share their information, while also retaining ownership and control of it, Keller explained.

"Everyone thought we were crazy that we'd built an app and we were giving it to farmers for free," Keller said, explaining that she and her partner didn't feel farmers ought to pay for a better way to manage, when a wellmanaged farm benefits the entire agricultural industry.

Their venture took a huge leap forward in 2013 when they got an invitation from GrowLab, a startup business accelerator program in Vancouver.

For Keller, it meant spending a year without a paychegue. The payback was equity investment from GrowLab, participation in a three-month "boot camp" and the chance to learn from others who had built successful companies.

Keller said in particular they learned to work faster, since in technology "things happen fast."

At the end of the three months, the pair stayed in Vancouver and kept building their company. They raised investment money from contacts in the prairie agriculture industry, \$1.6 million in total, Keller said.

On the surface, the app looked simple to build, but Keller said it was actually quite complicated because of

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Kim Keller,

co-founder of

Farm at Hand

О РНОТО ВУ DAVID STOBBE

the sheer volume of information collected. It also had to have offline capabilities, enabling farmers to access it even when out of cellular range.

Keller said she and Singh were also mindful of the trust farmers placed in them, and the responsibility that went with it "especially when agriculture is based on relationships ... and we took that incredibly seriously."

At the end of 2015, one of their early investors, Winnipeg-based FarmLink Marketing Solutions, bought Farm At Hand. The following spring, Keller and her fellow founder stepped away from the company.

Keller said she is happy with the way it turned out.

"I learned more in four years building this than I think I could have ever learned in a lifetime, and that is priceless."

She moved back to the family farm, which she now operates full-time with her parents and brother.

But don't count her out of future entrepreneurial ventures—she said she and her former partner are "always talking about new ideas ... I would build another company with him in a heartbeat."

Paperless patients

It was back in 2014, during a health hackathon-an event bringing together health-care professionals, entrepreneurs, designers and developers in order to create solutions to health-care problems—that Dan Merino (MSc'12) and Ryan Sander (BSc'01, MD'05) discovered they had something similar in mind.

That was, a way to electronically gather information from a patient and transmit it to a physician before their face-to-face clinic visit. Merino was thinking in terms of a self-reporting tool for patients, while Sander had an information-gathering tool for physicians in mind.

The latter is what took shape, Patient Prep by TrueVation Technologies Inc., a venture that Nick Rutherford (BSc'15) and Jeff Wandzura (BSP'13) also joined.

"One of the very cool things is that Jeff actually was a judge in the hackathon competition," Merino recounted. "That's how I met Jeff there. And because of his diverse background we wanted to have him on the team."

With Patient Prep, a patient fills in an online questionnaire, either at home or on an iPad in the clinic office before seeing the physician. There are more than 100 guestionnaires available, suited to different situations, and physicians can also customize them or create new ones to fit their practice.

The usual starting point is to have the patient select a symptom, condition or reason for the visit. Further questions follow, with that information transmitted to the patient's electronic medical record (EMR).

APPETITE FOR INNOVATION



It not only helps streamline the doctor-patient visit, it also helps ensure that all the questions that should be asked are asked—an especially important consideration in a time-constrained health-care system, Wandzura noted.

Jeff Wandzura

Better patient care decisions is the end goal, a goal Sander had initially tried to reach using paper questionnaires in his clinic.

"Rather than having a hundred different sheets of paper based on the broad type of conditions that family physicians see, using an iPad or other type of tablet really lends itself well to the problem they were trying to solve, to gather that relevant information that would drive the clinical decision-making process," Wandzura said.



Merino said one of the arduous tasks in most developing the software was to make sure it complies with all of the regulations under Saskatchewan's Health Information Protection Act. To make sure everything was extremely secure, "we developed

Dan Merino

our own specific system to be able to handle and encrypt all the information end to end," he explained.

Another hurdle was convincing physicians and clinic managers to adopt this new technology, Wandzura said. Even getting their attention was tough, he recounted, since they had to compete with drug company sales reps with much bigger marketing budgets.

TrueVation cold-called and networked through LinkedIn. It also forged a relationship with the Canadian company QHR Technologies, which describes itself as the largest single EMR platform in Canada.

A big break came when Sander got the chance to demonstrate Patient Prep to tech-savvy physicians at a conference in Mexico. Initial sales bolstered by word of

> "...you can make a meaningful impact if you do innovate and find a meaningful avenue for change."

> > WANDZURA

mouth carried the venture forward. And then, they took part in BluePrint Health, a business accelerator program in New York City where they saw "an intersection of health care and technology, and how you can make a meaningful impact if you do innovate and find a meaningful avenue for change," Wandzura said.

He also credits the U of S for the way it encourages constant interaction among students from multiple disciplines, allowing for cross-functional teams to develop and really innovate.

"I think they do a great job of making sure that the right people are at the table and allowing for those organic natural interactions to happen that allows companies to form like this," he said.

On the money side, winning the \$50,000 grand prize in the Tech Venture Challenge—an annual business startup competition organized by the U of S Industry Liaison Office-helped get them going. Another \$10,000 came from winning first prize in the i3 Idea Challenge, a business idea competition for early stage startups, put on by the university's Wilson Centre.

The group has since sold the Canadian rights to OHR Technologies, which in turn was recently bought by the Loblaw grocery and drugstore chain. Wandzura and Merino expect by press time that Patient Prep will have launched within the QHR network, bringing the technology to more than 7,500 physicians.

A shift in scheduling

One would not necessarily expect a regional health authority to turn to a mobile game developer for help in scheduling staff, but that's what the Saskatoon Health Region (SHR) did. Noodlecake Studios, known for fun-and-game creations such as Super Stickman Golf, got down to serious business with its subsidiary NC Consulting, formed to help clients develop software and mobile apps.

A pitch on the pitch helped bring the two together.

Erik Frederiksen (BEng'09, BSc'12) was a programmer at Noodlecake when he got an email from fellow U of S alumnus and soccer pal Kweku Johnson (BA'06), a manager of staff scheduling at SHR.

Initially, NC Consulting built a system for SHR to keep track of interpretations of collective bargaining agreements, ensuring the same question would get the same answer no matter who it came from. An essential services database followed.

Then a chat about problems in the scheduling department led to the creation of NC Consulting's flagship product, NC Smart Call.

Up to that point, backfilling staff who called in sick was a slow and labour-intensive task. An average of 200 SHR staff call in sick every day, said Tom Ross, CEO of NC Consulting. Every time it happened, schedulers would

"...we're solving real problems, and people want what we have, they're crying out for it, they need it."

FREDERIKSEN



pull up a list of employees who could be called to fill that shift, based on their skill sets and union seniority. They would then go down the list, manually dialling phone numbers to contact people one-to-one. At times, it would take close to a whole shift to find a replacement.

"A person doesn't need to be dialling a phone number, a person doesn't need to be leaving a message. Software can do that. And that's what we've been able to accomplish here with NC Smart Call," said Ross (BComm'06).

It went live in June 2014. Now, NC gets an upload of unfilled shifts from the health region's scheduling system. It then sends out notifications through an interactive voice recorder phone call or through text message.

Employees can not only control how they wish to be notified, they can also set the parameters. For example, if they don't want to work Mondays they will never be offered backfill shifts on that day.

If more than one employee responds, schedulers can figure out which is the best choice. For example, one may incur overtime while another would not.

NC Smart Call has brought multiple benefits to SHR. Scheduling-related grievances have dropped by more than 80 per cent, Ross said. Managers, schedulers and employees all have access to an audit trail, "so if (employees) think that they might have been missed for a shift they can go back and take a look and see for themselves if they were notified or if they weren't, and the reasons why," he explained.

He also said the number of schedulers being deployed to deal with 200 daily absences has been reduced from 16 to four, and the remainder can now focus on scheduling vacation and other types of leave several months into the future.

As well, the software has resulted in an estimated savings of \$500,000 annually in operational costs.

NC Smart Call has turned out to be a great opportunity for Noodlecake, said Frederiksen, now chief technical officer with the consulting subsidiary.

Tom Ross, Erik Frederiksen and Kyle Drever of NC Consulting.

In the business of game development, a company typically invests money until it starts to run out, and then it's under pressure to release what it has no matter how far along the product has come. The hope is that, at the end of it, someone wants what the company has built, Frederiksen explained.

NC Consulting was set up to bring in more revenue, allowing for a longer development cycle, he continued. Unexpectedly, it led to something far more. While SHR put up the initial money to develop NC Smart Call, the health region allowed the company to assume ownership and build on it.

"We've been very aware from the start that we're solving real problems, and that people want what we have, they're crying out for it, they need it," Frederiksen said. "So I think it's been pretty safe because we know that the work that we do is worth it, and we've got clients that are willing to pay for it."

While other industries also have computerized scheduling systems, software developers have been reluctant to pursue the health-care market, Ross said.

Through its partnership with SHR, NC Consulting was able to gain an insider's perspective, and develop a communications tool that complies with the stringent requirements of collective agreements, he continued.

That meant having to learn not only what's written on paper, but how the agreements are interpreted and implemented.

"We very quickly had to become domain experts in the workings of a massive health-care organization," Frederiksen explained.

A further component called Smart Leave, which automates the vacation request process, has also been added.

"When you look at the full suite, there is no one else out there that is doing it," Ross said.

Cypress Health Region in Swift Current and Northern Health in British Columbia have signed on as clients, he said. He is now marketing NC Smart Call to health regions across the country and beyond.

The road from Nelfort to Google

How does a hockey-obsessed kid from small-town Saskatchewan become senior engineering director at one of the world's largest tech companies?

N BEVERLY FAST

roles since graduating from the University of Saskatchewan's computer science program 30 years ago. He's been an academic, a semi-pro hockey player, a research fellow and an entrepreneur.

Add influencer to the list, and you've got his current career neatly summed up. Woods is senior engineering director at Google Canada. He's responsible for managing overall engineering operations at the company's base in Waterloo, Ont. He's also responsible for representing Google in Canada's tech community and for wooing some of the country's best and brightest to the Google team.

Living up to expectations Woods grew up in Melfort, the youngest in a farm services business. He remembers having a natural aptitude for math and sciences, but being obsessed with sports, excelling in hockey and competing nationally as a junior golfer. He credits his parents with giving all this innate potential a focus.

"I knew I was destined for the University of Saskatchewan from the time I was five years old," Woods said. "My father was a Second World War veteran, and when he returned home, he just wanted to get on with life, earn a living and raise a family. I was the youngest by several years, but I remember that things were expected of us-we were expected to do well in school, to participate in sports. And if we decided to do something, we were expected to commit to it."

When an introductory class on computers in high school sparked his interest, his parents bought him a Commodore Vic-20 computer. "A home computer was still a relatively expensive thing back then, but my parents wanted to foster that interest. I got pretty obsessed with how it worked. I hung around the local Radio Shack, I ordered books and subscribed to magazines-that was the beginning for me," Woods said.

Still, it wasn't a direct path to a career. Woods enrolled in the College of Arts and Science when he arrived on campus in 1983. If the fact that he brought his Vic-20 with him foreshadowed any career inclination, Woods said he was too naïve to see it. He took an eclectic mix of classes: math, philosophy, psychology and computer science.

"Sometime in the first semester of my

PHOTO BY PETER POWER

Steven Woods (BSc'87) has played a lot of

computer science class, we took a course that actually streamed us into computer science majors or those just taking a computer science course. So, in a way, I didn't actually make a decision to major in computer science ... it just sort of happened."

The computer science department in the 1980s was a small but closely knit group. Even today, more than 30 years out, Woods still has close connections with former classmates. He plays hockey with one, now a professor at the University of Waterloo, and works closely with another. "Verna Friesen was our class valedictorian. I remember always wanting desperately to be in her lab group; now she's here at Google."

"I had amazing mentors and a great environment at the University of Saskatchewan that's one of the reasons my daughter is an undergrad."

WOODS

Exploring the world outside

Despite being encouraged to pursue postgraduate studies, Woods jumped into the workforce, working as a software developer at SaskTel for several years. By 1989, he was restless and looking for a new challenge. He enrolled in a master's program at the University of Waterloo. For the next eight years, Woods jumped between academia and work

"I get bored easily, so I would alternate school with work until I basically ran out of school," said Woods. He did his master's in math and computer science, then went to work for the Commonwealth Scientific and Industrial Research Organisation (CSIRO), which is Australia's national research body. In his spare time, he played

semi-professional hockey for the Canberra Knights. He followed this with a year-long stint at Canada's Department of Defence, before returning to Waterloo to complete his PhD in computer science.

In 1996, Woods earned a post-doctoral fellowship at the University of Hawaii at Manoa. A year later, his PhD was published as a book on constraint-based reasoning co-written with Alex Quilici and Qiang Yang (Woods' PhD supervisor). Back on the mainland, he spent almost two years as a consultant at Carnegie Mellon University's Software Engineering Institute, where he worked on product line development and practical software architectural reconstruction and analysis.

At that time, the tech industry was booming and Woods wanted to be part of the technopreneurial wave.

"I was doing interesting work at Carnegie Mellon," he said, "but I wanted to do something that was my own. It wasn't about fame and fortune, but about bringing together a team of the best people and working to create something amazing, something that was ours."

In 1998, that "something" turned into Quack.com, the world's first interactive voice portal. When America Online/ Netscape (AOL) acquired Quack.com in 2000, Woods stayed on as vice-president. He had officially "made it" in Silicon Valley, and during the next eight years, he was involved in a succession of start-ups, including an ingame advertising firm called NeoEdge.

Coming home

"Google had tried recruiting me a few times over the years, but I didn't want to work for a big company," Woods said. "They just kept introducing me to people, and the more people at Google I met, the more I saw how passionate, sincere and honest they were. I realized I wanted to be part of that."

Google's final enticement closed the deal: Woods would move home to Canada. "I've been a virulent Canadian for a long time. All my companies were heavily dominated by Canadians. We used to lose people because they wanted to go back home, and I knew, someday, I wanted to come home and do something big in Canada," he said.

"When Google pitched me on becoming director of engineering in Waterloo, I talked to my wife. She agreed to uproot herself and we moved our family to Ontario. Now, we live on an acreage just outside

the city, surrounded by trees and farms. When friends from Saskatchewan visit, they recognize the shared set of values here."

Nurturing, attracting and retaining talent

Innovation is the common theme connecting Woods's post-graduate work, his research at CSIRO and Carnegie Mellon, his entrepreneurial successes in Silicon Valley and now his leadership role at Google Canada. But it is intertwined with a passion for bringing together top talent. He's been a team player throughout his career, and it's clear he sees teamwork and team building as essential components of growing the innovation economy in Canada.

"Talent is what will drive the future of innovation, and competition for talent is global. I see the flow of highly talented Canadians to the United States," Woods said. "Even though many come back, the reality is that many don't. We need to do more to make Canada a place where people want to be innovative, where they want to come and build a company."

Woods is also concerned that our education system is leaving too many people behind.

"Our STEM [science, technology, engineering and math] programs aren't good enough, but that's not the fault of educators," he said. "In England, they've done tremendous things in bringing computational thinking into schools at a very young age-that's brilliant. That is our challenge in Canada. We need to make it clear to kids from a young age that math is not esoteric; math is how you understand computers, how you change the world. We need to convey that excitement."

Canada has work to do in making STEM careers more appealing to young people, particularly young women. Despite initiatives aimed at recruiting more women, women are still underrepresented in STEM programs. In computer science, the statistical marker is essentially unchanged from Woods' era. According to a Statistics Canada report, in 1992, 33 per cent of postsecondary computer science students were female; in 2013, 29 per cent were female.

"That's concerning, because we're moving to a world where computers are making unbelievably good decisions. It's going to change the way we work and live," Woods said. "We need to show young women that tech is a welcoming culture, one where they can accomplish great things and help better the world."

Idea Lab encourages collaborative, creative thinking

The Wilson Centre for Entrepreneurial Excellence was established at the University of Saskatchewan in 2007 with a \$1 million gift from alumnus W. Brett Wilson (BE'79). In the decade since then, it has evolved in response to the growing entrepreneurial culture across campus. The centre recently expanded, moving out of its original 252-square-foot office in the Edwards School of Business to a 4,200-squarefoot "Idea Lab" in the Concourse Building at Innovation Place.



students, faculty, alumni, members of the community. The whole space designed to help early stage entrepreneurs take

"The Idea Lab is

their ideas to the next level, and also to facilitate the development of viable new ideas from the ground up," said Stephanie Yong, director of the Wilson Centre.

Equipped with writable surfaces, low-fidelity prototyping, LittleBits electronic building circuits and more, the Idea Lab gives participants a variety of hands-on tools as well as access to programs, events, business expertise and networking opportunities.

One of the Wilson Centre's best known programs is the i3 Idea Challenge, an annual business idea competition for start-ups. Since launching in 2007, the competition has attracted 27 to 30 business pitches every year. The i3 Idea Challenge has helped create over 25 new business ventures—including notable successes such as 3Twenty Modular, Skip the Dishes and MagnoPlug—and awarded over \$300,000 to early-stage entrepreneurs.



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IDEAS THE U OF S HAS GIVEN THE WORLD

For a century-plus, the U of S has shaped the world through its ingenuity and innovative spirit in a variety of disciplines. Here are just few of the ideas that U of S faculty and students came up with that made a lasting impression beyond our campus border.

🔊 SEAN CONROY



Commercia

cement

Thorbergur Thorvaldson (LLD'50), member of the Department of Chemistry from 1914 to 1948, was a pioneer in materials chemistry research.

His work altered how commercial cement was manufactured and increased the durability of concrete structures.



Cobalt-60

The world's first calibrated cobalt-60 cancer therapy unit was established at the University of Saskatchewan and installed at University Hospital (G Wing). The calibration work was done by Sylvia Fedoruk (BA'49, MA'51, LLD'06).

The miraculous birth of language

As a professor of English, **Richard Albert Wilson's** work *The Birth* of Language inspired Irish comic dramatist and literary critic George Bernard Shaw to create a second edition for which he wrote a preface.

Shaw argued that Wilson's literary work was "proof that the University of Saskatchewan was apparently half a century ahead of Cambridge in science and of Oxford in common sense."



Canadian education.

Professor of history Hilda Neatby (BA'24, MA'28) published her influential work So Little for the *Mind* and sparked a national discussion about



Ukrainian-English dictionary

Constantine Henry Andrusyshen, professor and head of the Department of Slavic Studies, led the compilation of the first Ukrainian-English dictionary.

The dictionary included approximately 100,000 word entries, 35,000 idiomatic expressions and a summary of Ukrainian grammar. Republished in 1957 and 1981, it is still recognized today.

1960s 5BX

William Orban is the forefather of Canada's first fitness craze called 5BX or Five Basic Exercises. Orban was the director of the U of S School of Physical Education from 1958 until 1966. His plan sold 23 million copies in 13 languages worldwide.

The plan required 11 minutes for five exercises: stretching, sit-ups, back extensions, push-ups and running.

1964

Linear accelerator

Following the betatron and the cobalt-60 therapy unit, the University of Saskatchewan's Department of Physics opened the linear accelerator which created six times more energy than the betatron, a particle accelerator that the department previously used.

Physicists from around the world have used the facility which has brought international recognition to U of S research.

1980

Harrington barley

Bryan Harvey and various colleagues developed over 60 barley varieties, the most impactful of which includes Harrington barley.

The discovery and production of Harrington barley has been influential to the brewing industry, as it has been used to make billions of hectoliters of beer worldwide.

Human ovulation using ultrasonography **Roger Pierson's** research has

revolutionized women's health. His research revolves around ovarian follicular development in natural and hormonal contraception conditions.

Pierson, a professor in the College of Medicine, gave the medical and scientific communities the first ever visualization of human ovulation using ultrasonography in 1990.



Canadian **Light Source**

Officially opened in 2004, the Canadian Light Source (CLS) is Canada's national centre for synchrotron research. Scientists use the synchrotron to gather information about the structural and chemical properties of materials at the molecular level.

Research at the CLS has ranged from viruses to superconductors to dinosaur bones.

cycles and under ovulation induction



Endoscopy camera pill

Dr. Julia Montgomery at the Western College of Veterinary Medicine, along with equine surgeon Dr. Joe Bracamonte and Khan Wahid, a specialist in health informatics and imaging in the College of Engineering, developed an endoscopy capsule, or "camera pill," to examine a horse's abdomen.

This innovation enables veterinarians to diagnose diseases or to check surgical sites.

Aerosol **Limb** Imager

Matthew Kozun (BE'12, MSc'15) created the Aerosol Limb Imager (ALI), a prototype instrument designed and constructed at the U of S. ALI represents a groundbreaking approach to measuring the concentration of aerosols—tiny dispersed particles—in the upper atmosphere using a unique optical device.

Kozun aims to track climate change through stationing ALI in space.

The wheels go round and round

For U of S grads, sustainability and innovation go hand-in-hand: Shane Olson has found success by finding innovative ways to reinvent rubber from tires, while Patrick Schmidt and Stan Yu save bikes from landfills through their involvement with Saskatoon's bicycle reclamation project.

💊 DEE HOBSBAWN-SMITH

Shane Olson (BSA'93) is fond of using farm work as an analogy for what Shercom Industries, his successful recycling business, does with tires.

"We harvest tires," he said during a recent conversation. "The crop is always good and we don't care about the weather. Tires are sorted [by size and type] and go through grinders which liberate nylon fiber and steel [from the rubber]. We use a magnet to remove the steel and put the fibre through a gravity table, similar to a grain cleaning operation."

The analogy can be extended further: after the steel and nylon are sold, often for use in oil spill cleanups, the remaining crop of reclaimed rubber is then transformed, as grain is into bread and pasta, into myriad of new products—from wheel chocks to automobile risers to rubber paving stones and driveways to equestrian stall mats, many of these diverse products innovated at Shercom.

Tires spin a lesser but still relevant role in the story of how a bicycle reclamation project rolled out a collaboration between the City of Saskatoon and a bicycle co-op located in a low-income city district.

Recycling revolution

The Shercom story starts in the early 1990s. Olson was a farm boy, raised on a mixed farm near Star City, Sask. As a young man, he stuttered through some indecisive years, first studying agronomy at the U of S for two years before a stint at Bible college, then farming full time for several years before returning to university and earning a degree in agricultural economics.

"I saw the future of farming in grain marketing and thought I needed to know marketing," Olson said wryly. He briefly worked in a lab, building stills to extract turpines from conifers as alternative green fluorocarbons, then spent a winter at a fabricating plant before taking what looked like a dream job, buving grain.

In 1993, when he and his cousin came into an opportunity to make products of recycled rubber, Olson guit his day job and they started a company, making simple pylon bases, parking curbs and lawn edging.

"We had no real technology, no innovative products, no markets. You miss any of those and you have no business." According to Olson, he was "too naïve to know better and to stubborn to quit."

So he didn't. The two took up nighttime welding jobs, and during the day, Olson was in the office developing new product ideas.

"Lots of times we scratch our heads and wonder what we are doing," Olson admitted, "My degree, welding, then a shirt and tie job, then back to welding, didn't feel like the career path... The jobs all had practical applications in developing Shercom: lab, marketing, fabricating, design."

Then one day, he saw a rubber wheel chock and thought,"We could make that!"They welded together a few moulds and punched out some recycled rubber wheel chocks. "We sold enough to pay the rent."

But for a married man with three kids, it was a tough life, working days and going to a second job at midnight. After nine months, the cousins guit the welding jobs and focused on production and sales. Not long after, a friend asked if the business could make a ramp to drive a horse trailer onto.

"We made a mould out of scrap metal and took it to our friend. Then he sold 12 at the Farm Progress show," Olson explained, noting this was the start of what became Shercom's flagship product, the highly successful EZ Riser, which was decommissioned in 2004.

"We'd been selling them across the country, mostly for the do-it-yourself guys who maintained their own cars," he said. "But everyone who needed one still had one, so the market tapered off as it became harder for car drivers to change their own oil. Products have a lifespan."

ihane Olson, ow<mark>ner of</mark> Shercom Industries

PHOTO BY DAVID STOBBI

It was a valuable lesson: Shercom now spends \$500,000 to \$800,000 annually on research and development.

His cousin left the business in 1996. Two years later, Shercom pioneered the first Canadian rubberpaved driveway. The supply of discarded tires had diminished, but the provincial government brought in scrap tire legislation stipulating that tires need to be separated from the flow of garbage, the first step of recycling. A levy charged on tires went to a non-profit organization that licensed private sector companies to collect and dispose of the tires.

"You needed a license and to demonstrate you can recycle. For us, it was a good fit, and gave us access to raw material," said Olson. "But most tire recyclers go bankrupt. There's no money in collecting and processing tires. Value added in manufacturing is where the money is: making wheel chocks out of buffings (a rubber processing by-product), for instance."

A prospective buyer looking at the Shercom website can now ogle a wide array of things made from recycled tire rubber: driveways, playground surfaces, garden stepping stones, mulch and borders; garage mats, curbs, curb ramps and speed bumps; agricultural stall blocks, mats, equestrian ring mulch and crumb; and industrial cable guards and rooftop walkway blocks. The EZ Riser was re-launched last spring, and Olson is keen on developing new products, such as lawn edging with a stone front, and tile with wood grain.

"Now we are fully integrated," Olson said. "We harvest the raw material for our own manufactured goods, then process and manufacture. Farming is my constant reference, even though I haven't farmed for 15 years. Harvesting tires is like barley—if the price is low, you feed your cattle. At a high price, you sell the barley. Rubber is a commodity, and we can sell it or use it."

Tires proliferate in our society. Olson said that an average of one tire per person per year is generated for recycling. In Saskatchewan alone, that means one million tires annually that once crowded landfills are now repurposed into new forms. At Shercom, tires have been transformed from hazardous waste to Leadership in Energy and Environmental Design (LEED) certified landscaping and building products. This represents a major shift in attitude. It's an important and significant shift in mentality, agreed Olson, to view tires as a resource to be managed and not a waste product to be disposed of.

"It's critical understanding through that shift that we can make significant contributions to the economy through new construction and job creation." Further, he said, "tires are an expense to get rid of; we shouldn't export them. That's a drain on the economy, and we lose jobs and innovation."

Shercom has two plants now, in Saskatoon and in Simcoe, Ont. "The plant in Ontario is strictly manufacturing," Olson explained. "We buy rubber crumb from Ontario processors—rubber is heavy to move, and we sell product, not freight."

The company's commitment has been recognized with the 2013 Environment Achievement for Business Excellence and Saskatoon and District Chamber of Commerce Environmental Sustainability Awards, and was a 2015 Ernst & Young regional Western Canada finalist for Entrepreneur of the Year.

A fire last spring at the Saskatoon plant decimated the manufacturing facility. Forty of 94 skilled workers were laid off, a significant brain drain. But within five months, a new building was up and production resumed. Olson is particularly proud of the company's innovation in finding ways to process tires.

"Most of our specialized equipment has been built in-house, a remarkable investment of sweat equity and innovation," Olson said.

Equally remarkable is the company's bounce back from disaster after such a short time, but that is perhaps not surprising for a business built on rubber.

On the road again

More modest but equally vital is Saskatoon's bicycle reclamation program, a pilot project initiated by Patrick Schmidt (BE'04, MSc'10) and Stan Yu (BA'06, MA'12). Through this work, unwanted bicycles condemned to the city's landfill are now being rescued from the waste disposal stream for reuse instead of being sold for scrap metal.

Schmidt, project engineer of the water and waste stream division at the Saskatoon landfill, as well as a year-round bicycle commuter and dedicated recycler, was distressed at the sheer number of bicycles being brought to the landfill. The bike reclamation project had its beginnings in the spring of 2016, when he saw a copy of an agreement between the U of S and Bridge City Bicycle Co-op (BCBC), providing bikes to the co-op.

"I realized that bikes in the landfill are an underutilized resource," Schmidt explained. "I wanted to see the city divert as much materials as possible and reuse them, which is always better than recovering them just for their material value of metal."

BCBC, a non-profit organization that began in Saskatoon's low-income neighbourhood of Riversdale in 2012, offers learning-based bicyclerelated services at its drop-in work space, which provides tools, supplies and education for participatory bike repair and maintenance. Yu, who is a BCBC board member and feet-on-the-floor "We want the maximum benefit to go to city citizens as opposed to a company making profit off discarded bikes."

SCHMIDT

organizer, explained that the co-op sees two types of cyclists: bike owners who drop in looking for volunteer assistance to troubleshoot and mend a bike with a malady; and would-be bikers in search of a set of wheels through their "build-a-bike" program. For the latter, the co-op collects donations of previously owned bikes from city residents and beyond. People needing a bike are welcome to come in and the co-op will pair each with a good fit, then talk the new owner through necessary restoration.

"Our bikes are all donated, and all need TLC," said Yu, adding that for kids under 18, the build-a-bike program is free, while adults pay what they can in cash or time.

The co-op started as a truck with a bike stand, tools, canopy and a table. The service has done nothing but grow: 2015 saw a 300 per cent increase in demand from 2014; traffic increased by 80 per cent in 2016, with the Riversdale shop having 1,600 visits from folks looking for a bike or fixing it themselves.

Yu's working hypothesis is that the landfill's bikes have mostly been outgrown or forgotten, left to rust in back yards or garages.

"Individuals don't necessarily know what to do with them," he said. "Our co-op is interested in seeing another way. When Patrick contacted us, we thought, what if we struck a partnership? The more we talked, the more momentum the idea gathered. The city made it an official one-year pilot project in late 2016."

Landfill staff now set aside any bikes that come in, and BCBC volunteers evaluate and take them to the co-op after determining that none have been stolen (stolen bikes are turned over to police custody), where the best are redistributed through the build-a-bike program; bikes past the point of reasonable repair are stripped for parts.

Schmidt said it was important for the city to partner in the project with a non-profit instead of a bike shop.

"We want the maximum benefit to go to city citizens as opposed to a company making profit off discarded bikes," he observed. The biggest surprise for Schmidt, who witnessed the first bike collection at the landfill by BCBC, was how many of the abandoned bikes were in exceptional condition and quite valuable. "I'm simply surprised that these are being plain old disposed of instead of the owner trying to do something else with them," he said.

Yu estimated that the co-op repurposes up to 2,000 donated bikes annually. "We saved over 250 from the landfill last fall," he said. "There'll be more as soon as we hit more nice weather. But numbers alone cannot reflect the possibilities a bike can bring to someone in need of one. One person's trash is another person's treasure."

Decolonizing the commission

U of S grad part of federal inquiry into violence against Indigenous families

🛰 ANDRÉA LEDDING

For Marilyn Poitras (LLB '84), becoming a lawyer was progressive enough, but her recent appointment as one of five federal commissioners to the Missing and Murdered Indigenous Women and Girls Inquiry shows just how innovative her career and expertise are.

Poitras, an assistant professor in the U of S College of Law, will bring her unique persepective, experience and education to the commission. With \$53.8 million in federal funding, the inquiry will investigate the systemic causes of centuries of disproportionate violence against Indigenous females, including social, economic and historical factors, examining institutional policies and practices and making recommendations.

Poitras said that the commission is particularly interested in decolonizing the commission as much as possible: the decolonial process is an innovation in itself, but Poitras' journey towards being one of the five commissioners is just as innovative.

She has done groundbreaking work incorporating traditional and Elder-led knowledge in classrooms and programming, along with litigating at every level of court in Canada. This latest challenge, a national inquiry on life-and-death issues under a two-year timeline, promises to draw on all of that experience to respond in unprecedented ways, drawing on the experience of other national inquiries but also creatively innovating new paths which weave in Indigenous knowledge and approaches with the Canadian governmental inquiry framework.

The inquiry website reports on the statistics that led to the creation of this commission, including that Aboriginal women in Canada report rates of violence, such as domestic violence and sexual assault, 3.5 times higher than non-Aboriginal women, and young Aboriginal women are five times more likely than other Canadian women of the same age to die of violence. Between 1997 and 2000, the rate of homicide for Aboriginal women was almost seven times higher than the rate for non-Aboriginal women.

The Government of Canada announced the inquiry—one of the Liberal election promises—on December 8, 2015. After a few months of meetings with stakeholders by three federal ministers—Carolyn Bennett, Minister of Indigenous and Northern Affairs, Jody Wilson-Raybould, Minister of Justice and Attorney General of Canada, and Patty Hadju, Minister of Status of Women—a report was published in May 2016 summarizing pre-inquiry feedback. Poitras and four other colleagues were announced as commissioners on Aug. 3, 2016, and officially began their work on Sept. 1, 2016.

The official website also notes, "For the commissioners, the emotional well-being of the families who have lost a loved one is at the very heart of this national inquiry. We know that the families who will be appearing before the national inquiry and providing statements will be re-living some of the most difficult moments of their lives. We are ensuring that the national inquiry is done in a way that is trauma-informed and culturally appropriate."

Where to begin?

In a way, this is a role Poitras has been preparing for all her life: unexplored territory requiring innovative processes and perseverance against systemic adversity.

"I have wanted to be a lawyer since I was eight years old," she said. It was her response when asked at that age if she wanted to be a teacher or a nurse.

"There was a legal show on the television and I said, 'I want to do that.' My family all laughed at me and said, 'Well you can't do that.' But I had it in my head from the time I was eight that I could do that."

She attributes her self-belief to the supportiveness of her mom, that women could do anything men could do.

"I wanted to do something that felt cutting-edge."

Her inclusion as commissioner in the national inquiry certainly highlights how cutting-edge her practice has been, despite challenges. She was told through high school that she wouldn't get into law, as an Indigenous student going to school in a predominantly non-Indigenous high school. So she tried it out as a court worker for a while, then went back and finished law school, having three babies while doing her degree.

"I was really lucky, I got to work on Indigenous land claims right away," she noted, adding that her experience in all levels of the courts included Treaty Land Entitlement and constitutional work for the province. "And then I started getting involved with legal education."

She was immersed in Indigenous legal education and various programs including work in founding the Indigenous People's Resource Management Program at the U of S College of Agriculture, and then eventually began teaching at the College of Law, bringing Indigenous innovation right into the classroom, hands-on.

"I love community work and community education," she said. "I work with Elders, they're in my classroom all the time. I try to get my students to see what an Indigenous perspective and legal experience would be."

"We hope that through the process we build bridges into institutions and organizations that are healthy, so people start working together on the issues," she explained. "We hope that through the process we build bridges into institutions and organizations that are healthy, so people start working together on the issues," she explained. "We hope that through the process, and that will of the national inquiry, which is informed by an Elder's Circle she described as a grandmother's advisory panel: an innovation to

Canadian legal processes, informed by traditional practices.

"I have been lucky enough that I've been teaching with Elders for over 20 years," recalled Poitras, "and there are so many communities where I can access Elders when I have a question."

She also worked with Indigenous people across Canada in engaging Indigenous people in processes, including through the Banff Leadership Centre, legitimizing Indigenous traditions back into the fabric of the country, along with incorporating the teachings of Elders.

"Indigenous people have a huge contribution to make. So where are the doors that we can open, to have our voices heard?"

Poitras has persisted in Indigenizing law and leadership at every opportunity, with creativity, passion and innovation. When she got the call for the commission, her first response was that the inquiry needed a strong spiritual component, to truly honour women and girls whose lives had been lost, and to be led by that to a healthy place.

"It felt so daunting: how are we going to do that in a Canadian legal process?"

Looking through different lens

The vision of Poitras and of her colleagues is that they can innovate the inquiry process by bringing to it a decolonial lens, and incorporate healthy Indigenous practices in a way that centre the individuals, families and communities throughout the journey. Part of their hope is that if they incorporate a health lens into the inquiry process, it can actually be healing for the survivors and families who take part: an Indigenous innovation where the journey is as important as the result.

"Families clearly said in the pre-inquiry process they need their voices heard, so we're working hard to do that," Poitras said. "There's a whole variety of ways people want to express what happened to them and their families."

Along with providing diverse means of access to the commissioners and the inquiry process—something that has kept them very busy—they will only go where they are invited. They are looking for what's happened and how to stop it from happening, while supporting and listening to the families and tying in community resources—while supporting those community resources as well.

"We want to work through an Indigenous process and Indigenous lens, and dovetail that with the Canadian inquiry process, figuring that out and doing it the best way we can as it goes along."

Part of this includes the full picture of individuals, not just the collection of statistics: putting a heart, a face and a story to each person's background. Not only will they listen to blood relations, but close friends who are also a type of family: anyone who has stakes in this matter is encouraged to take part in the process.

She hopes that at the end of the day, people feel heard in telling their truth, and that the commissioners are then able to bring that story forth.

Action from inquiry

The work of the commission will not be simply a shelved report. Implementation and action are so crucial, part of that healing process involves active steps towards implementation. The health component is also critical, with a director of health working throughout this process so that active implementation is happening during the life of the commission.

"How do you talk about the most painful experience in your life in a way that's not going to devastate you or your family and the work you do? So we want to make sure all those supports are in place before, during and after," Poitras said.

Putting the families at the centre of the inquiry and being open to constant feedback as they proceed is also crucial to their Indigenous, family-centred mandate.

"We want to decolonize as we move along, so we're going to use that decolonial touchstone throughout. Is this a decolonial methodology for a commission to use? Because when you're steeped in legal methods and processes, it's really hard to pull yourself out. Is this healthy, is this looking at the full person?"

They've put together a team committed to doing just that. Along with the five appointed commissioners, advised by the circle of grandmothers, they have hired directors of health, law, community relations and communications, along with liaisons to go directly into communities. Together they are all working on both the Indigenous and Canadian processes and putting them together in an innovative, traditionally informed way.

"We set up our values around love, honouring, respect, inclusion and tried to come up with a way to honour, a way to find truth, and a way to move to a space where we see the lost loved ones as family members," she said. "That's the way we're trying to go and what we're trying to do: the best way we can go forward."

Poitras noted that all five commissioners-Chief Commissioner Marion Buller, originally from Mistawasis here in Saskatchewan, and Commissioners Michèle Audette, Brian Eyolfson and Qajaq Robinson—are honoured to have been selected to something they all care deeply about, and are committed deeply in a heartfelt way.

"Everybody brings something to the table."

Along with the strong vision and leadership of the commissioners, there are more than 30 hires since September, and they are all committed to making the process itself a ground-breaking journey of healing and Indigenous process.

"I see these missing people as canaries, showing us what our society looks like," Poitras said. "How do we make sure it's healthy for everybody? We're living in a first-world country."

She said that if they can make things better for some people, that makes things better for all-Indigenous and non-Indigenous people. Poitras hopes these stories come forth in a good way to engage the rest of Canada in making positive changes: identifying negative patterns and putting a stop to them.

"We really feel a lot of answers are in the communities," she said, "and we want to get them out there, and set up the service providers and support services around these gaping holes, opening doors that aren't open right now in terms of getting things happening as quickly as we can."

The commission's interim report is expected in the fall of 2017, and a final report by the end of 2018.

About the commission

The inquiry has the vision and capacity to alter a harsh centuries-long reality for so many, and improve outcomes for not just individuals, but an entire country.

Missing and Murdered Indigenous Women and Girls is entirely independent from federal, provincial and territorial governments and crown corporations.

Strategies include holding public hearings in locations across the country; collecting the advice of Elders, of Indigenous and non-Indigenous organizations, experts, academics, officials and public workers; privately gathering the stories and experiences of friends and family of murdered or missing Indigenous women and girls and those who have survived violence; establishing regional, issue-specific advisory bodies who can bring relevant information to the attention of the inquiry; referring incidents of illegal or improper behaviour by police, social workers and others to the relevant authorities; and operating at both a federal and provincial jurisdiction across the country. The national inquiry will be guided by the principle, "Do No Harm," The process and infrastructure for self-identifying is still being set up, but families are encouraged to subscribe to the website where updates will be posted.

The website notes that the national inquiry is not another

According to the official website, the National Inquiry into | Truth and Reconciliation Commission (TRC) or Residential School Independent Assessment Process (IAP).

> "The National Inquiry has legal powers and responsibilities, and a purpose, different from the TRC or IAP ... its purpose is simply to find the truth underlying why Indigenous women and girls (heterosexual, lesbian, bisexual, transgendered, queer, two-spirited) are so victimized by violence, so often the subject of unsolved crimes, missing and murdered in numbers disproportionate to other Canadians."

> Part of the mandate is also to educate the public, to facilitate healing of traumatized communities, to restore public confidence in institutions that have been seriously damaged in the eyes of Canadians, and to make recommendations for action and policy reform aimed at effecting real changes to make Indigenous women and girls safe, sacred, honoured and empowered.

> Indigenous and non-Indigenous peoples alike are encouraged to use the website to share their ideas at mmiwg-ffada.ca. This openness is another example of innovation, incorporating today's technology to engage everyone in the process.



CALL FOR NOMINATIONS

Nominate one of our amazing University of Saskatchewan alumni for a 2017 Alumni Achievement Award.

The deadline for nominations is June 5, 2017. Visit alumni.usask.ca/achieve.



VOLUNTEERING — IT'S IN SASKATCHEWAN'S DNA.





innovation, public service, community, leadership, philanthropy

On March 25, U of S alumni, staff, students, and volunteers came to the U of S for the Volunteer Summit-a day of celebrating and strengthening volunteerism in Saskatchewan. While the Volunteer Summit has concluded, we still strive to reach the peak of supporting our communities and important causes.

Your efforts continue to embody this prominent part of Saskatchewan's DNA. Thank you!

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Health science fiction

The sun breaks through the blinds and you roll out of bed. Throat is sore and cough is dry. You pick up your tablet and call your doctor by video.

You answer a few guestions, they listen to your chest, and then you cough into a special sensor connected to your computer device that enables your doctor to diagnose the bacteria or virus that ruined last night's sleep. Before leaving the house you have a prescription.

This is the future of health care, 15-20 years from now, that Dr. Ivar Mendez is helping create.

KRIS FOSTER

"The general theme of my work is how can we use technology to make a difference," said Mendez, unified head of the Department of Surgery at the University of Saskatchewan.

Mendez and his team have focused their attention on a few main areas: how technology can narrow the gap of healthcare service, how state-of-the-art systems can treat neurological conditions and how 3D printing and virtual reality can be used to personalize medicine.

Robots in the north

A big question Mendez has been solving is how technology can help narrow the gap of inequality in health-care delivery. Saskatchewan, with its expansive territory and widely dispersed population, presented a perfect location for Mendez to turn his research in remote sensing technology into application.

Saskatchewan is big and the majority of its 1.1-million population lives in the southern part of the province. Not so coincidentally, that is also where the bulk of the province's health-care resources, practitioners and facilities happen to be. This leaves smaller communities, Mendez explained, under-served and at risk.

"How do we provide service to the most vulnerable segments of the population: children, pregnant women and the elderly? It's a big challenge."

Compounding the challenge in Saskatchewan, he continued, is that about 36 per cent of children in the province between the ages of one month and four years live in communities with populations less than 1,000 people. To get treatment they have to arrange transportation, which is not efficient in terms of time and money.

"I've been working for a number of years on the idea of remote presence technology that enables the expert or physician to provide care where the patient is in real time."

To demonstrate this technology, Mendez takes out his smart phone, opens an app, scrolls through a list and selects a robot named Patrick in the Royal University Hospital that can be controlled by his phone. Patrick is equipped with all sorts of high-tech equipment, sensors, a monitor and a video camera that captures and displays everything in view on Mendez's phone.



presence robot, Patrick

"This is a game changer. This is a platform for the development of a therapy for incurable diseases that has the potential to benefit millions of people around the world."

MENDEZ

Mendez directs the robot to proceed to the nursing station. Patrick manoeuvres autonomously through the hospital corridors, sensing if people are close by or around the corner, and proceeds with caution to the final destination. Once there, Mendez and a nurse have a conversation in real time, just as he might with a patient. This minute-long demonstration only scratched the surface of the robot's capabilities.

"This technology is evolving," said Mendez. "With remote sensing we can now do ultrasounds, listen to hearts, do electrocardiograms. With this technology we can do some blood work and have results in real time with rapid diagnostic tests."

The robots—worth about \$80,000 each—are now in six communities throughout Saskatchewan, a number Mendez hopes to see increase by leaps and bounds, based on the results he has already seen.

In Pelican Narrows, a northern community with a population of about 2,700, the robotic system is showing impressive results. In collaboration with Dr. Tanya Holt, head of Pediatric Intensive Care, and Dr. Veronica McKinney, director of Northern Medical Services, Mendez has conducted a pilot study using remote presence robots.

"In a period over 10 months we took care of the acutely ill children using the robotic system. What we were able to accomplish is 100 per cent of these kids got the initiation of the therapy immediately. The second is that about 70 per cent of these children did not need to be transported here. We were able to take care of them in their own community. That is a huge thing and we are demonstrating here the value of point-ofcare medicine."

Stem solutions

A renowned neurosurgeon, Mendez made a name for himself by looking at how stem cells and technology can be combined to combat incurable conditions such as Parkinson's disease, strokes and other neurological disorders.

"I look at how we can use state-of-theart technology and stem cells to repair the brain. We actually developed the technology-new surgical instrumentsto implant stem cells in the human brain."

His research in brain repair for Parkinson's disease attracted the interest of Harvard University and resulted in a decade-long research partnership.

"Harvard University wanted to partner with us because we have the technology and know-how. Harvard has the knowledge about the cells and we know how to operate on patients and put cells into the human brain."

The partnership between Harvard and the U of S, announced in Sept. 2015, will support Mendez's continued work on cellbased therapy for Parkinson's that is aimed at restoring cells lost through the disease.

The process, Mendez explained, will use stem cells from the patient that will provide the necessary dopamine neurons to enable damaged brain circuitry to be repaired.

Mendez began this work in the 1990s and has had promising results. So far, 10 patients with Parkinson's have had cells implanted into their brains as part of a study; all 10 have seen significant improvements.

"This is a game changer. This is a platform for the development of a therapy for incurable diseases that has the potential to benefit millions of people around the world."

The third dimension

About a year and a half ago, Mendez was planning for a complicated surgery that required him to "put electrodes into the brain of a patient with a complex neurological condition." He normally uses advanced computer software to map out the surgery; this case required more.

"To do this advanced neurosurgical procedure we needed advanced systems of planning, we needed 3D structures that are identical to the patient's brain," he explained.

Mendez worked with Bob Wilson from the Engineering Shop in the College of Engineering, which has equipment that can print in three dimensions using a variety of materials. Mendez brought a team together-Dr. Marla Mickleborough and Chelsea Ekstrand (psychology student), Devin Bradburn (engineering student) and MRI specialist Alain Lalonde-to figure out how to use personal MRIs to print an accurate, see-through representation of the patient's brain.



Mendez looks at how stem cells and technology can treat incurable traditions.

After some trial and error, the group was able to print a semi-lucent model of the brain-including internal nuclear structures—using a rubber material that was a close representation of the brain's texture well.

The use of 3D printing, Mendez continued, is going to change health care in substantial ways, including printing organs and other parts of the body.

"3D printing is going to become very important. For example if someone needs a new knee, instead of buying a new one and trying to fit it to a particular patient, you will actually be able to print the knee of that particular patient just before operating. It is personalized medicine that will allow us to be much more efficient, much more accurate."

In a virtual reality

Building on his work with 3D brains, Mendez and a team of about 20 researchers, have developed a virtual reality (VR) brain that can also be used to guide a surgeon's preparation.

Mendez said VR was the next logical step as the MRI data used to print the 3D brain could also be used, with some alterations, to create a virtual reality environment.

So Mendez and his team—including Chelsea Ekstrand, a PhD student in neuroscience, and Saskatoon software company Sprockety, co-founded by Bruce Cory (BA'90, MA'94) and Tod Baudais (BSc'00, BEng'00)—took the logical next step and have successfully created a virtual reality environment that can be used not only for surgical planning, but also as a teaching tool in the classroom.

A student, Mendez explained, can enter the virtual reality environment and really get an "understanding of the structures in the brain."

The student or surgeon puts on the VR equipment, consisting of a visor and a couple hand-held devices, and is immersed in an environment in which they can examine the brain (and all of its parts) from different angles, different magnifications and even inside out.

"We strongly feel that virtual reality technology will be crucial in the future for medical education and surgical planning," said Mendez. "We, at the University of Saskatchewan, are pioneers in VR applications to the human brain."

Out of this world

All of this combines to place the U of S in a pioneering position.

"You can see how technology can allow us to provide care to people who don't have access to care, to repair organs, like the brain, of incurable diseases, and develop personalized medicine using 3D printing technology. Believe it or not, here we are pioneering all these things. We don't have to go anywhere; the world comes to us," said Mendez.

In fact, there are applications for this work that may go far beyond the pale blue dot of Earth. Mendez was invited to present at the World Health Organization and the United Nation's Office for Outer Space Affairs' General Assembly on "Applications of Space Science and Technology for Public Health."

"We were the only university invited to make a presentation to this group, which includes members from all the world's space agencies."

Closer to home, Mendez said these pieces come together to provide a glimpse of what the future hospital may look like.

"Hospitals of the future will shrink instead of getting bigger. With the use of remote presence technology we may shift the paradigm of centralization of health care."

Hospitals around the world face similar issues, he continued. Emergency rooms are full, beds are always occupied and wait times are long. With remote presence technology "we can change that and do point-of-care treatment and diagnosis. We can decentralize services of hospitals to where the people are in their own communities and potentially in their own houses."

This shift means hospitals will mainly deal with the "most acutely ill patients and surgery. Most of the care will be done in the periphery like what has happened in most other industries like banking or the airline industry where they have been able to decentralize."

University of Saskatchewan

Connecting your community to the U of S

University Senate is the university's window on the province and the province's window on the university. Senate members have the opportunity to bring together perspectives of communities across the province. Help us choose your representatives who will join senate in 2017.

Voting closes June 16 at 4 pm for five members-at-large.

All alumni are welcome to vote for members-at-large.

For information about the candidates, please visit usask.ca/senate-election, call 306-966-5186 or 1-800-699-1907, or email us at alumni.office@usask.ca.

You may vote online or by paper ballot. To vote online at usask.ca/senate-election you will need your U of S NSID and password. If you don't have this information, or wish to vote by paper ballot, please contact us at the phone numbers or email address above.



For the love of the game

Alumnus' \$12.25M gift will help give a new home to the Huskies and community hockey

S JESSICA ELFAR

History was made on Oct. 13, 2016, when University of Saskatchewan commerce and law graduate Merlis Belsher contributed \$12.25 million to help fund a new twin-pad ice facility to replace 88-year-old Rutherford Rink. Belsher's gift is the largest single donation from an alumnus and individual in the university's history.

Community members, Huskie athletes, university representatives and hockey aficionados gathered in Rutherford Rink for the donation announcement. The special occasion also marked the public launch of the Home Ice Campaign, in which the university, minor league hockey and community volunteers asked the public to raise the remaining \$7 million to fund the new facility. By April, only \$500,000 in funding was needed with a ground-breaking ceremony tentatively scheduled for this spring. The Home Ice campaign total is up to date at the time the *Green & White* went to print.

Belsher explained his intention for his gift. "I made this donation because of my gratitude for the University of Saskatchewan—it provided me with confidence and education in two professions. That was my doorway to a satisfying career in the manufacturing industry."

The accomplished accountant, lawyer, entrepreneur and

philanthropist said success started when he first came to the U of S. He graduated with a bachelor of commerce in 1957, and was admitted to the Saskatchewan Institute of Chartered Accountants in 1960. He returned to pursue a law degree, graduating in 1963, and was admitted to the Law Society of Saskatchewan the following year. A businessman by nature, he then purchased Weldon's Concrete Products in Saskatoon. Through acquisitions and expansion, he grew the business to be a leader in Western Canada, eventually selling it in 2008 to Oldcastle, an international firm.

Finding success in not one, but multiple professions took dedication and a strong work ethic. For Belsher, it also required a community of support. When he was just 15 years old both of his parents died tragically in a blizzard near their homestead. As a result, Belsher found himself alone at an early age.

It was thanks to a caring group of community members and two

older siblings that he was guided to his new home at Luther College in Regina to finish high school. His interest in pursuing a university education deepened, thanks to the encouragement of his teachers, but it was his mother—an elementary school teacher—to whom he gives the most credit.

ALUMNI

"I've been very fortunate in my life," he explained. "If I had one wish, it would be that my mother could see how much education has helped me."

Education has since become a major focus in Belsher's philanthropic and volunteer efforts; he's served the U of S in commerce and law advisory roles and has been giving back for decades to support students.

An avid sports fan, and former athlete and hockey coach, Belsher can also relate to the importance of athletics in youth life. He's most excited that his donation will help increase the amount of ice time available for Saskatoon minor league hockey players and U of S recreation and varsity teams.

Although the new ice facility will be named after him—Merlis Belsher Place—Belsher remains humble, and stated that he did not make the contribution for the notoriety. He made it to help university students, first and foremost.

"This is about the university, not me," he said. "If you see a good cause, you get fulfilled by getting involved."



New arena unites community

Since the public campaign to raise funding for Merlis Belsher Place was launched in October 2016, it has gained wide support, both locally and across Canada, from Huskies and university alumni; volunteers; local businesses and organizations; Saskatchewan Minor Hockey Association and the City of Saskatoon. Here are just some of the many stories behind the community's generous support of the university's new ice facility.

The **Wyant Group of Companies** announced its \$500,000 donation on Dec. 1 with a Huskies vs. minor league road-hockey game at the Wyant dealership in Saskatoon. President and CEO Vaughn Wyant said the decision to support the campaign was an easy one. "Sport—and hockey in particular—is part of the fabric of Saskatchewan culture and this project represents an exciting opportunity for Saskatoon."

Ron and Jane Graham's \$4-million donation to Merlis Belsher Place was celebrated with a special recognition event in the Physical Activity Complex on Dec. 8. Their gift will further develop the ice-facility as a multi-sport complex, adding two NBA-length practice gymnasiums, dressing rooms and team rooms to the arena, to benefit Huskie basketball. Men's basketball head coach Barry Rawlyk called the gift a "true game changer" as it will help the U of S attract top-level athletic talent.

The **Agricultural Students' Association** kicked in the profits from their annual social event and presented their \$3,400 donation to Merlis Belsher and hockey legend and campaign chair Dave King on Dec. 12.

As a minor hockey coach, father of three and senior financial advisor with Assante Wealth Management, Shannon Briske credits his success to the experiences he had as a student athlete with the Huskies. U of S alumni **Shannon and Jill Briske** donated \$200,000 in March. "This facility will touch so many people in sports and will be a venue that everyone can truly be proud of," he said.

ALUMNI NEWS

President's message

As the Alumni Association Centennial draws to a close, the best is yet to come!



Association The Alumni Centennial launched at homecoming in September 2016. Homecoming is always a special opportunity to come back to the U of S and reconnect with an important part of your personal history. The friendships forged; the

life lessons learned; the priceless education; the unforgettable memories; your time at the U of S helped shape the collective legacy of the Alumni Association.

Our history is incomplete without you sharing your story.

The revival of this history extended beyond homecoming during our centennial.

The Alumni Association takes immense pride in celebrating the accomplishments of our 150,000 alumni, which is why we brought our centennial events to our proud alumni throughout the country and across borders and oceans. Whether it was Regina, Ottawa, San Francisco or London, U.K., we were thrilled to host centennial festivities far and wide and reconnect with our grads.

The U of S campus was the site of a couple signature events during centennial. The Volunteer Summit in March honoured, celebrated and strengthened volunteerism in Saskatchewan. Alumni Weekend, an all-years reunion in May, was the culmination of the Alumni Association Centennial and recognition of all U of S graduates from all colleges.

We also reignited the same passion for Huskie Athletics that we voiced at homecoming with our several Alum Nights during centennial, as we sported green and white and cheered for our Huskie teams on the pitch, on the ice and on the court.

Through many changes over 100 years and humble beginnings, the mission of the Alumni Association remains the same as when the U of S Graduate Association was first established in 1916: to add value to the lives of U of S alumni everywhere and to create a community of alumni and celebrate their success.

We remain committed to this mission as we enter our 101st year, whether you're living in Saskatoon or Kathmandu.

I want to thank you for being part of the Alumni Association Centennial events and continuing to share the passion for the U of S with us.

While the centennial celebrations were one-of-a-kind, I am confident that what lies ahead, for you and the Alumni Association, will be even more momentous.

Jim Blackburn (BSP'60), president, Alumni Association

Alumni events



Head coach of the Vancouver Canucks Willie Desjardins (BEd'85) was the keynote speaker at the Vancouver Centennial Celebration Dinner in December.



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USSU engaged

Chris Hengen-Braun (BComm'11)

The director of business development for Freedom 55 Financial is this year's USSU Engaged Young Alumni Award recipient.

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Rider pride was on full display at the Regina Centennial Celebration Dinner as president and CEO of the Saskatchewan Roughriders Craig Reynolds (BComm'98, MPACC'99) delivered the kevnote address.

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UNIVERSITY OF SASKATCHEWAN SPACE TEAM N TERI PARKHURST

WHAT IS IT?

The USST is a dynamic special interest design group that focuses on potential emerging space technology challenges with an aim to arrive "in the right place at the right time."

THE TEAM

Formed in 2005

Students from all engineering disciplines:

- Mechanical • Electrical / Computer Chemical
- Engineering physics Civil / Environmental / Geological

Students from non-engineering disciplines:

- Computer science Commerce • Biology



TWO WORLD RECORDS

(1) Most Power Wirelessly Beamed

(2) Fastest Power Beamed Climb

MEDIA COVERAGE

The New York Times Wall Street Journal Maclean's **Popular Science** CBC MSNBC The Discovery Channel

SPACE **ELEVATOR**

Students attempted to build an ultra-light robotic elevator and power delivery system to carry fuel, materials and people into space.

NASA's Space Elevator 2010 Competition



2005-2007 2009 1st 3rd

CANADIAN SATELLITE DESIGN CHALLENGE

Students were tasked with building a satellite with a specific purpose, gaining experience in the design, construction, integration and testing of a satellite.



The 3U cubesat satellite is 4 kg and 10 x 10 x 30 cm.

MARS ROVER

The USST accepted the challenge of building a rover (University Rover Challenge), including mechanical subsystems (chassis and mobility) and electrical subsystems (controls, power, communications, software) that could function in the harsh environment of Mars.



2015 2017 1st overall (in progress)

Maximum rover weight 50 kg **Traverse 15 degree slope** Comms range of at least 1 km Cost less than \$15,000 US

2014

HIGH ALTITUDE BALLOON (HAB) PROJECT (2015 - present)

The HAB Project, in collaboration with the Saskatoon Amateur Radio Club SABRE Team, launches large balloons from campus that capture a range of information.

3 m3 of hydrogen gas 2 kg of equipment to gather data/photos/videos

Ascends more than 27 km (almost 100,000 feet)



Visit usst.ca to learn more, or follow @UofSSpaceTeam on social media for regular project updates.



Looking after your family is not just about today's new shoes, it's about always. Our Term Life Insurance lets you live life fully and enjoy every moment, confident that you have provided for the future of those most important to you.





CAN-RGX / PROJECT STARFOX (2016 - present)

The USST was selected to conduct low-gravity experiments to study the dynamics of mineral screening and separation in a microgravity environment.

1 of 4 Canadian universities selected to participate in experiments onboard an NRC **Falcon-20 Zero-G simulation** aircraft.

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CLASS NOTES

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Your story will be shared online in class notes and may be published in the next Green & White or in college publications. Visit alumni.usask.ca/classnotes.

1940

Mr. Harold E. Chapman, BSA'43, of Saskatoon, SK, was appointed as a Member of the Order of the Canada for 2017.

Dr. Marguerite G. Ford, BA'47, of Vancouver, BC, was awarded the Order of Canada, Order of British Columbia, and the Freedom of the City of Vancouver during her career.

1950

Professor Emeritus Bob B. McKercher, BSA'54, MSc'56, of Saskatoon, SK, was inducted into the Saskatchewan Agricultural Hall of Fame on April 22, 2017.

Mr. John W. Rittinger, BE'59, of Swift Current, SK, retired after 55 years of practice of engineering as a single practitioner specializing in design of buildings.

Professor Emeritus Murray P. Scharf, BA'59, Educ'60, BEd'61, MEduc'64, of Saskatoon, SK, received the 2016 We Are Proud of You Award from the Saskatoon Chapter of B'Nai Brith on November 8, 2016 in recognition for his volunteerism efforts.

Professor Emeritus Gordon G. Shepherd, BE'52, MSc'53, of Toronto, ON, was awarded the Committee on Space Research William Nordberg medal for his contributions to optical techniques as applied to space research. His most significant contribution was the conception, development and implementation of a wind imaging interferometer that measured upper atmospheric winds from space on a NASA satellite from 1991 to 2003.

Mr. Garrett G. Wilson, BA'53, LLB'54, of Regina, SK, recently published his autobiography Outlier: Life, Law and Politics in the West.

1960

Professor Emeritus Lorne A. Babiuk, BSA'67, MSc'69, DSc'87, DSC'14, of Edmonton, AB, is the recipient of the World Agriculture Prize. This award is presented by the Global Confederation of Higher Education Associations for Agricultural and Life Sciences.

Mr. Gordon L. Barnhart, BA'67, MA'77, PhD'98, of Saskatoon, SK, was elected president of the Saskatchewan Urban Municipalities Association on February 6, 2017. He was also elected as a member of town council for the community of Saltcoats, SK in 2016.

Mr. William H. Deverell, JD'63, BA'64, DLet'16, of Pender Island, BC, received a Honourary Doctor of Letters at the University of Saskatchewan's Fall 2016 convocation ceremony.

Ms. Claire C. Eamer, BA'67, MA'72, of Gabriola, BC, released her seventh non-fiction book for children, Inside Your Insides: A Guide to the Microbes That Call You Home, in September 2016. Two more books will be published in spring 2017: What a Waste! Where Garbage Goes and a picture book, Underneath the Sidewalk.

Mrs. Sheila D. Early, BSN'69, of Surrey, BC, wrote a forensic nursing chapter for the recently published Lawyer's Guide to Forensic Sciences. This textbook has chapters on all the forensic sciences written by experts and contains legalities related to each specialty.

Dr. Frank H. Farley, BA'60, MA'63, of Wyncote, PA, is the E.L. Carnell endowed chair of psychological studies in education at Temple University in Philadelphia. He is the president of the Society for the Study of Peace, Conflict and Violence, and chaired the National Violence Summit held in Washington, DC in November, 2016

Dr. John W. Foster, BA'61, of Ottawa, ON, was honoured with the presentation of a diploma from Chilean president Michelle Bachelet, in tribute to the humanitarian work that generously contributed to save lives and protect thousands of Chileans during the dictatorship. Foster was noted for his tireless work and strong commitment on behalf of the respect of human rights in Chile.

Mr. Barry B. Ghiglione, AGRIC'69, of Saskatoon, SK, was inducted into the SABEX Hall of Fame on February 9.2017.

Ms. Lee J. Hunt, BA'66, of Calgary, AB, earned a master's degree in education from the University of Calgary in 1989 and was recently honoured by the Federation of Calgary Communities for her work in co-ordinating the design and painting of a large community mural. Hunt is also a regular contributor to The Brentwood Bugle which is a monthly newsletter in her community.

Dr. Wilf A. Keller, BSA'69, PhD'72, of Saskatoon, SK, was inducted into the Saskatchewan Agricultural Hall of Fame on April 22, 2017.

Mrs. Rae R. Kells, BA'68, of Calgary, AB, has been appointed chief umpire for curling at the 2018 Winter Olympic Games. This will be the fourth Olympic Games she will be involved in.

Dr. Grant G. Maxie, DVM'69, of Puslinch, ON, received the 2016 Carl Block Award from the Canadian Animal Health Coalition in recognition of significant contributionsto the Canadian animal health industry.

Mrs. Kathy K. Metelski, BSN'62, of Brandon, MB, graduated from Brandon University with a Bachelor of Fine Arts (honors) in May 2016.

Professor Emeritus Bill R. Mulford, BED'69, MEduc'69, of Sandy Bay, TAS, was appointed an Officer in the General Division of the Order of Australia (AO) on January 26, 2017 (Australia Dav) for distinguished service to academic administration and management, as a researcher into educational leadership and school effectiveness, and through executive roles with professional associations.

Dr. Llovd G. Nelson, BA'66, BEd'66, BA'68, of Black Diamond, AB, participated in the 55+ Canada Games in Brampton, ON in August, 2016, as skip of team Alberta's 65+ mixed curling team, winning the silver medal.

Dr. Charles H. Pierce, MD'68, PhD'74, of Cincinnati, OH, is a certified family physician, practicing in urgent care. He provides webinars regarding the practice of clinical research.

Mr. Rov J. Romanow, BA'60, LLB'64, LLD'07, of Saskatoon, SK, has been appointed the new chancellor of the University of Saskatchewan effective November 1,2016.

Dr. Ken C. Sauer, BAPE'61, BED'61, MEduc'66, of Medicine Hat, AB, was honoured by having an elementary school (Dr. Ken Sauer School) named after him on September 7, 2016. Sauer served as superintendent of schools for the Medicine Hat Public School District #76 for 14 years, and as an alderman for the City of Medicine Hat for 24 years.

Mr. Ronald E. Selin, BEd'66, BA'71, of Parksville, BC, was a teacher in Wadena, Uranium City and Melfort for a total of 11 years, until 1975. He then enrolled at the University of Oregon in Fugene and received a Master of Journalism degree with honours, then returned to Saskatchewan briefly and worked for the federal government. Selin then moved to Edmonton, working mostly as manager of public affairs for Industry Canada.

1970

Mr. Harvey N. Allyn, BSc'72, BEd'73, SC'74, MEduc'80, of Saskatoon, SK, is a voting member of the Canadian Well Logging Society

Mr. David M. Arnot, JD'75, of Saskatoon, SK, has been named the CTV Saskatoon's 2016 Citizen of the Year

Mr. Edwin G. Buettner, BA'70, BEd'73, MEduc'75, of Winnipeg, MB, recently published two books based on his experience in clinical reading: Targeted Cloze and Reading Issues: Parent-School Partnerships.

Dr. Lorraine L. Cathro, BEd'76, MEduc'80, PhD'93, of Foothills, AB, published her second memoir/ family history book of short stories titled Branching Out: Adventures & Roots

Mrs. Diane P. Coble-Kendall, BSHec'72, of Winnipeg, MB, retired in 2015 from her position with communications services with the Province of Manitoba where she worked for the past 20 years as communications coordinator for the ministers of health, agriculture and municipal and intergovernmental affairs.

Dr. John A. Cohen, MEduc'73, of Ashmont, NSW, was invested with the Medal of the Order of Australia granted at the Australian Queen's Birthday Awards 2016 for services to children's literature and the community.

Dr. Beverly G. Dahlby, BA'72, Arts'73, of Calgary, AB, was appointed by the BC minister of finance as chair of the British Columbia Commission on Tax Competitiveness in July 2016. The commission's report. Improvina British Columbia's Business Tax Competitiveness, was released on November 23, 2016.

Mr. Paul D. Elash, BA'74, LLB'77, of Estevan, SK, was appointed Queen's Counsel on December 16, 2016

Mr. Ken B. From, BE'79, of Regina, SK, was appointed the new president and CEO of SaskEnergy Incorporated on January 1, 2017.

Ms. Marion Ghiglione, BSc'71, of Saskatoon, SK, was inducted into the SABEX Hall of Fame on February 9,2017.

Ms. Marion R. Mutala, BEd'79, PGD'94, MEduc'95, of Saskatoon, SK, launched her sixth book and debut poetry collection Ukrainian Daughters Dance.

Mr. Drew S. Plaxton, LLB'76, of Saskatoon, SK, was appointed Queen's Counsel on December 16, 2016

Mr. Bryan B. Puk, BA'77, BEd'79. MA'83, PGD'89, of Saskatoon, SK, is currently a sociology instructor by the Sociology Department and the Distance Education Unit at the University of Saskatchewan.

Mr. Leigh G. Robinson, BA'76, BEd'75, of Carlyle, SK, received the Saskatchewan Architectural Heritage Society Vintage Building Award in 2000 and the Lieutenant Governor of Saskatchewan's Heritage Architecture Excellence Award in 2012.

Mrs. Elma M. Schemenauer, **BA'70,** of Kamloops, BC, published her latest book, YesterCanada: Historical Tales of Mystery and Adventure.

Mr. Ross R. Ulmer, BMusEd'76, of Llovdminster, AB, was presented with the Lifetime Achievement Award from the Llovdminster Chamber of Commerce on October 21, 2016.

Professor Emeritus Bill A. Waiser, MA'76, PhD'83, DLitt'10, of

Saskatoon, SK, was the recipient of the 2016 Governor General's Literary Award for Non-Fiction for his book A World We Have Lost: Saskatchewan Before 1905.

Dr. Gavlord C. Wardell, MD'78, of Medicine Hat, AB, was awarded the FRCP in Pain Medicine in September of 2016. This was the first examination in history for the subspecialty of pain medicine.

Ms. Kim E. Wells, BSc'76, of Dallas, TX, was appointed the chief operating officer of 1218 Inc.

Ms. Jane E. Welsh, PHYSIO'76, BPT'83, of Regina, SK, operates her own clinic Welsh Professional Physical Therapy.

1980

Dr. Alaa-El-Din S. Abd-El-Aziz, PhD'89, of Charlottetown, PE, was recently named the chair of the association of Atlantic Universities.

Mr. Tom L. Anselmi, BE'85, of Ottawa, ON, was appointed CEO and president of the Ottawa Senators of the NHL on January 25, 2017.

Ms. Cynthia M. Block, BA'85, of Saskatoon, SK, was elected to Saskatoon City Council to represent Ward 6 on October 26, 2016.

Mr. Kim F. Coates, BA'81, of Altadena, CA, received the 2017 ACTRA National Award of Excellence on January 28, 2017.

Dr. Jay C. Cross, DVM'87, of Okotoks, AB, was appointed the inaugural director of the College of Discovery, Creativity and Innovation at the University of Calgary on October 11, 2016.

Dr. Charmaine B. Dean, BSc'80, of London, ON, will assume the position of vice-president, university research at the University of Waterloo on July 1, 2017. Dean currently occupies the position of dean of science and professor in the Department of Statistical and Actuarial Sciences at the University Western Ontario.

Ms. Bev Dubois, BusAdm'81, of Saskatoon, SK, was elected to Saskatoon City Council to represent Ward 9 on October 26, 2016.

Mr. Tim W. Fell, BE'88, of Sturgeon County, AB, was appointed a director for TEC Edmonton on September 29, 2016.

Mr. Glen G. Gardner, BA'80, LLB'80, of Regina, SK, assumed the position of deputy minister of justice and deputy attorney general for the Government of Saskatchewan on January 17, 2017, and received his Queen's Counsel designation on December 16, 2016.

Dr. Digvir S. Jayas, PhD'87, of Winnipeg, MB, received an Honourary Doctor of Science degree from the Tamil Nadu Agricultural University in India on October 18, 2016.

Mr. Bob M. Korol, BComm'84, of Saskatoon, SK, recently became a Saskatchewan fellow chartered professional accountant.

Mr. James N. Korpan, BA'89, LLB'92, of Regina, SK, was appointed Queen's Counsel on December 16, 2016.

Mr. Timothy E. Lasiuta, BSc'85, of Red Deer, AB, has created a new comic book work, Nosferatu, which has been published by Graphic Classics. He is also in the process of optioning one of his books for his first film, The Mystery of Mi-Chiq-Wun Creek

Mr. Francis T. Lavandier, MA'83, of Summerside, PE, completed a 30year career with the Department of Justice and Public Safety in Prince Edward Island in March 2010, employed as a probation officer for most of that timeframe. He continues to teach part-time as a sessional instructor at UPEI, teaching courses in criminology, victimology, and sociology of law.

Dr. Joan B. Lloyd, DVM'86, of West Ryde, NSW, recently completed a project that demonstrated an association between the length of the docked tail and bacterial arthritis in lambs, with short tails found to be a greater risk factor for joint infections than longer tails.

Ms. Valerie L. Macdonald, LLB'85, of Regina, SK, was appointed Queen's Counsel on December 16, 2016

Dr. John J. McKinnon, MSC'86, PhD'92, of Saskatoon, SK, received the Award for Distinction in Outreach and Public Service at the University of Saskatchewan's fall 2016 convocation ceremony.

Ms. Patti A. Miller, BSA'83, MSC'86, of Winnipeg, MB, became the chief commissioner of the Canadian Grain Commission on February 13, 2017.

Mr. James A. Morrison, BA'80, LLB'82, of Saskatoon, SK, was appointed Oueen's Counsel on December 16, 2016.

Ms. Karen L. Nesbitt, BA'88, Educ'91, of Pierrefonds, QC, received a Master of Education degree in educational psychology, counselling from McGill University in 1991 and has been working as a guidance counsellor in Montreal since then, with a brief period spent working as a college counsellor in Fort St. John, BC. She has also written a young adult novel, entitled Subject to Change, which was released in February 2017.

Mr. Cameron B. Swan, BSA'89, of Regina, SK, was appointed special advisor to the deputy minister to the premier of Saskatchewan on December 1, 2016 with responsibility for transformational change priorities.

Ms. Carolyn M. Tastad, BComm'83, of Cincinnati, OH, was ranked as #37 on Fortune magazine's list of the "Most Powerful Women" for 2016.

Ms. Cheryl C. Van Ooteghem, BEd'86, of Guelph, ON, was appointed the new superintendent of education for the Upper Grand District School Board in Guelph, ON on February 3, 2017.

Ms. Sharon L. Zakreski-Werbicki, BEd'85, BusAdm'92, of Saskatoon, SK. was elected as Greater Saskatoon Catholic Schools trustee on October 26, 2016.

1990

Mr. Murad F. Al-Katib, BComm'94, of Regina, SK, was presented with the SABEX Oslo Business for Peace award on February 9, 2017.

Dr. Derek G. Brewin, MSc'94, of Winnipeg, MB, began a fiveyear appointment as head of the University of Manitoba's Department of Agribusiness and Agricultural Economics on January 1,2017.

Ms. Denise A. Brochu-O'Neill, BSPT'96, BSPE'97, of Cochrane, AB, celebrated her 20-year reunion with the graduating class of physical therapy in Saskatoon in August 2016.

Dr. Karla L. Guyn, MSc'94, PhD'01, of Lockport, MB, was named CEO of Ducks Unlimited Canada in October 2016

Mr. Collin K. Hirschfeld, BComm'94, LLB'97, of Beaver Creek, SK, was appointed Queen's Counsel on December 16, 2016.

Mr. Tim J. Jelinski, PGD'93, MEduc'94, of Saskatoon, SK, was re-elected as Greater Saskatoon Catholic Schools trustee on October 26, 2016.

Judge Ivan M. Ladouceur, LLB'91, of St. Paul, AB, was appointed a provincial court judge for the Province of Alberta on September 28, 2016.

Ms. Lisa S. Laskowski, BComm'90, BMus'91, of Saskatoon, SK, was recruited and appointed Canada's representative to the International Conference Committee of the Association for Healthcare Philanthropy.

Dr. Brenda A. Macdougall, BA'94, PhD'05, of Ottawa, ON, was named a member of the College of New Scholars, Artists and Scientists by the Royal Society of Canada on September 13, 2016.

Dr. Dwight G. Newman, JD'99, of Saskatoon, SK, was named a member of the College of New Scholars, Artists and Scientists by the Royal Society of Canada on September 13, 2016.

Ms. Leah A. Schatz, LLB'93, of Saskatoon, SK, was appointed Queen's Counsel on December 16, 2016.

Mr. Leslie D. Tochor, BComm'90, of Calgary, AB, assumed the position of AVP (finance) at the University of Calgary on October 31, 2016.

Rev. Donna I. Wilson, BA'94, Arts'97, of Saskatoon, SK, received a Doctor of Ministry designation from St. Stephen's College in Edmonton, Alberta on November 2, 2015.

2000

Ms. Lori M. Blondeau, MFA'03, of Saskatoon, SK, received the 2016 Artistic Excellence Award from the Saskatchewan Arts Board on October 18, 2016.

Ms. Bia B. de Freitas, BE'06, of Saskatoon, SK, received the Promising Member Award from the Association of Professional Engineers and Geoscientists of Saskatchewan (APEGS) in May 2016.

Ms. Mackenzie D. Firby, BComm'03, of Saskatoon, SK, received the Best in Customer Service and New Business Venture awards from SABEX on October 22, 2016.

Ms. Hilary B. Gough, BA'09, of Saskatoon, SK, was elected to Saskatoon City Council to represent Ward 2 on October 26, 2016.

Ms. Charity D. Helman, BA'02, | Ms. Sarah M. Buhler, LLM'11, of BED'02, of Bragg Creek, AB, became a Google for education certified innovator in October 2016, and a Google for education certified trainer in January 2017.

Dr. Shane S. Journeav, PhD'08, of Toronto, ON, has been short-listed to become one of Canada's next astronauts

Ms. Holly F. Kelleher, BComm'04, MBA'11, of Saskatoon, SK, was acclaimed as Saskatoon Public School trustee to represent Ward 1 on October 26, 2016.

Ms. Namarta Kochar, BA'00, Arts'00, of Saskatoon, SK, was the recipient of the SABEX Community Leadership Award on February 2, 2017.

Ms. Jenelle J. Orcherton, BED'09, BMusEd'09, of Urbana, IL, founded the premier Champaign-Urbana Jazz Festival bringing in local and national artists, backed by local businesses, musicians and arts funding agencies. Orcherton was also nominated for an Entrepreneurial Excellence Award in Innovation

Dr. Andrew J. Stevens, BA'03, of Regina, SK, was elected to Regina City Council to represent Ward 3 on October 26, 2016.

Mr. Brett D. Zabolotney, BComm'07, of Saskatoon, SK, received his Chartered Professional Accountant designation.

Dr. Abraham A. Ali, PhD'15, of Wolaita Sodo, SNPPR, after completing his PhD in community and population health sciences, became an associate professor of public health and is currently working as academic vicepresident of Wolaita Sodo University in Ethiopia.

Mr. Andrew M. Arruda, JD'14, of Toronto, ON, has been named to Forbes' Law and Policy Top 30 Under 30 list for 2017.

Dalyn C. Bear, CIPRM'12, of Whitecap, SK, was elected councillor of the Whitecap Dakota First Nation for 2017.

Saskatoon, SK, received the award for Distinction in Community-Engaged Teaching and Scholarship at the University of Saskatchewan's fall 2016 convocation ceremony.

Dr. Gerald Finley, DLet'15, of Kent will be featured in a booklet of stamps released by Canada Post featuring operas and singers who have placed Canadians on the world stage.

Ms. Sarina G. Gersher, BSc'12, of Saskatoon, SK, was elected to Saskatoon City Council to represent Ward 8 on October 26, 2016.

Ms. Echo Huang, BComm'12, of North York, ON, received her Chartered Professional Accountant designation.

Dr. Vickie A. Lamb Drover, MA'10, PhD'16, of North Battleford, SK, has been recruited to a senior administrative post at North West College and now lives in North Battleford, SK with her husband (Doug), and three children, Grace, Sam and Jack.

Mr. David H. McKerchar, DIPAGB'13, BSA'15, of Yorkton, SK, has accepted a second term on the international board of directors of the Grain Elevator And Processors Society (GEAPS), as Canadian vicepresident for the 2016-17 year. He is also serving on the GEAPS international board nominations and chapter member resource committees.

1930

- Auld, Isabel G (Hutcheson), BA'38, MA'40, LLD'79
- Kelly, Ruth E (Armstrong), BA'37 • Malley, Margaret M (Poyser),
- BHSC'38 • Stevens, Fern M (Moar), BA'34, Educ`'35

1940

• Ahlberg, Charles D (Duncan), BA'44 • Balogh, Peter J, BSA'47

- Balych, Miron, BA'46, BEd'50
- Bays, Neil R, BE'44
- Bell, Marion M, BACC'44
- Bocking, Martha M (Merle) (Armstrong), BA'45 • Botham, Alan G (Grant),
- BComm'48
- Bray, Betty C (Wilson), BA'49
- Browne, Norma V (Verla)
- (Simpson), BSN'47 • Bulani, Anatoly, BSA'49
- Burden, Gerald M (Gerrv), BA'46, LLB'49
- Burnard, Ruth E (Lovatt), BHSC'47
- Butler, Percy M, BE'46
- · Cameron, Alexander G (Sandy), RComm'49 Clark, Keith, BE'48
- Cornwell, Norma L (Paine), PHARM'48
- Eley, Harold A, BE'48 • Friedl, Max T, BE'49
- Gentles, Thomas B, BE'47,
- Admin'70 • Gordon, Dorothy A (Anne)
- (Powell), BA'40 • Haney, Marjorie S (Allen),
- BComm'47
- Haver, John V (Jack), BA'46, BEd'49, MD'60
- Hayes, Thomas P, BA'48, BE'48

The Alumni Association has noted, with sorrow, the passing of the following graduates.

In Memoriam include those who have passed prior to March 15, 2017. Names are listed by decade of receipt of their first U of S degree. Date of death and last-known address can be found online at usask.ca/greenandwhite.

• Hedlin, Phyllis M (Fredeen), BHSC'49 • Hesketh Chisholm, Florence E (Hesketh), BA'49 • Howell, Forest P. BSA'47 • Koob, Anthony J, AGRIC'47 • Krenz, Earl W, BE'46 • Laimon, Harold, BA'49, Med'51 • MacKay, Edwin A, BA'49 McGillivrav, Allan R, AGRIC'47 McMurtry, James D (Douglas), RA'42 • Mever, Arthur E, BE'49 • Miller, Joyce B, BHSC'43 Morrison, Russell J, BA'44 • Newman, Sarah A (Hunter), BHSC'45 Nielson, Walter R, BA'49, BEd'51 • O'Donnell, Barbara E (Murphy), BA'49 • Phillips, Hazel S (Shirley) (Durie), BA'46 • Pierce, Mervin B (Merv), BE'48 • Pirie, Gordon E, BA'49, MEd'52 • Riddell, Betty C (Welcher), BSP'49, BusCer'62 • Riederer, Lewis A, BEd'49, BA'50 • Rutledge, Anne R, BA'45 • Rymerson, Verle H, BEd'49 Sample, William K, BEd'49, BA'52 • Sproule, Warner R (W.R.), BE'46 • Thompson, Ronald E, BE'47 · Vanderham, Mariette L (Suttle), BA'47, Educ'48, BEd'50 • Varley, John C, BA'48, MEd'51 • Wedge, Marian A (Hall), BA'44, LLB'61 • Young, Wanda E, BHSC'43 1950

 Atkinson, Donald G, BComm'51 • Baron, Roger J, BE'59 • Beatty, Garry H, BA'57, BComm'62 • Bonham, David H (Dave), BComm'53, BA'58, JD'60 • Boughen, Frederick L (Fred), MEd'51, BA'51

IN MEMORIAM

- Bronfman, Beverly M (Chertkow), RA'55
- Brown, Reginald H, BEd'53
- Cameron, Dugald D, BSP'53
- Coulter, Eleanor M, BHSC'51 • Coviello, Donald K (Keith), BEd'56, BA'57
- Daniels, John I, BE'56
- Dash, Gordon H, BE'50
- Dick, Jacob A, BA'51
- Dombowsky, David S, BComm'58
- Elliott, George F, BA'55, MD'58 Ewanchyna, Joseph E, BE'54,
- MSc'55
- Flory, Marianne M (Sr), BA'51, Educ'52, BEd'55
- Francis, Alvmer E (Al), BE'55
- Gorkoff, Alexander A, BE'58, BA'59, BusAdm'74
- Haight, Beverley A (Massey), BSHEC'54
- Halvk, Russell M, BE'56
- Hanly, Elizabeth F (Richardson), **RA'58**
- Haverstock, Lawrence T (Bud), RSP'54
- Hill, George D, BA'57, LLB'58 • Hobbs, Ernest H (Harcourt), BE'51
- Holtby, George W (Warren),
- BComm'54
- Horton, Lois J (Collins), BEd'54 Johnston, Richard W (Dick), MA'55 Josephson, Mundi I, BEd'50, BA'60, MA'64
- Krystyniak, Joseph N, BComm'52 • Lefebvre, Verna M, BA'57, BSHEC'59 Litwack, Emanuel, BComm'51 Lowe, Eric, BA'51
- Maguire, George W, BSA'52, BA'52 • Martens, Elmer A, BA'53, Educ'54 • Meiklejohn, Morley I, BComm'53 • Mitchell, Robert W (Bob), BA'57, LLB'59
- Molder, Vance C, BComm'56 • Morris, Frederick R, BA'51, MEd'54 • Noonan, Philip F. BE'52
- Opseth, Melvin O, BA'55, MD'59
- Philion, Roy A, LLB'58
- Phillips, Clayton L, BComm'51
- Pillipow, William J, LLB'57

- Plewes, Grant W, AGRIC'52
- Prowse, Reginald T, BComm'51 • Raymond, Dorothy J (Ahrens),
- BComm'50 Shapiro, Martha (Pressesky), BA'50,
- MA'52
- Spicer, Robert T (Bob), BComm'52
- Stata, Paul D, BE'59
- Stevens, Wendell A, BA'50
- Stroeder, Stanley G, AGRIC'59
- Tames, James S, BComm'50
- Tribe, Norman G, BE'50
- Wallace, Donald W, AGRIC'54
- Walshe, Lois E, BA'55, BEd'57
- Webber, Mona M (Haslett), NURS'57
- Wieler, Alfred, AGRIC'57
- Wolff, James A, Educ'55, BEd'58

1960

- Archambault, Joseph R (Omer), BA'62, LLB'63
- Armstrong, Donald E, BComm'68, MBA'75
- Baran, Emil I, BA'63, Educ'64, BEd'74
- Barry, Richard E (Rick), BE'69, BSc'73
- Barschel, James P (Paul), MD'68
- Berg, Herman E, BEd'63, BA'67
- Blumrich, Karla B (Jantzen), Nurs'66
- Boesch, Isobel A (Barton), BEd'66
- Boscher, Denis A, BEd'68, BA'69, PGD'69
- Bruce, Garth A, BA'66, MD'70
- Cameron, Alexander C (Colin), BA'60
- Carline, Gerald F (Gerry), BEd'68, BA'73
- Cooper, Joseph H, AGRIC'63
- Crockett, Ray K, BE'60
- Day, Glen G, BEd'69, BA'71
- Demofsky, Michael P, LOCADM'62
- Deutscher, Clive O, MD'67
- Dickson, Frank G, BA'62, LLB'63
- Dyck, Martin S, LOCADM'65
- East, William (BusCer'64)
- Erdahl, Gary L, BComm'64, BA'69
- Fleming, William A, BA'62, Educ'62

LLB'68

BEd'66

HOSADM'77

BEd'69

BEd'67

MVSC'77

Educ'70, MEd'79

Mackay, Colin S, BE'61

McGregor, Lois E, BA'62

• Nickel, Grace E, BEd'67

BA'63, PGD'73, MEd'74

• Porter, James O, BE'62

• Quiring, Bertha M, BEd'67

• Rees, William J, BusCer'61

BA'63, BEd'73

(Williams), BA'68

BEd'72

Sali, Ernest S, BEd'62, BA'65

Shoemaker, Milton R, Educ'63,

• Stilborn, Gwladys E (Eluned)

• Tough, Norman J, ADMIN'69

• Veeman, Margaret N (Nayda)

· Zadworny, Bohdan M (Bob),

Anderson, Boyd M, LLD'79

Brown, David J, BComm'75

• Brunner, Eric E, BSc'78, SC'79

Chernoff, Laura (Bloodoff), BEd'74,

(Lavson), BA'65, BEd'80, PhD'04

• Vaillant, Armond J, BEd'69

• Vick, Alan D, BusCer'62

BEd'60, BA'61

1970

PGD'78, MEd'80

• Taylor, Kenneth W, BA'62, MA'67

• Penner, Lee A, BA'64, MD'68

• Pope, Leslie H, BEd'61, BA'64

EDUC'65, BEd'65

BEd'73

• Fotheringham, Bruce H, BEd'65,

• Goulden, Melvin L, BEd'68

• Hails, John A (Jack), BEd'69

• Heshka, Jack J, BEd'62, BA'62

· Hiebert, Wilfred J (Wilf), BSc'69,

• Hilderman, Charlotte K, BA'65

• Hilderman, Lily H (Mittelsted),

Kaufmann, Mildred V, BSN'68

MacDonald, Donald W, MSc'67

McConnell, Gilbert R, BEd'69

• Mooney, Francis B, BAPE'64,

• Naphin, Robert L, BSc'68, SC'72,

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1980

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1990

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2000

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