For the second consecutive year the University of Manitoba jazz program has produced a national award winner, and this year it was a bassist who won the $10,000 prize.

Luke Sellick, 19, was driving back from a family trip to Thunder Bay in July when he got a text message from a friend saying he won the Oscar Peterson Grant for Jazz Performance, an award given to only one Canadian jazz student every year by the Hnatyshyn Foundation. He recently received the first installment of the prize money, which he’s using to buy a new bass.

“It definitely wasn’t something I was banking on, I mean you work hard to win it and you hope you do but you get some luck too,” Sellick said. “They happened to like mine; maybe they were in a good mood when they listened to my tape. So yeah, a lot of hard work goes into it but there is definitely luck involved, and support from other people, which I definitely got, especially from a guy like Steve Kirby” – his instructor.

This type of response comes as no surprise to Kirby. “I’m not humble,” he said. “I think you speak to him, nothing actually happened. He’s just some kid who hit the right notes in style.”

Hitting the right notes in style

The future of flax and biofuels research has never been brighter in Manitoba. With the Province of Manitoba’s $375,000 investment in Genome Prairie’s Total Utilization of Flax Genomics (TUFGEN) and the $1.3 million investment in the Microbial Genomics for Biofuels and Co-Products from Biorefining Processes (MGB2), Manitoba is set to lead Canadian genomics research in flax and biofuels.

“Manitoba’s contribution to these projects underlines its commitment to having our province emerge as a leader in alternative energy and agriculture research,” said Jim Rondeau, Manitoba Minister of Science, Technology, Energy, and Mines (STEM). “The diversity of agriculture research development presently underway in Manitoba reflects the increasing complexity of the industry.”

Most of the research for the MGB2 project is based in Winnipeg at the University of Manitoba. Richard Sparling and David Levin at the U of M are lead researchers for the project. Other researchers involved are John Wilkins, Brian Fristensky and Oleg Krokhin. The project also involves researchers in microbiology, biochemistry, genomics, bioinformatics, proteomics, and engineering from across Canada, the United States, and New Zealand. The International Institute For Sustainable Development in Winnipeg is also a funding partner for the project.

“Genomics research is becoming more and more important in the areas of energy and agriculture research. We are pleased to receive the Province’s support for these projects which have the potential to help transform the biofuels and flax industries,” commented Wilf Keller, President and CEO of Genome Prairie.

Sylvie Cloutier from Agriculture and Agri-Food Canada (AAFC), and an adjunct professor at the U of M, co-leads the TUFGEN project which aims to increase the value of flax for producers. Manitoba based research for this project takes place at the Manitoba AAFC facility and involves Scott Duguid.

“The University of Manitoba is pleased to lead these Genome Prairie projects,” said Digvir Jayas, Vice President (Research) at the University of Manitoba. “By using agricultural feedstocks as a source of alternative energy we can reduce product waste and maximize uses for plants. The flax research project’s goal to develop flax as a dual-purpose crop and to sequence the flax genome, is an invaluable contribution to flax research.”

First-year jazz student and bass player Luke Sellick won a national competition, claiming the $30,000 prize.

Luke Sellick, 19, was driving back from a family trip to Thunder Bay in July when he got a text message from a friend saying he won the Oscar Peterson Grant for Jazz Performance, an award given to only one Canadian jazz student every year by the Hnatyshyn Foundation. He recently received the first installment of the prize money, which he’s using to buy a new bass.

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continued on page 2
In The News

Manitoba researcher recognized for HIV-related work

Winnipeg Free Press, CJO
October 28, 2009

Stephen Moses, associate professor of medical microbiology and internal medicine, was among eight Canadians recently recognized by the Canadian Institute of Health Research and the Canadian Medical Association Journal for achievements in health research. Moses developed "the effectiveness of multidrug combination in reducing the transmission of HIV in Africa" to capture the honour, as selected by a peer-review panel of Canadian and international experts in this first year for the awards.

How much sand is in our hourglass?

How do marathons affect your heart?

New York Times

Davinder Jassal, assistant professor of cardiology, radiology, and physiology shared his findings on a study effort he conducted on long-distance runners. Jassal examined the effects of strenuous running on the cardiac system and found that many half marathons, and even more of the full marathons, display elevated levels of troponin and other blood markers of heart damage. What’s more, after an hour, when runners were tested yet again, even more of both groups showed blood indicators of cardiac damage.

In The News

Defence Command have undertaken exercises and have the Canadian Forces and the North American Aerospace measures. The Olympics require a significant military Studies shares his thoughts on aspects of Olympic security James Ferguson of the Centre for Defence and Security a decade less than the others. not for those who are poor or living in remote northern for many Manitobans life expectancy has increased, but team at the Manitoba Centre for Health Policy found that Fransoo shared his findings on a recently completed after an hour, when runners were tested yet again, even more of both groups showed blood indicators of cardiac damage.

How much sand is in our hourglass?

How do marathons affect your heart?

On September 28, 52 first-year pharmacy students took their first steps toward becoming pharmacists by participating in the faculty’s traditional White Coat Ceremony.

Guest speakers at the ceremony included: Randy Stephen an, president, Manitoba Pharmaceutical Association; Shawn Bugden, president-elect, Manitoba Pharmaceutical Association; and Ruby Grynons, professor, Faculty of Pharmacy.

We are pleased to present the White Coat ceremony, new students stand and recite the "Oath of a Pharmacist" in which they promise: "I, a member of the profession of pharmacy, do hereby vow to observe the pharmaceutical code of ethics in order to provide an effective service to the public and to maintain the highest standards in all business transactions with patients, practitioners and other health care professionals."

Sellick entered three songs into the contest, the most demanding piece being Violation by Paul Chambers. (Visit the U of M’s news blog to hear him play).

"It’s a hard song, the kind that makes you struggle," Kirbysaid. "But when Luke struggles it’s a different story then when the rest of us struggle. When he’s struggling with some stuff, he still sounds like he’s nailing it."

Kirby arranged for Luke to play with other musicians – Larry Roy and Curtis Nowosad – but the bass is always, invariably, leading the conversation; there are no stiltments, just a kid playing his bass.

The judges are listening blindfolded basically. They’re just listening for quality and for a bass player to win, jeez. I mean he’s competing against vocalists, he’s competing against pianists, drummers, saxophonists, all these melodic instruments that get your attention first, so for a bass player to win, that says something huge, Kirby said.

Sellick first picked up a bass when he was 11 years old. He rented a black fibreglass bass from the University of Manitoba. He doesn’t remember entered a contest and he was lucky, that’s how he’s going to present it to you," Kirby said. Sellick entered three songs into the contest, the most demanding piece being Violation by Paul Chambers. (Visit the U of M’s news blog to hear him play).

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Sellicafter he was picked up by a music management company in 2008, he signed a record deal with a major label and began touring extensively. He quickly earned a reputation as a skilled improviser with an impressive range of technical skill. Sellick is known for his ability to blend traditional jazz elements with contemporary pop influences, creating a sound that is both familiar and fresh. His music has been described as "imagination and inspiration flow freely and in the moment, as if it were a river that cannot be contained."
Events Listing
University of Manitoba

- The Bulletin publishes events involving the university community.
- E-mail events to bulletin@umanitoba.ca or fax, 474 7631.
- The deadline for the Oct. 22 Bulletin is Oct. 14 at 4:30 p.m.

Northern Scientific Training Program, Graduate and senior undergraduate students who are working in the North are invited to apply to the NSTP by October 15. Projects supported are northern topics from all disciplines and in multi-disciplinary fields. Contact Enza Pohl at 204-474-6827 or email enza_pohl@umanitoba.ca for application details.

FRIDAY, OCTOBER 9

E3 - 262 EITC, 10:30 a.m. to noon, Resonance in Very Low Field. Chris Bidinosti, Department of Physics and Astronomy, University of Winnipeg, 330 Allen Building, Pharmacology Library (Video-link to SBRC, Sam Cohen Auditorium), 9 a.m., October 9.

Course, Story Power: The Quintessential Skill for Learners and Leaders. Continuing Education, Course no. 43023 09-01 (Topics in Adult Education), U of M Downtown: Aboriginal Education Centre, 111 The Promenade, 9 a.m. - 5 p.m. daily, October 15 - 17.

FRIDAY, OCTOBER 16

Oral Health Alumnus to Honour Canadian Icon, Hotel Fort Garry. Limited number of tickets now available for the evening by calling 204-789-3631 or via email at dent_events@umanitoba.ca, Friday, October 16.

WEDNESDAY, OCTOBER 14

Native Studies Colloquium. Are there Aboriginal Language Rights in Canada? by Lorena Fontaine, assistant professor in the Aboriginal Governance Program at the University of Winnipeg, and doctoral student at the University of Manitoba. 307 Tier, 12:30-1:30, October 14.

FRIDAY, OCTOBER 30

Birds do poop in the forest, but does it matter? A short history of guano and an examination of the role of seabirds in maintaining our coastal forests. Barry Glickman, Dept. of Biology, University of Victoria, 527 Buler Building, 3 p.m., Friday, October 30.

Starting a business: Don’t know where to turn?

Get free information* from the L. Kerry Vickar Business Law Clinic at the Faculty of Law.

The clinic is designed for entrepreneurs who require information* regarding new business organizations: incorporation, partnership, sole proprietorship, and not-profit.

Students do not give legal advice.

Located on campus in Pembina Hall, The University Club’s reputation is matched only by the view from its patio door - the enchanting shoreline of the historical Red River. The University Club provides a common gathering place for social and business meetings with facilities for dinners and receptions. We invite you to relax in our informal surroundings, sample our superior cuisine and let yourself experience the difference. We’d be happy to discuss booking your holiday events with us.

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University Club
No tilting necessary with wind turbine on campus

CHRIS RUTKOWSKI
The Bulletin
You’ve probably noticed it as you traveled down Chancellor Matheson and wondered what it was doing there. No, it’s not a windmill, and Don Quixote will not be tilting at it anytime soon.

The new five-kilowatt wind turbine under development by the department of mechanical and manufacturing engineering was installed this summer in Smartpark, just off Technology Trail.

“This is an exciting new project,” says Eric Bibeau, NSERC/Manitoba Hydro Industrial Research Chair in Alternative Energy. “It will give undergraduate and graduate students important hands-on experience when learning about renewable energy.”

Earlier this year, the University of Quebec at Rimouski and Industry Canada donated the wind turbine to the University of Manitoba following a request from Eric Bibeau on the availability of the unit for research. Additional funds were required to install and maintain the turbine, and these came from the Manitoba government’s Sustainable Development and Innovation Fund.

However, installing a wind turbine in the middle of an urban area is not a simple task. In fact, some of the challenges facing the design team seemed like Quixote-ish tilting at windmills — insurmountable and very daunting. The students working on the project discovered that there were many hurdles to overcome, not the least of which was securing permits and authorizations from a variety of agencies and organizations.

NAVCAN and Transport Canada needed to give their consent to have the turbine erected. Because it is a relatively small structure, only twelve metres in height, it did not require significant lighting that would have been needed for aerial navigation and safety.

The University had to grant approval for the project because it owns the land on which the turbine is built. The approval required the drafting of a site plan, elevations and construction plan by the design team.

Manitoba Conservation had to be consulted for an environmental impact. Again, if the turbine was larger, it may have needed a significant environmental assessment before it could have proceeded.

Finally, a permit had to be obtained from the City of Winnipeg to allow construction, requiring a professional engineering review. As the turbine had been donated, an external source had to be secured for the appropriate drawings and seal of approval, delaying the installation by several weeks. Only then could a local community meeting be scheduled to allow public input on the project, and then plans had to be reviewed by civic departments including zoning, water & waste, electrical and public works.

In addition, a systems building was required to be constructed for housing the converter, battery bank, inverter, computer and data acquisition system. The nine by nine foot building, which was constructed of steel metal and insulated inside with spray foam, making it well-insulated and energy efficient. Vents were added to allow for battery box venting, since if the batteries were to overcharge in the battery box they would produce hydrogen gas, which is explosive.

The turbine is made up of five separate components: base plate, pole, guy wires, nacelle and blades. The base is installed on a concrete foundation poured 20 feet deep into the ground. The pole came in three four-metre sections that needed to be assembled like a Meccano set. The guy wires made of six-strand, ¼-inch cables anchor the structure to the ground. The generator is housed within the nacelle, allowing the turbine to rotate and face the blades into the wind. Finally, three fiberglass blades, each three metres in length, reach outward to catch the wind.

The wind turbine will have a variety of applications and users, although it will primarily be used by 4th year mechanical engineering students as part of a renewable energy laboratory course. The turbine will be connected to a data acquisition system that will measure current, voltage and wind speed, sending the data to a website that will allow monitoring of the turbine in real time. A live, real-time camera feed is also planned.

For operation of the turbine, it all starts with a bit of wind. If the wind speed is more than 2 m/s and less than 25 m/s an anemometer sends a signal to the nacelle to let the blades spin and the dogvane tells the nacelle to rotate on the pole so that the blades face directly into the wind. If the wind speed rises above 25 m/s the blades are furled out of the wind to take stress off of the generator and prevent damage to the generator by spinning too fast.

When the blades spin they rotate the shaft which spins a generator. The generator then produces AC electrical power that travels down power cables and enters a converter. The converter converts the power back to DC power at 120 volts, allowing the power to be used. Electrical outlets in the systems building power a heater, interior lights and lights on two signs and the turbine pole.

Bibeau notes that the wind turbine carries with it much potential for teaching and research.

“One of the things we will be looking at is the design and testing of ice detectors on the turbine,” he explains. “Icing is a serious issue on much larger wind turbines and wind farms, especially in our climate, so such research is very important.”

Bibeau also notes that future teaching could include studies on the use of composite materials in turbine towers and blades by other researchers, although there are no plans for additional wind turbines on campus. However, there is an opportunity that some may be built at the Glenlea Research Station at one point.

Smartpark is home to new wind turbine.

Eric Bibeau, mechanical and manufacturing engineering, will conduct research with a new wind turbine.

By Chris Rutkowski

St John’s College 143rd Annual Convocation

Sunday November 1, 2009 at 3:00 pm
Chapel of St John the Evangelist
St John’s College

Honouring

Doctor of Canon Law (honoris causa) Recipients
M. Etienne Gaboury
Dr. Roy Miki (speaker)

Doctor of Divinity (honoris causa) Recipient
The Rev. Memo Wide

2009 Graduates & Award Winners

All are welcome to attend
Nursing a Relationship
Students and faculty from Sichuan University, China, visit campus and city as part of school exchange

Above: Six nursing students and two professors from Sichuan University, China, a bed in the Faculty of Nursing’s simulation lab. The Chinese nurses are here on a two-week exchange program.
Below: Ya Wen (left) and Qian Zhang, nursing students from China’s Sichuan University, receive instructions before working in the Faculty of Nursing’s simulation laboratory.

SEAN MOORE
Six students and two faculty members from Sichuan University will be participating in University of Manitoba classes and learning about the Canadian health care system as part of an exchange program the schools established in 2007.
When not on campus the nursing students will tour city health facilities, including hospitals and community clinics, meet the lieutenant-governor, visit Siloam Mission, and shop, of course. The visit begins on September 28 and students fly home on October 10.
“The overall objective of this relationship is to develop a greater cultural competence — a respect for cultural differences. We’re not just doing it for fun, we’re doing it to cultivate, in our students and theirs, a greater appreciation of each other,” Ruth Dean, the program coordinator said.

“Even if our students don’t practice anywhere but Winnipeg, Manitoba, they are going to be exposed to a multicultural clientele; the idea is they learn an appreciation for that and the different cultural ways that go with it.”
The relationship with the Sichuan University began in the 90s when the U of M received grants to help what was then known as Western China School of Nursing develop a sustainable program. In 2001 the school was mature enough to be on its own and now the two schools keep the relationship alive with student exchanges.
U of M faculty and students last went to China in 2008 and will go again in April 2010. The Faculty of Nursing is also currently courting Kenyatta University in Nairobi, Kenya, in hopes of developing another student exchange program.

Viewpoint Policy
The University of Manitoba Bulletin welcomes submissions for Viewpoint from members of the university community. Unless otherwise discussed in advance with the editor, articles should range between 600 and 700 words and should address issues related to the university or higher education. Speeches related to issues of interest to the university community are also welcome. E-mail submissions to bulletin@umanitoba.ca. The editor reserves the right to edit or reject any submission that does not comply with policy. Opinions expressed are those of the writer.

Letters Policy
The University of Manitoba Bulletin welcomes letters to the editor from readers about matters related to content in the Bulletin, the university or higher education. Letters must be original and addressed to the editor. Opinions expressed are those of the writer. The Bulletin does not publish anonymous letters. Please include your name, affiliation and phone number. Letters should be submitted to bulletin@umanitoba.ca. The Bulletin reserves the right to edit letters to address style, length and legal considerations.

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Eighth Templeton Lecture on Democracy
The University of Manitoba

The Faculty of Arts and the Department of Political Studies at the University of Manitoba is pleased to present

Our Parliamentary Fundamentals are Not Sound

DR. PETER RUSSELL
Principal of Senior College at the University of Toronto

Peter Russell is an Officer in the Order of Canada and former Foreign Secretary of the Royal Society of Canada. He has gained insight into how our Parliament functions through his involvement with inquiries such as the Royal Commission on Certain Activities of the RCMP and the Research Advisory Committee for Canada’s Royal Commission on Aboriginal Peoples.

Thursday, October 15, 8:00 p.m.
Provencher Ballroom, Hotel Fort Garry
All are welcome. Free admission.
For more information, please call 474 9521

One university. Many futures.
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The Templeton Lecture on Democracy is sponsored by the University of Manitoba out of the generosity of the late Carson Templeton, O.C., LL.D., P.Eng. Dr. Templeton was Chief Engineer of the Greater Winnipeg Dyking Board after the 1950 flood.

Advertise in the Bulletin
For details call 474 8111
A Long Road to Travel
From truck driver to tenured math professor

SEAN MOORE

“Do I look like a nerd? I’m not a nerd. Math is not for nerds,” David Gunderson says.

Before arriving at the University of Manitoba in 2002, in the early eighties, after a period of homelessness, Gunderson worked for a Calgary trucking firm delivering such things as shingles and machinery around the province. Occasionally, at night, for fun, he arm wrestled; he hasn’t lost since 1982. In his twenties he delighted in renting a plane for a day to fly aerobatics. He owns 12 types of saw and keeps a stockpile of 100 different species of wood in his shed.

He owns 9,000 books, 8,000 of which are different types of saw and keeps a stockpile of 100 different species of wood in his shed. He has the demeanor of a Hemingway character and once, in the late 90s, he modeled clothes in a Tilley catalogue. He owns 9,000 books, 8,000 of which discuss mathematics. He wears cowboy boots and owns at least one tweed jacket. For three weeks, maybe four, the question that troubled him most was “what to tell them by the centre of a triangle?”

Geometry amuses him – his office walls and ceiling and shelves are decorated with posters and mobiles and blocks depicting shapes that have 22-letter names. But combinatorics sates him – it gives him the tools to solve puzzles and he’s obsessed with puzzles. He has been since high school when his teacher challenged him with Fermat’s Last Theorem.

“But he didn’t tell me it was perhaps the most famous puzzle and people had been working on it for 350 years with very limited success. But I used to play with it and a number of other math type puzzles and this to me was where life was, but I didn’t know it at the time.”

He grew up in rural Alberta in a town called Ponoka. He and his four brothers were raised in a single-parent household sustained by welfare. No one on either side of his family had ever attended university and university so disquieted him that he refused, in 1975, when a friend had run to an errand on a campus, to get out of the car because “I just didn’t feel like I belonged.” As of July 1, however, he’s a tenured professor of mathematics in the Faculty of Science.

At 13 he joined the air cadets and through them, at age 18, he got his pilot’s license and applied for the Regular Officer Training Program at Royal Roads military college near Victoria, B.C. He was accepted even though French was a prerequisite and he spoke none.

“It was French immersion and I had no idea what was going on. I tried. I listened to tapes and eventually learned the difference between a chapeau and a châleau, but not much else. I didn’t work very hard at the academics in military college. I was learning how to become a man. How to be one of the guys, teamwork and fun, sports, drinking, whatever.”

His marks dropped and while at summer training camp in Borden, Ont., he got a call from the commandant. He let me drive his truck delivering half and a stockpile of 100 different species of wood in his shed.

“I rewrote and I failed French so bad they gave me a double F. I didn’t know there was such thing. I’m not joking. On my transcript it was FF. History was just F but for French it was FF.”

He could repeat the year but it would be at his own expense so he left school and moved to Calgary to live with his grandparents. One of his first jobs was running a jackhammer and he cycled through many more, all were hard labour. He made drurke. Indeed, for 32 years he thought his stiff neck was a remnant of this work but a doctor’s exam two years ago led him to learn it was broken in five places, most likely a result of a 1975 car accident, although, to date, four vehicles have struck him while he was a pedestrian.

In 1978 he fell ill and quickly lost 40 pounds. Weeks later he was paralyzed with Guillain-Barré syndrome, an autoimmune disorder affecting the nerves. Six months later when he could walk without canes he got a job driving a truck for a stationary company, and things went well until spring of 1979.

“It was very strange. I was sharing a place with a guy and he needed money for some strange reason and I trusted him so I gave him all this money and the next thing I know he’s gone. Then I had no money for rent. I got punted to the streets, someone came looking for a friend of mine and my boss didn’t like that guy coming around so he fired me and all of a sudden in a matter of weeks I have no home or job. It doesn’t take long. Two events both within a week and the next thing you know you’re dead. Homelessness can happen to anyone, and quickly too.”

He lived on the street for about a year until his ex-girlfriend saw him and helped him. She later became his wife.

“I could have had it a lot rougher but dozens of people helped me. People like Vic Lawson – co-owner of a trucking firm – gave me a job. He looked at me, gave me an honest shot and in a few months he let me drive his truck delivering half a stockpile of 100 different species of wood in his shed.

It’s because he’s a sweet man. Thankfully there are people out there who work hard for people and the hole and they’re the ones who need the light shined on them, not me.”

So, Gunderson drove a truck for Monarch Messenger and Fermat lingered in his thoughts. Every working day for months he hurled 64,000 pounds of shingles off the truck at constructions sites. He grew strong and began arm wrestling in competitions. He lost a twist, as it’s called, in a 1982 tournament in Calgary where he placed second. Afterwards the Canadian Arm Wrestling Federation asked him to join its tour and it was a commercial pilot, it wasn’t a vocation he wanted; neither could scratch the cerebral itch he had in school.

On the morning of the second day the speaker asked the audience to write down what they wished to do in life but were afraid to try. Almost reflexively, Gunderson wrote “bachelor of science in pure mathematics” at the top of the page because he knew pure mathematics might help him solve Fermat’s Last Theorem. Knowing little about the degree he went to the University of Calgary to ask a professor about life as a mathematician.

With his girlfriend’s support he registered for university in 1984. But 10 years had passed since high school and he felt mathematically anemic so he fetched his old textbooks and worked his way through high school math, starting in Grade 10.

“I did math homework day and night. I studied it on the bus, at work, at the trucking place, while I was eating, even in the bathroom. I did it all the time because I was petrified. Think about it: I was 29 when university started and the youngsters around me are going to be way faster than me. I mean, what have I been doing? Arm wrestling was the height of my intellectual endeavours so I’m thinking I’m going to get my butt kicked when I go to university so I was petrified. I was even doing math exercises in the lineup when I was registered.”

In his first year Gunderson won a scholarship for having the highest grades of a student entering the Faculty of Science. In second year he married and in 1988 he reached his goal – a bachelor of science in pure mathematics. He then asked his wife to support him through his master’s and she agreed.

To purchase individual tickets and tables or to become a Tribute Dinner sponsor please call Randy Van demoselaer at (204) 831–2332 or rrvandemosselaer @stpauls.mb.ca.

St. Paul’s High School Jesuit

2009 Ignatian Challenge Award TRIBUTE DINNER Honouring Dr Emőke Szathmáry 3 November 2009 Winnipeg Convention Centre Reception 5:30 pm, Dinner 7:00 pm

St Pauls President, Fr Alan Fogarty SJ, is pleased to announce that Dr Emőke Szathmáry, President Emeritus and Vice Chancellor of the University of Manitoba (1996–2008), is the 2009 Ignatian Challenge Award Honouree.

The proceeds of the annual Tribute Dinner support the establishment of the Dr Emőke Szathmáry Bursary Fund. Bursary Funds are an essential aspect of a Jesuit education at St Paul’s High School ensuring accessibility for all applicants.

Dr Szathmáry has had a profound impact on our city, the university and, through her efforts, at the University of Manitoba and St Paul’s College in Calgary. She has had a profound impact on the development and accessibility of post-secondary Catholic education.

Join us on 3 November 2009 as we pay tribute to Dr Emőke Szathmáry’s outstanding community leadership and raise funds to ensure the accessibility of a Jesuit education at St Paul’s High School.

Educating Men for Others www.stpauls.mb.ca
year they divorced and he was broke again. Some men bounce though, and a summer job he sought out a leading woodworking company in Calgary to learn the skills he now uses to construct wood models of the geometric shapes published in DeDivina Proportionis, which has a collection of 60 Leonardo da Vinci's illustrations depicting shapes like the Campanus Sphere, which required Ganderson to do three pages of calculations to sort out how the 264 pieces fit together. His work is displayed in MacRay Hall.

In 1991 he received his master's degree from the University of Calgary and then went to Emory University in Atlanta to work on his PhD. The professor he sought out could train him on that but he's very good at it. It's very impressive." Gratzer says. "It's almost as if we have developed a way of talking to each other completely differently. We have to get the cat to sit on a rung (the general claim) and then teach it to move its paws up a rung. If the cat can climb one rung, it can climb them all. Incidentally, Gunderson once taught a cat how to climb the ladder to his daughter's bunk bed.

His research exceeds the complications of a cat climbing a ladder but at his desk he eagerly paws at scrap paper so he can explain it to the cat-level. Indeed, his students say he enlivens lectures on theory with his life stories. Math pervades life and he wants people to recognize and enjoy that fact. And he wants to make universities inviting to students, for the past six years he has shared his story with high school students from Churchill, Kelvin and St. Saviour, talking about life, math, and university and then he invites them to campus for the day.

"I say, 'Look, if you don't even have university on your sights don't worry - a lot of people don't. But you have to concentrate on what you love. And if you love math, and if that's what you want to do, come see me and we'll make it happen. I don't care what kind of math you think it is. Never mind how long it takes. If you want to do math or any bloody thing else, we have all the qualified people here waiting for you.'"

Gunderson notes: "It should be transcribed into English. Indeed, mathematics comprises a series of languages all its own. 'He's in combinatorics and I'm in lattice theory so we view things completely differently. We have to develop a way of talking to each other so we can understand each other," Gratzer says. "It's almost as if we have different tongues. So we have to work on that but he's very good at it. It's very impressive.'

Gunderson's cute question, it turned out, needed combinatorics to solve it. So he and Gunderson toiled for two years and found the solution. The journal Algebra Universalis will publish the paper. In the meantime Gunderson continues to work on his long-overdue book.

The book, one of three he is working on, is an 850-page jaunt through mathematical induction. ("It should be done but there is just so much fun stuff to do in life. I love my research, but I love many other things. I just wish days were longer.") Mathematical induction involves proving a general claim that allows you to jump from one step to the next, and that allows you to conclude it's true for the remaining, infinite steps. Or, as he says, it's like teaching a cat how to climb a ladder: get the cat to sit on a rung (the general claim) and then teach it to move its paws up a rung. If the cat can climb one rung, it can climb them all. Incidentally, Gunderson once taught a cat how to climb the ladder to his daughter's bunk bed.

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David Gunderson explains the beauty and mystery of the geometric puzzles he has accumulated over the years.

The Bulletin
Aboriginal Issues Press launched their newest publication, Sacred Landscapes - a fusion of western science and traditional knowledge - at the Clayton H. Riddell Faculty of Environment, Earth, and Resources on Sept. 25.

The book is a refereed publication containing four sections: Sanctity of Resources, Ancient Sites and Ceremonies, Today, Landscapes and Mindscapes, and Protecting and Coping with Change.

Many of the authors were students. PhD student Kyle Elliott wrote on the use of seadrids as monitors of ecosystem change in Hudson Bay. "It was an amazing opportunity to be able to present my work in this way," Elliott said. "It's neat to see it in a book. I've published before in refereed journals where it was obscure and not in the same kind of format; it was in very scientific language, it was not something I could present to family members or the public."

As the preface notes, Sacred Landscapes provides the reader with an opportunity to explore the sanctity of our environment, illustrating the connection between landscapes and mindscapes. First Nations perspectives are presented, as well as perspectives from non-Aboriginal authors working with Inuit, Métis and First Nations. "The connection the Clayton H. Riddell faculty has with Aboriginal Issues Press is a very important one because the faculty encompasses Mother Earth. We all have relationships to sacred landscapes in different ways," co-editor Jill Oakes said.

The book suggests that before we can understand the significance of our relationship to anything, be it duck, tree, or rock, we must first understand our environment in its entirety. No discipline can achieve this in isolation.

"What gave me a delightful surprise was seeing that people I worked with, people who collected data in my labs, connected issues related to that data with traditional knowledge. That's the kind of fusion we are beginning to see: high-tech western science being applied to natural problems," Dean Norman Halden said.

The faculty took over the sponsorship of Aboriginal Issues Press from Native Studies in 2002. The Press has 15 publications being sold across North America and Europe and all profits are used to fund scholarships for students who are studying in a field of Aboriginal interest.

You are invited to attend the President’s Town Hall

Thursday, October 15
10:00 am - 11:00 am
E3-707, Engineering and Information Technology Complex (EITC) and connected via video link to the Frederic Gaspard Theatre, Basic Medical Sciences Building

For information: Dr. Malcolm Smith, Head, Department of Marketing, Asper School of Business, Winnipeg, MB, R3T 5V4. Tel: (204) 474-9484. E-mail: malcolm.smith@umanitoba.ca

You are invited to attend the President’s Town Hall

Introduction and short presentation by David Barnard, President and Vice-Chancellor, followed by an open forum question and answer period with the president and the executive team.

ASPER SCHOOL OF BUSINESS
Department of Marketing
Position: Assistant Professor
Start date: July 1, 2010
Position number: 10013
Application deadline: October 22, 2009

For information: Dr. Malcolm Smith, Head, Department of Marketing, Asper School of Business, Winnipeg, MB, R3T 5V4. Tel: (204) 474-9484. E-mail: malcolm.smith@umanitoba.ca

One university. Many futures.
U of M-led HIV/AIDS research among nation’s best

Research proving male circumcision reduces risk of HIV infection declared one of the ‘Top Canadian Achievements in Health Research’

KATIE CHALMERS-BROOKS

By this time tomorrow, thousands more people around the world will have become infected with HIV. The virus remains determined and aggressive, much like the scientists trying to stop it in its tracks. University of Manitoba professor Stephen Moses was principal investigator in research that revealed a significant hole in the deadly virus’s armor. His team showed that male circumcision significantly reduces the risk of acquiring HIV for men who have heterosexual intercourse.

Today, the Canadian Institutes of Health Research (CIHR) and the Canadian Medical Association Journal (CMAJ) declared these findings one of the Top Canadian Achievements in Health Research. Estimates show that male circumcision in hard-hit sub-Saharan Africa could avert more than 7.7 million HIV infections and 3 million AIDS deaths during the next two decades. Findings from this research have prompted the Government of Kenya to establish a task force and adopt national policy guidelines for voluntary male circumcision.

“Dr. Moses’ project is one of only eight across the country to receive this prestigious honour, which speaks volumes about its impact in terms of reducing the spread of HIV and saving lives,” says Dr. Dipak Jayas, Vice-President (Research) at the University of Manitoba. “Not only has Dr. Moses improved our understanding of this disease, but these findings have already been put into action, and have encouraged many countries in eastern and southern Africa to increase male circumcision services in their battle against HIV and AIDS.”

Moses, along with colleagues in the United States and Kenya, conducted a randomized clinical trial involving men in Kenya, and showed that circumcised men were over 50 per cent less likely than uncircumcised men to acquire HIV during sex with women. The clinical trial began in 2001 and involved more than 2,700 men before coming to a close nearly five years later. The trial ended early when its Data Safety and Monitoring Board deemed that the results were already so compelling it was unethical to continue without offering the control group the protection of circumcision. In 2007, Time magazine identified male circumcision for HIV prevention as one of the year’s top medical breakthroughs.

A physician and public health specialist, Moses says these findings will have the greatest impact in regions where HIV infection rates are high and rates of male circumcision are low, such as several countries in eastern and southern Africa. In these settings, it could take as few as 19 circumcisions to prevent one person from contracting HIV.

“Doing more male circumcisions over a period of years in those countries, so that the majority of adult men become circumcised, could result in a reduction in HIV prevalence in the general population by as much as 67 per cent,” says Moses. “Not only would this save lives and reduce suffering, which is paramount, but it would also help economically by reducing the costs associated with HIV/AIDS care.”

The findings have garnered recognition as a Top Canadian Achievement in Health Research. As one of three principal investigators— and the only Canadian—he attributes the success of the Kenya trial to having a strong team of collaborators.

“It was a complex undertaking that required expertise in a variety of different disciplines,” Moses says.

The Top Canadian Achievements in Health Research recognizes the discoveries and innovations that have had the biggest impact on the health of people in this country and around the world. A peer-review panel of Canadian and international experts selected the final list.

Each year the University of Manitoba honours support and academic staff who have been notably active in outreach activities. The university will hold its 30th Annual Outreach Reception on Monday, December 7, 2009.

Deans and Directors are accepting nominations until Friday, November 6, 2009, of anyone active during 2008-2009 in enriching and enhancing the contacts of the university. Administrative units of the University should send their nominations to their respective Vice-President.

Outreach activities may include increasing access to existing university programs, extending the nature and range of the university’s programs and services, and sharing the work of the university most effectively with the community. The award recognizes the best in outreach activities since the previous award. Please refer to umanitoba.ca/admin/vp_academic/awards_honours.html for a listing of previous winners.
Professors receive highest honour
University of Manitoba contingent among the Royal Society of Canada’s latest inductees

Dr. Digvir Jayas, Dr. Kenneth Standing, Dr. Noralou Roos and Dr. Ronald Stewart

Three University of Manitoba professors have been elected to the Royal Society of Canada (RSC), the country’s most prestigious association of scholars and scientists. A fourth professor was named a medal winner.

Election to the society is the highest honour a scholar can achieve in the arts, humanities and sciences. The new inductees are Dr. Digvir Jayas, Dr. Noralou Roos and Dr. Ronald Stewart, the RSC announced recently. Dr. Kenneth Standing received the Sir John William Dawson Medal.

“We are very proud of these outstanding researchers,” says Dr. Joanne Keselman, Vice-President (Academic) and Provost at the University of Manitoba. “They have each made enormous contributions in their fields of study and are most deserving of this honour.”

Jayas, Distinguished Professor and Vice-President (Research), is a world-renowned leader in grain storage research, striving to reduce losses in grain quality and quantity during storage in farm and commercial systems. His research results are published in 270 refereed papers and are the basis upon which storage recommendations are made in North America and around the world. In reducing spoilage of stored grain, Jayas’s research has increased the availability of high-quality grains to feed the growing population of the world.

Roos, professor of community health sciences, founded the Manitoba Centre for Health Policy and pioneered the use of administrative data to identify the health-care use patterns of Manitobans over the past three decades. She was awarded a Tier 1 Canada Research Chair in population health. Citations to Roos’ work rank her among the top 100 Canadian scientists according to the Institute of Scientific Information’s website: ISI.HighlyCited.com.

Stewart, professor and head of the department of environment and geography, is a global leading expert on precipitation processes within winter storms. He plays an important role internationally, including within the Global Energy and Water Cycle Experiment and now its new initiative on climate extremes. He completed his graduate studies in physics at the University of Toronto and has held several positions in universities and government, including senior scientist with Environment Canada. Stewart is former president of the Canadian Meteorological and Oceanographic Society and held a Natural Sciences and Engineering Industrial Research Chair in extreme weather at McGill University.

Standing, Professor Emeritus of physics and astronomy, is internationally renowned for innovations in time-of-flight mass spectrometry that have provided significant improvements in methods for characterizing large biomolecules. He and his colleagues hold a patent on the orthogonal injection matrix-assisted laser desorption technique. He collaborated with scientists at the Canadian National Microbiology Laboratory which produced the first analysis of the proteins from the human SARS virus.

The new Fellows will be officially inducted November 28, 2009, at the Canadian Museum of Civilization in Gatineau, Quebec. The University of Manitoba professors are among 81 new scholars and scientists elected this year by the Royal Society of Canada.

Founded in 1882, the society’s primary objective is to promote learning and research in the arts and sciences. It consists of approximately 2,000 Fellows. These are men and women from across the country who are selected by their peers for outstanding contributions to the natural and social sciences and in the humanities.

For more information contact Katie Chalmers-Brooks, research communications officer, (204) 474-7184.
Canadian universities, which has direct and retain the best researchers from the discoveries coming out of the University of Manitoba, said Vice-President (Research) Dr. Diger S. Jayas. “We congratulate these remarkable scientists and scholars,” Jayas said. “These awards represent a significant vote of confidence in their abilities and are further testament that the University of Manitoba is home to outstanding researchers.” The other two new CRCs are Dr. Peter Eck and Dr. Zahra Moussavi. Eck, Canada Research Chair in Nutrigenomics, investigates whether genetic variations in cellular membrane transporter proteins, such as Vitamin C and organic cation carriers, cause functional changes that lead to diseases. These proteins are found in the small intestine and kidney, making them accessible to dietary interventions. Eck aims to refine nutritional recommendations based on individual genotypes. The goals of his research are to prevent or treat dietary-related diseases by personalized nutritional intervention.

Jeffrey Marcus (left) and Phillip Gardiner

These six awards-worth a combined $4.8 million plus infrastructure support - have a big impact not only within specialized research fields but on the greater population who benefit from the discoveries coming out of the University of Manitoba, said Vice-President (Research) Dr. Diger S. Jayas. “We congratulate these remarkable scientists and scholars,” Jayas said. “These awards represent a significant vote of confidence in their abilities and are further testament that the University of Manitoba is home to outstanding researchers.” The other two new CRCs are Dr. Peter Eck and Dr. Zahra Moussavi. Eck, Canada Research Chair in Nutrigenomics, investigates whether genetic variations in cellular membrane transporter proteins, such as Vitamin C and organic cation carriers, cause functional changes that lead to diseases. These proteins are found in the small intestine and kidney, making them accessible to dietary interventions. Eck aims to refine nutritional recommendations based on individual genotypes. The goals of his research are to prevent or treat dietary-related diseases by personalized nutritional intervention.

Dr. Fikret Berkes, Hao Ding and Phillip Gardiner had their CRCs renewed.

Berkes, Canada Research Chair in Community-Based Resource Management, is researching the conditions under which the ‘tragedy of the commons’ may be avoided, and natural resources used sustainably and equitably. He has played an international leadership role in the areas of commons theory, linked social-ecological systems and resilience, and has served as the leader of a number of research groups. Ding, Canada Research Chair in Genetic Modeling, is treading on new ground in understanding the world of gene function. He focuses on applying mouse models to determine the gene function during development and in the pathogenesis of human genetic diseases. In the past, Ding made important discoveries regarding the functions of several genes thought to have a significant role in normal development and that may be the cause of certain human conditions such as cleft palate and brain tumors.

Ding, Erik Marcus and Moussavi were each awarded $500,000 Tier 2 Chairs over five years. Gardiner and Berkes each received a $1.4 million Tier 1 Chair over seven years.

The new CRCs also received $125,000 from the Canada Foundation for Innovation. The foundation is an independent corporation created by the Government of Canada to fund research infrastructure.

The University of Manitoba now has 48 Canada Research Chairs.

From butterflies to brain function
Three new Canada Research Chairs announced and three renewed

SEAN MOORE
The Bulletin

The butterfly fluttering around your backyard this past summer might have provided a pleasant distraction from your gardening. But for biological sciences researcher Dr. Jeffrey Marcus this pretty insect offers incredible insight.

With support from new government funding, the University of Manitoba associate professor is studying the origins, organization and evolution of butterfly colour patterns. The latest Canada Research Chair in Phyllogenomics, Marcus develops new methods for mapping and manipulating genomes, which includes creating the world’s first genetically modified butterflies.

Marcus is one of three new Canada Research Chairs from the University of Manitoba. Chairholders are research leaders or rising stars in natural sciences and engineering, health sciences, or social sciences and humanities.

The Honourable Gary Goodyear, Minister of State (Science and Technology) today in Ottawa announced funding for the new Chairs, in addition to renewed support for three others.

“Canada’s government is investing in science and technology to strengthen the economy, improve Canadians’ quality of life and create the jobs of tomorrow,” said Goodyear. “The Canada Research Chairs Program helps attract and retain the best researchers from the country and around the world to Canadian universities, which has direct benefits for our communities.

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Be a Returning Officer or Assistant Returning Officer

You can make a significant contribution to our democratic process in Manitoba by ensuring the conduct of a free and fair election in your community.

As the manager or assistant manager of the election, ROs and AROs see to the planning, organization, implementation and monitoring of all election activities in a returning office.

Keys to success:
- excellent people skills and the ability to motivate others
- project management experience
- organizational skills, attentive to detail
- ability to work independently
- time management skills, the ability to multi-task
- good written and oral communications skills
- computer literate, experienced with Microsoft Office

Would be an asset:
- experience with record keeping
- experience hiring and training

You must be available on an intermittent basis for training and planning activities up to an election and to work full-time during an election. Election law requires employers, in most circumstances, to grant unpaid leave to anyone wanting to work as a Returning Officer or Assistant Returning Officer.

To qualify, you must be an eligible voter in your electoral division and demonstrate that you can conduct the Office in an independent, non-political manner. French language skills are preferred in designated bilingual electoral divisions.

This is a paid position. Compensation is under review.

If this sounds like the right fit for you, please visit us online or call us for an application form.

Phone 945.7940
Toll-free 1.866.628.6837 ext. 7940
Email RORecruit@elections.mb.ca
Website www.electionsmb.ca/Employment
Closing Date: October 26, 2009

Elections Manitoba

Employment Equity is a factor in selection. Applicants are requested to indicate if they are from any of the following groups: Aboriginal people, visible minorities and persons with disabilities.

We thank all who apply and advise that only those selected for further consideration will be contacted.

www.electionsmb.ca/Employment

The Bulletin October 8, 2009

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In Brief

Poster Competition:
Date Change

Student researchers will get a chance to show off their cutting-edge projects by entering the poster competition now scheduled for Nov. 9 (note change of date). Undergraduate students campus-wide are invited to create posters that depict their research projects. The posters will be on display for the public Nov. 9 from 1 p.m. to 4 p.m. in Room 210-224 of University Centre.

This is the first year the competition is open to students of all disciplines. A panel of judges will decide the two top winners in each of the four categories: applied sciences, natural sciences, health sciences and social sciences humanities. First-prize winners will take home $500, runners-up will receive $250.

To enter contact Shellie Johannesson in the Office of the Vice-President (Research) at 474-7952 or johann1@cc.umanitoba.ca. The deadline for submissions is Oct. 9.

Upcoming
Presentations:
Recruitment and Informed Consent
Wednesday, October 14, 2009
12:00 PM - 4:30 PM
Frederic Gaspard Theatre
(Theatre A)
Basic Medical Sciences Building
727 McDermot Avenue
Bannatyne Campus
For more info: contact Monica Woods at (204) 272-3121 or woodsm@cc.umanitoba.ca

Bringing Research to Life
Speaker Series
Using Math for Disease Control
Wednesday, October 21, 2009
7:00 PM
Room 290
Education Building
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BY KATIE CHALMERS-BROOKS

Every minute, four more young people become infected with HIV. Each day over 5,000 people die of AIDS. How do you tackle numbers this daunting? With math, according to Abba Gumel.

The professor puts pen to paper to develop and test mathematical models that track the spread of diseases like HIV or H1N1 and determine the most effective plan of attack. He figures out their pattern and tries to predict how many people will get sick, end up in hospital or die. He can also show public health officials how to best control an outbreak by using methods like quarantine, vaccination, and awareness campaigns.

Gumel’s world revolves around scores of numbers but he says it’s the individuals behind the figures that drive him. He recalls touring a health centre in Botswana and looking into the eyes of a young man in his 20s only minutes away from dying of AIDS. The patient could no longer talk but his eyes spoke volumes.

“That was compelling. That was absolutely compelling. I looked at him and he was basically just bones, nothing. I think by the time we left, he had probably died,” says Gumel. “It’s not just something abstract that mathematical modelers are doing. It is a well-rounded science that affects the lives of millions of people around the globe.”

His latest project has the potential to make a huge impact. Gumel and his postdoctoral fellow Salsi M. Garba recently constructed a mathematical model (which is a system of equations) that if put into action, they say would lead to the elimination of HIV in Nigeria in roughly 20 years. About three million people in the West African country (population 150 million) are HIV-positive.

A mathematical model is a representation of reality and, in the context of disease spread, is designed with input from sources like public health officials, clinicians, statisticians and pharmaceutical scientists. Gumel then plugs in different parameters and runs scenarios to determine which control strategy – vaccination, for example – would prevent the greatest number of new infections and deaths.

He says mathematics offers a cost-effective scientific approach for studying disease transmission since it doesn’t require expensive lab equipment and lengthy lab experiments. Mathematical modeling also helps resource-poor nations minimize the burden of diseases while using limited available resources.

Gumel’s recent findings have caught the attention of some Nigerian public health officials who want to know more about his low-cost recipe of counseling, condom distribution and drug intervention. Helping to eliminate HIV in the most populous country in Africa may be a lofty goal, but it’s also a personal mission for the researcher.

He holds Nigeria close to his heart; it’s where he was born and raised, and it’s where he first fell in love with math. At only three-years-old, he would tag along to class atop the shoulders of his uncle, who was a primary school teacher. It is the foundation of the natural and engineering sciences,” says Gumel, who is the director of the Institute of Industrial Mathematical Sciences at the University of Manitoba. “Mathematics is about studying the often complex relationships between objects and observing patterns. It’s not just about adding and subtracting numbers.”

Gumel has put his expertise to use to help combat diseases like tuberculosis and West Nile virus. He and his colleagues successfully predicted the 2003 SARS outbreaks in Toronto could effectively be contained using quarantine and isolation.

A few years later, he and his collaborators evaluated Canada’s 2006 preparedness plan for pandemic influenza and discovered it underestimated the projected burden and may have been inadequate to effectively control its spread. His accompanying paper recently received the prestigious Dr. Lindsay E. Nicolle Award from The Canadian Journal of Infectious Diseases and Medical Microbiology.

Now Gumel is part of a team that is working towards achieving the United Nation’s goal of effectively controlling malaria globally by 2015. Every year, malaria kills more than 1 million people.

“Lots of people are dying, especially children. A child dies of malaria every 30 seconds. It’s very deadly. It’s terrible. It’s a big problem,” says Gumel, who believes mathematical modeling can be part of the solution.

To learn more, come to a free public presentation called “Using Math for Disease Control” Oct. 21 at 7 p.m. in the Education Building, Room 290.

Bringing Research to LIFE

Math with a Mission
Researcher developed a strategy he says can eradicate HIV in Nigeria in only two decades

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To enter, contact Shellie Johannesson in the Office of the Vice-President (Research) at 474-7952 or johann1@cc.umanitoba.ca. The deadline for submissions is Oct. 9.

Department of mathematics professor Abba Gumel uses math to combat deadly diseases worldwide.

Photo by Katie Chalmers-Brooks
Meet New Faculty Members

Mojgan Rastegar
Medicine
Dr. Rastegar is an Assistant Professor of Biochemistry and Medical Genetics and part of the Regenerative Medicine Program, Faculty of Medicine with a cross appointment to Immunology. She obtained a Diplôme d’Études Approfondies (DEA) in Biochemistry and Human Cellular Biology (1998) and a PhD degree in Biomedical Sciences (2000) from the Université Catholique de Louvain (UCL), Brussels, Belgium. Dr. Rastegar performed her postdoctoral training at the Hospital for Sick Children in Toronto, at the McGill Cancer Centre in Montreal and at the Indiana University Cancer Center, IN, USA. Dr. Rastegar’s research explores the potential of stem cell differentiation towards generating specific cell types for treatment of neurological disorders.

Judith Hughes
Social Work
Judith Hughes received her PhD from the University of Toronto. She joined the Faculty of Social Work in January 2009 from the University of Northern British Columbia where she was an assistant professor. Her program of research centers on understanding the complexity of intimate partner violence and how professional service providers recognize and respond to the issue. In 2008, Judith received a SSHRC standard research grant to examine how the child welfare and family law systems respond to intimate partner violence.

Étienne-Marie Lassi
Arts
Étienne-Marie Lassi joined the University of Manitoba in July 2009 as an Assistant Professor in the department of French, Spanish and Italian. He holds a PhD in francophone literature from the University of Ottawa, an MA in francophone studies from the University of Calgary and the DIPES 1 & 2 in bilingual studies and language teaching from the École Normale Supérieure of Yaoundé, Cameroon. Étienne-Marie has received a number of academic awards including a SSHRC doctoral fellowship. His research interests include francophone African and Caribbean literatures, francophone African cinemas, film adaptation, novelization and postcolonial theories.

Sherif Sherif
Engineering
Sherif Sherif joined the Department of Electrical & Computer Engineering in September 2008. His research area is Biophotonics which is the interaction between biological systems and light. His interests include biomedical imaging & sensing: optical coherence tomography (OCT) and very high magnification fluorescence microscopy. He has a PhD in Optics from the University of Colorado at Boulder and an M.S. in Digital Image Processing from the University of Wisconsin-Madison. After postdoctoral training at the University of Oxford and Imperial College London, he became a Lecturer in Applied Optics at the University of Kent at Canterbury UK. Before joining the University of Manitoba he was a Research Officer at the Canadian National Research Council in Ottawa. He has over 60 scientific publications, including two patents, and is the recipient of three teaching awards.

The second annual U of M World Cup: A Time to Make Friends was held on September 26. Hosted by the English Language Centre and Bison Recreation Services, the tournament offers a chance for international students to meet new people and get active. This year about 60 students participated.