

DAL MAGAZINE

WINTER 2014

HEART SMARTS • CELEBRATING ETHICAL LEADERSHIP
TEMPLE GRANDIN VISITS TRURO

FEATURE

BIG DATA'S DILEMMA

BIG BROTHER OR BIG ANSWERS?

DAL THINKERS TACKLE THE RISKS AND REWARDS OF AN EXCITING NEW FIELD

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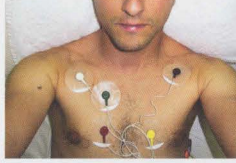
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THE HEART OF THE MATTER

From medical research to philosophy and literature, the human heart is the focus of much study at Dalhousie. Its physical importance is clear, but it turns out its symbolic meaning is just as profound. By Matt Semansky



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BIG DATA'S PROMISE

To its proponents, big data offers a big promise: insight into complex—and critically important—questions in health care, science, business and more.

BIG DATA'S DILEMMA

But its detractors say it poses big risks for individual privacy. Enter Dal's new Institute for Big Data Analysis, poised to explore this challenging new field of study.

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WHAT IS THE FUTURE OF UNIVERSITIES?

Are universities obsolete, about to be replaced by online courses beamed around the world? Or more opportune than ever, as places of careful thought and challenging questions? Dalhousie's new president joined this conversation with eight university leaders from around the world, as they gathered on our campus, sharing insights, challenges—and laughter.



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DALMAGAZINE

MASTHEAD

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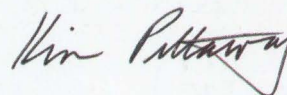
EDITORIAL

NOISE AND KNOWLEDGE

"A place for careful pause." That's one of the ways President Florizone describes universities in his remarks on the role of the university, now and in the future (*What is the future of universities?* p. 18). In today's hyperlinked world, the idea of careful pause could seem quaint. But what's the point of accumulating all of that information if we don't take the time to step back and consider its meaning? What insights develop as we think deeply and engage with others who are thinking deeply as well, as we—in Dr. Florizone's words—"pause, reflect and challenge"?

Some of these same questions about how we approach knowledge are being considered in a newly developing field focused on how we handle "big data," data sets that are huge, flow fast and often contain different forms of information (*Big data's promise, big data's dilemma*, p. 12). Big data can look like information overload—noise rather than knowledge. But apply the right tools and nuance emerges, whether you're trying to tease out insights into the complexities of the health indicators of premature babies or the retail shopping habits of high-income consumers.

What are the right tools? That's a question that Stan Matwin, director of the newly formed Institute for Big Data Analytics at Dal, is seeking to answer with his team. And in the context of a university's role in our evermore hyper world, it's something that all who care about teaching, learning and creating new knowledge need to consider. We hope that the features in this issue of *Dal Magazine* contribute to that effort, offering you an opportunity to pause and reflect and, yes, to challenge.



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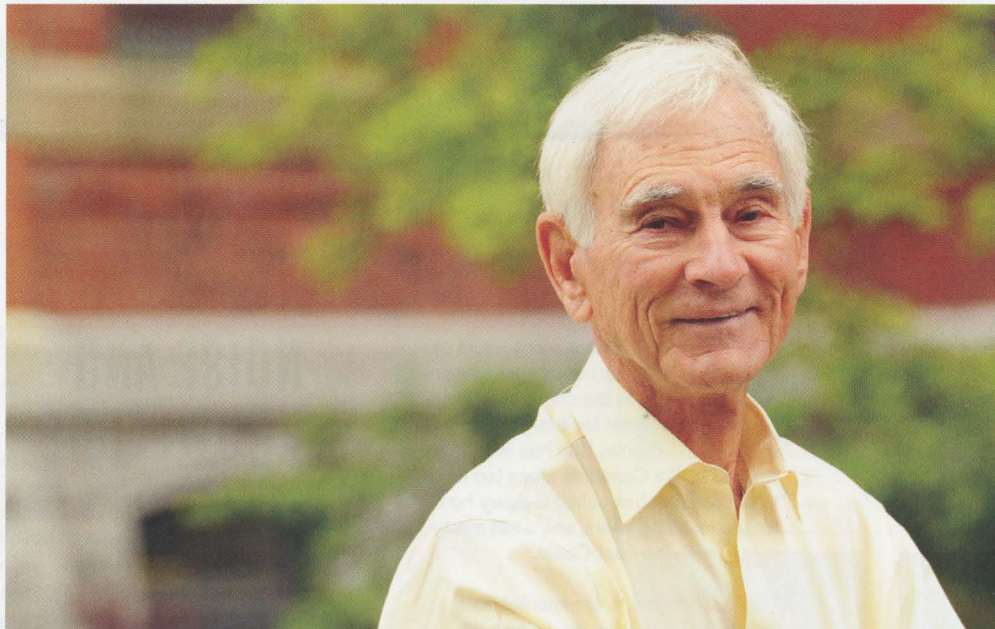
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“Remembering Dentistry in my will is a great way to give back to Dalhousie. For me, it’s an opportunity to leave a legacy to the school that provided the foundation for a rewarding career and to enable future generations to become part of the alumni family.”

– Dr. Frank Lovely, DDS’59

A proud Dalhousian – a meaningful legacy.

Frank Lovely is one of a growing number of our alumni who have a special role in shaping the past, present and future of Dalhousie University. In a very real way, his decision to include a bequest for Dentistry allows him to continue a meaningful, personal legacy.

Whatever your passion – be it funding a scholarship for a deserving student, giving to university outreach programs, or supporting research in a discipline that’s meaningful for you – we can help you realize it.

Planning ahead allows you to direct your gift and support the areas you value.



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PG 4



PG 5



PG 6

Smarter ERs, innovating researchers and ethical leaders: there's a lot to celebrate in this issue. Plus read about Dal's efforts in improving energy efficiency, a vaccine program for the homeless and more.



SMART WORDS

“SOME DAYS ARE SO FULL OF HOPE AND PROMISE THAT YOU JUST HAVE TO TRAVEL WITH A CHOIR.”

Tim Crooks, executive director of the youth support organization Phoenix at the official launch of the Children and Youth in Challenging Contexts (CYCC) Institute, hosted at Dal. The Phoenix Community Choir performed at the launch.



DAL NEWS

THE LIST

Innovation leaders

Dalhousie had a big presence at the Halifax Discovery Centre's 11th annual Discovery Awards, designed to celebrate science, technology and innovation in Nova Scotia. Dal's winners were:

1. Dal's SENSELab (Sensory Encoding and Neuro-Sensory Engineering) took home the Innovation Award. Its members include Dal faculty Manohar Bance (otologist and ear surgeon, top right) and Rob Adamson (optical diagnostic imaging researcher, top left) who accepted the award for the lab's efforts to develop new ways to treat disorders of the ear, audition and balance.



Graven's expertise is in designing and developing health information systems. Together they've developed a patient-centred health information system that has been implemented countrywide in several Caribbean nations, including Belize, Barbados and St. Vincent and the Grenadines.

2. Noni MacDonald (photo 2) and Michael Graven, both professors of pediatrics at Dal and clinicians at the IWK Health Centre, were co-winners of the Professional of Distinction Award. Dr. MacDonald is an international expert in vaccines for children, youth and pregnant women. Dr.



3. The late George Geoffrey Meyerhof was inducted into the Centre's Hall of Fame, with his son accepting the award. He was dean of the Faculty of Engineering at the Nova Scotia Technical College (later TUNS, now part of Dalhousie) from 1964 until 1970 and was renowned for his research in geotechnical engineering.



4. Thomas John Murray—known to most as "Jock"—was also inducted into the Hall of Fame. A former dean of the Faculty of Medicine, he is a world-leading expert in multiple sclerosis research. During his time as dean, he established the medical humanities program, and founded and then directed the Dalhousie Multiple Sclerosis Research Unit. —Ryan McNutt with files from Matt Kennedy and Theresa Anne Salah



RESEARCH

REVOLUTIONIZING THE FACE OF EMERGENCY MEDICINE:

that's the goal of Dal's Division of Emergency Medical Services (EMS), part of the Department of Emergency Medicine. The division's research was highlighted in the first EMS Research Week, held in late October. A large portion of the research projects featured came from front-line staff suggestions. Paramedics or other first responders identify areas for improvement and from there a team is compiled to collect data and make a recommendation for policy change. This multidisciplinary approach is something that makes the EMS research at Dal stand out. Right now, the division is focusing on the practical application of its research and how it can improve the delivery of emergency services in the Maritimes—for example, with the extended care paramedic program and collaborative emergency centres. Both are preventative initiatives where paramedics and nurses work together to improve efficiency in emergency departments. "We're trying to ground [improvements] in good data and evidence-based decision making," says Jan Jensen, research leader for Emergency Health Services and lecturer within the Dal Division of EMS. —Marie Visca

JUST THE FACTS

Energy efficiency at Dal? Outstanding!

Dalhousie's efficiency efforts have been celebrated by the province's efficiency experts. The university received a Bright Star award from Efficiency Nova Scotia for outstanding energy efficiency within a large business or organization. The award recognizes Dal's energy efficiency work over the last five years, during which time Dal's team has implemented

over a dozen energy efficiency and water projects with partners—from upgrades to campus lighting, to commercial kitchens, to campus buildings.

While Director of Sustainability Rochelle Owen is proud of the award, she notes there's much still to do. "Dalhousie and our partners have invested over \$40 million in sustainability-related projects and released an utility master plan (energy and water) and climate change plan," she says. "We have our sights set on a number of new projects for implementation in the next five years." —Charles Crosby

WHY I DO IT

ACTING UP

NAME: Jure Gantar, professor in the Department of Theatre and interim director of the Fountain School of Performing Arts

DEPARTMENT/AREA OF STUDY: Theatre—focus on the theory of drama and gelotology, the study of comedy, laughter and humour

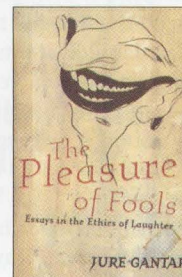
WHAT'S HIS FOCUS? At Dal since 1992, Dr. Gantar teaches the theory of drama while bringing directorial expertise to Dal Theatre productions. In July 2014, he'll start a two-year term as interim director of the new Fountain School of Performing Arts (which will continue to be housed in the Dalhousie Arts Centre). Dr. Gantar is already kickstarting infrastructure and policy review, collaborating with faculty from Theatre, Music and Film Studies. He hopes the school facilitates even more collaboration, with sights set on "fully produced opera" to showcase the school's diverse talents.

RESEARCH/ACADEMIC HIGHLIGHTS: His book, *The Pleasure of Fools: Essays in the Ethics of Laughter*, expands on work begun while an undergraduate student at the University of Ljubljana, Slovenia. "One of my theories is that laughter is a temporary expression of our rationality. Even a fake laugh, if done out of embarrassment, is about indicating the person understands." His current book project is about Oscar Wilde.

WHY HE DOES IT: "It's the best job in the world! I love teaching," Dr. Gantar says. Working in theatre is "exciting—you're creating something out of nothing. Getting involved with others, it comes alive." In October 2013, he directed *The Ghost Sonata* by August Strindberg: "We experimented, which was very rewarding for the [student] actors, using two separate casts." He also glows when mentioning students' contributions to set design and music: "I was absolutely delighted—have very fond memories of this production. —Jane Affleck



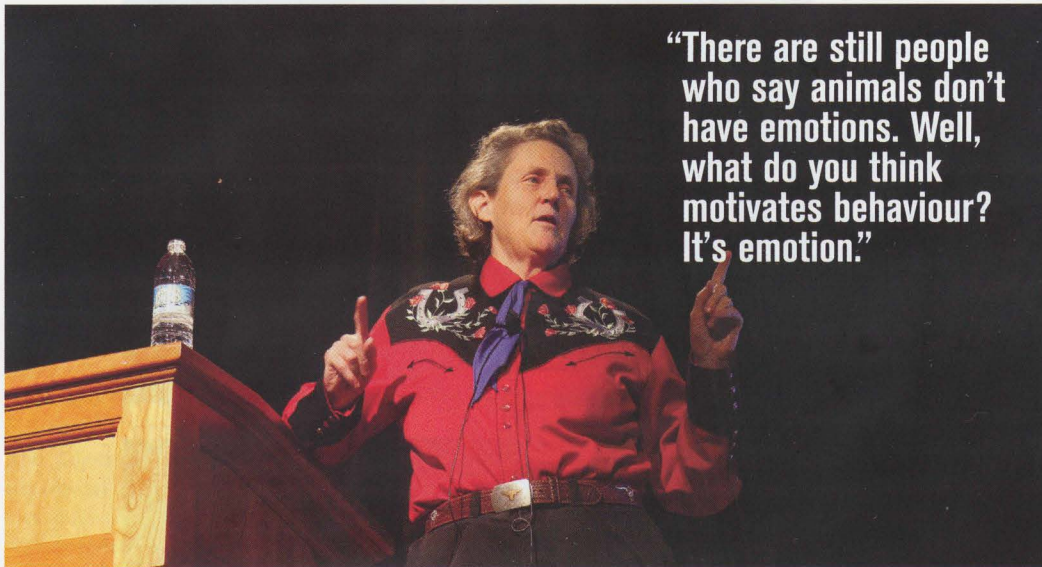
Jure Gantar, LEFT, interim director of the Fountain School of Performing Arts. ABOVE, the Dalhousie cast of *The Ghost Sonata*, directed by Gantar. TOP, a scene from the production.



SHOW/CAST: KEN KAM; GANTAR: DANNY ABBRIEL

DAL NEWS

EVENTS



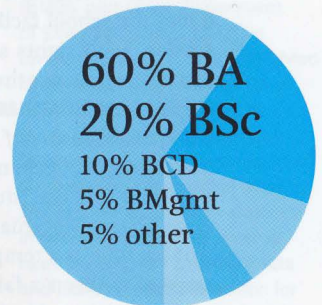
Animal behaviour expert and autism champion Temple Grandin, speaking to a capacity crowd at Dal's Agricultural Campus in December.

#

BY THE NUMBERS

Sustainable math

The Association for Advancement of Sustainability in Higher Education has awarded Dal's College of Sustainability its prestigious Campus Case Study Award for the college's cutting-edge work in planning, design, implementation and outcomes. Here's a look at some of the numbers behind the win.



Faculties ESS Majors are enrolled in

seven Number of Dalhousie Double Major/ Combined Honours degrees available with an Environment, Sustainability and Society (ESS) program major

450+ Number of students working towards an ESS Major

112 Students who have graduated with an ESS Major to date

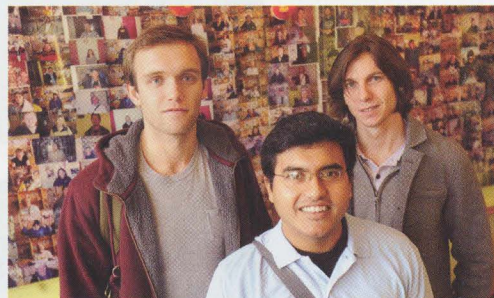
COMMUNITY CONNECTION

Infection fighters

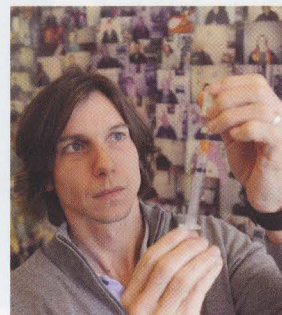
The idea came to Dr. Colin Van Zoost, a Dalhousie Medical School graduate and current faculty member, as he helped out at a soup kitchen: How, he wondered, could he help get more marginalized people vaccinated against influenza and pneumococcus?

After a research project to establish just how many homeless people were getting vaccinated, Dr. Van Zoost teamed up with a group of nurses called Mobile Outreach Street Health (MOSH), and helped expand their HaliVAX program to include nursing students, medical students, undergraduate students and internal medicine students. In just one year, the expanded team helped double the pneumococcal vaccine rates. And this year, they hit the streets again, armed with medical syringes and ice packs, to try to repeat last year's success.

"These students demonstrate how even small acts can make a big difference," says Dr. Van Zoost. —Kevin Bradley



Dr. Colin Van Zoost (right, and pictured above with students Tommy Brothers and Deep Jaiswal) developed a plan to improve vaccination rates for Halifax's marginalized communities, using student volunteers.



GRANDIN: NICK PEARCE; VACCINATION: DANNY ABRIEL

INNOVATOR

FRANK P. HARVEY: ERIC DENNIS MEMORIAL CHAIR OF GOVERNMENT AND POLITICAL SCIENCE

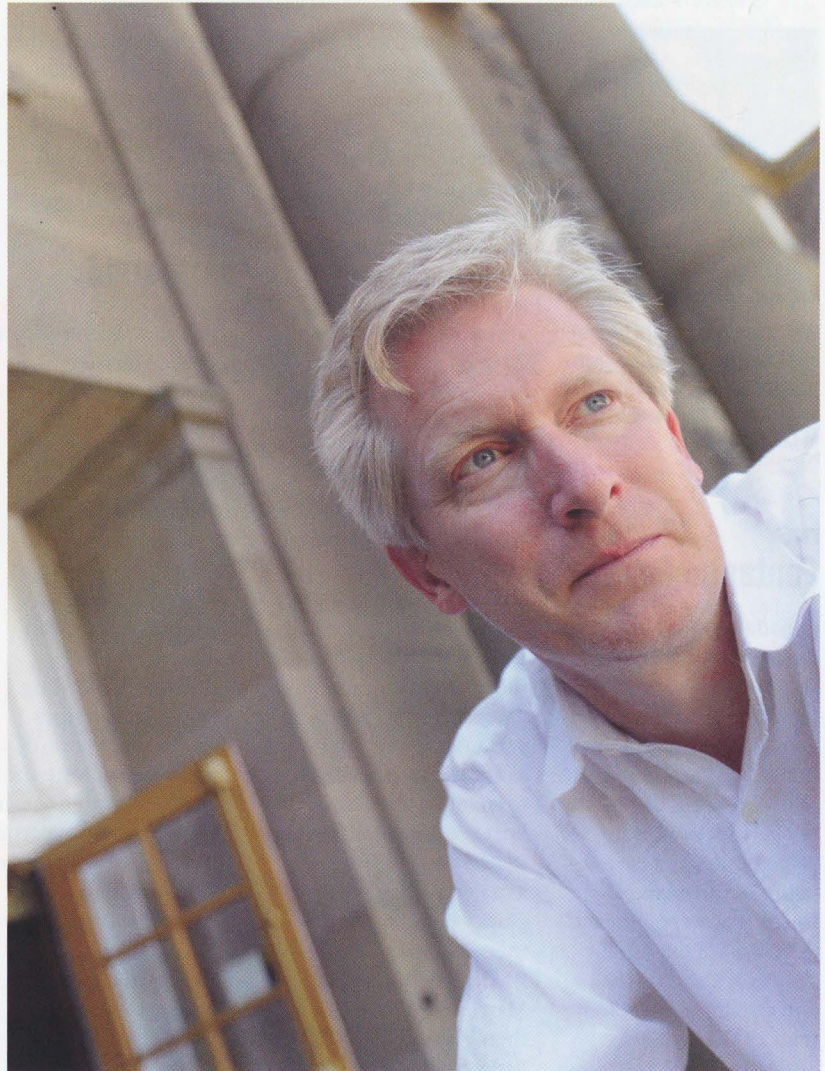
INNOVATION: Award-winning research into the origins of the 2003 Iraq War, using a hypothetical Al Gore presidency to illuminate the nature of modern foreign policy decision-making.

FOUNDATION: Counterfactual analysis, a thorough assessment of how historical events would have unfolded had certain details been changed. This isn't just a superficial “what if”: Dr. Harvey took two years and 350 pages to develop his argument in *Explaining the Iraq War*, winning both “best international relations book” and “best article” from the Canadian Political Science Association.

INSPIRATION: Dr. Harvey saw many logical and factual errors in the widely accepted explanation for the war, which largely held President George W. Bush and his advisors responsible. Frustrated by arguments that a different result in the 2000 presidential election would have prevented the conflict, he decided to test those claims. His research convincingly makes the case for how a Gore White House would have followed a similar course of action.

IN HIS WORDS: “Leaders of large, developed liberal democracies have very little control over the foreign and security policies they implement. In fact, many of these leaders typically adopt the policies of their predecessors, notwithstanding their own ideology, personality, values or belief system. Replacing a leader, in other words, won't change much, and counterfactual historical analysis can play a major role in demonstrating this pattern.”

WHY IT MATTERS: Dr. Harvey's counterfactual analysis helps uncover the complex web of influences that shape foreign and security policy. “Getting the history right is essential to fixing the real problems facing the U.S. intelligence community and avoiding similar catastrophic and costly errors in the future,” says Dr. Harvey. —Ryan McNutt



“Getting the history right is essential to fixing the real problems facing the U.S. intelligence community and avoiding similar catastrophic and costly errors in the future.”

DAL NEWS

NOTES



Prof. Mary Anne White (above) and Dean Thomas Marrie (not pictured) have been inducted as Fellows of the Royal Society of Canada.

Fantastic Fellows

Canada's most distinguished academic society has welcomed two new Dal faculty to its ranks. At a ceremony in Banff, Alta., Thomas Marrie, dean of the Faculty of Medicine, and Mary Anne White, professor in the Department of Chemistry, were inducted as Fellows of the Royal Society of Canada. They join an elite group of more than 2,000 scholars, artists and scientists who are peer-selected as having made remarkable contributions to their fields of learning.

“This is the third year in a row that two of our scientists have been awarded this distinguished honour,” says Martha Crago, Dalhousie’s vice-

president research. “It indicates the exceptional quality of Dalhousie’s researchers.”

Dr. Marrie is well known as a leading infectious disease specialist who has built a distinguished career as a teacher, researcher and clinician. With over 25 years at Dalhousie, his work means people battling diseases like pneumonia can get better, faster.

The RSC recognized Dr. White for her substantial body of work in materials chemistry. Throughout her 30-year career at Dal, Dr. White has explored the role temperature plays in the properties of various materials: how heat can cause materials to change phase; how heat is transmitted within materials; and what role a material’s structure plays when it comes to thermal expansion.

Alongside Drs. Marrie and White, there’s a third new RSC Fellow with strong Dal connections. Kenneth Frank, a researcher from the Bedford Institute of Oceanography and an adjunct professor with Dalhousie’s Department of Oceanography, is renowned for his revolutionary research into the dynamics of marine fish populations

and the ecosystems they inhabit. —*Maeghan Murphy and Ryan McNutt*

New global oceans partnership

In January, Dal President Richard Florizone and Vice-President Research Martha Crago accompanied the Canadian government delegation on a visit to Israel. While there, Dr. Florizone, together with President Rivka Carmi of Ben-Gurion University, one of that country’s leading research universities, signed a new memo of understanding with the goal of combining oceans scholarship and expertise between the two schools.

The agreement allows for several facets of interuniversity collaboration. The end objective is to create an Ocean Studies Center in Eilat that encompasses scientific and academic programs from both countries. Helping make the agreement possible is Canadian philanthropist and Dal School of Law namesake Seymour Schulich.

“The excellent science done by Marlon Lewis and other Dal

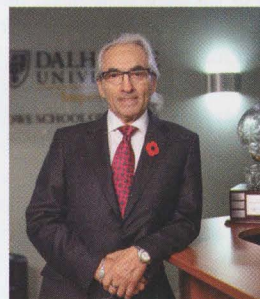
ocean researchers, together with Seymour Schulich’s strong support and Martha Crago’s facilitation, has given great momentum and credibility to our partnerships with leading Israeli universities and research institutions,” says Dr. Florizone.

—*Ryan McNutt*

Ethical leadership recognized

One of Canada’s most influential Aboriginal leaders and a knighted businessman—two very different stories, united by a commitment to ethical leadership.

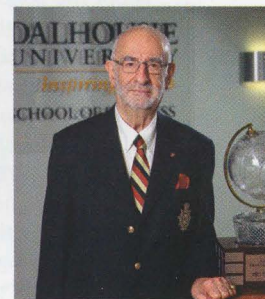
In November, Chief Phil Fontaine and Sir Graham Day were announced as the inaugural recipients of the Scotiabank Ethical Leadership Award, presented at the Ethics in Action case competition



and conference, hosted by the Rowe School of Business. The award and event are supported by a \$1.5 million donation made to Dalhousie by Scotiabank, announced last April.

“Ethical leadership is about defining the greater good of those you lead and striving to make decisions consistent with it,” said Chief Fontaine. “For First Nations’ leaders this often makes us unpopular. More often than not, the greater good for our people is not for the perceived greater good of the majority.”

Said Sir Graham, “I’ve tried all my life to do ‘the right thing’ because, simply, that’s how I was raised. For me, law school and subsequently law practice enforced those behaviours. I hope it’s not just my age, but today I observe too many corners being cut and easy ways out taken, including doing nothing.” —*Colin Craig with Ryan McNutt*



The first Scotiabank Ethical Leadership Awards recognized Chief Phil Fontaine (left) and Sir Graham Day (right).

100 DAYS OF LISTENING

LISTENING, LEARNING AND LOOKING AHEAD

You can fit a lot of listening into 100 Days. Try 554 separate meetings with students, faculty, alumni, community leaders and others; 48 in-person consultation sessions; 766 individual online submissions; and 140 blog posts on Tumblr.

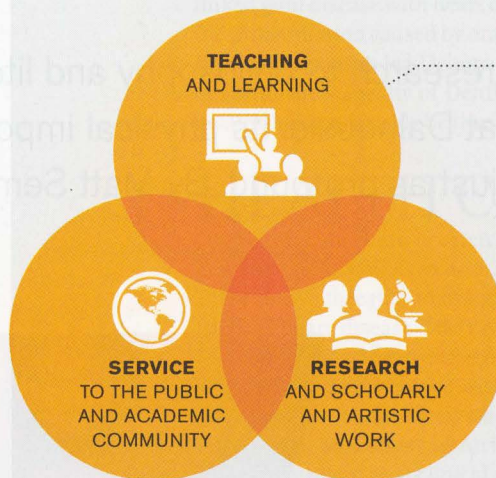
In mid-November, Dal President Richard Florizone wrapped up his *100 Days of Listening* campaign, a deliberate program of meetings, consultations and data gathering structured to engage as many internal and external stakeholders as possible. The goal: to introduce Dal's new president to the Dal community and deepen a collective understanding of the strengths, opportunities, weaknesses and threats faced, both now and in the future.

Just before the holiday break in December, the *100 Days of Listening* final report was released online. At 197 pages, it's no small read, but broken into chapters ranging from "Teaching & Learning" to "Research" to "Infrastructure," it offers a compelling, thorough look at the state of Dalhousie as it approaches its third century.

"During the consultations, I said that writing the definitive thesis on Dalhousie might take five years; this is the 100 days version of that thesis," says Dr. Florizone. "It was about generating as much information and opinion as we could, quickly, to offer a foundation for further discussion."
—Ryan McNutt

Read the full report, as well as its individual chapters, at dal.ca/100days

EMERGING PRIORITIES



EXPAND THE TRANSFORMATIVE POWER OF EDUCATION

- First-year retention
- Innovation in teaching and pedagogy, including e-learning
- Faculty-based program review
- Smart growth and student recruitment
- Non-academic student experience

STRENGTHEN THE ENVIRONMENT FOR SIGNIFICANT REFLECTION AND DISCOVERY

- Priority research areas
- Institutional framework
- Graduate student support

CATALYZE THE INTELLECTUAL, SOCIAL AND ECONOMIC DEVELOPMENT OF OUR COMMUNITIES

- Assessment of opportunities for public service
- Knowledge transfer and start-up support

PARTNERSHIPS AND REPUTATION

RECOGNIZE THAT NOBODY DOES ANYTHING ALONE

- Global Top 200 and reputation project
- 200th anniversary celebration and campaign

FACULTY AND STAFF

- Employee feedback
- Diversity and inclusiveness
- Compensation and pensions

FINANCES

- Operating budget sustainability
- Debt policy
- Cost efficiency

INFRA-STRUCTURE

- Multi-year capital plan
- University IT systems
- Classroom utilization
- Environmental sustainability

STRENGTHEN INSTITUTIONAL CAPACITIES

- Attract and support the best people
- Sustainable finances
- High quality spaces

MOVING FORWARD

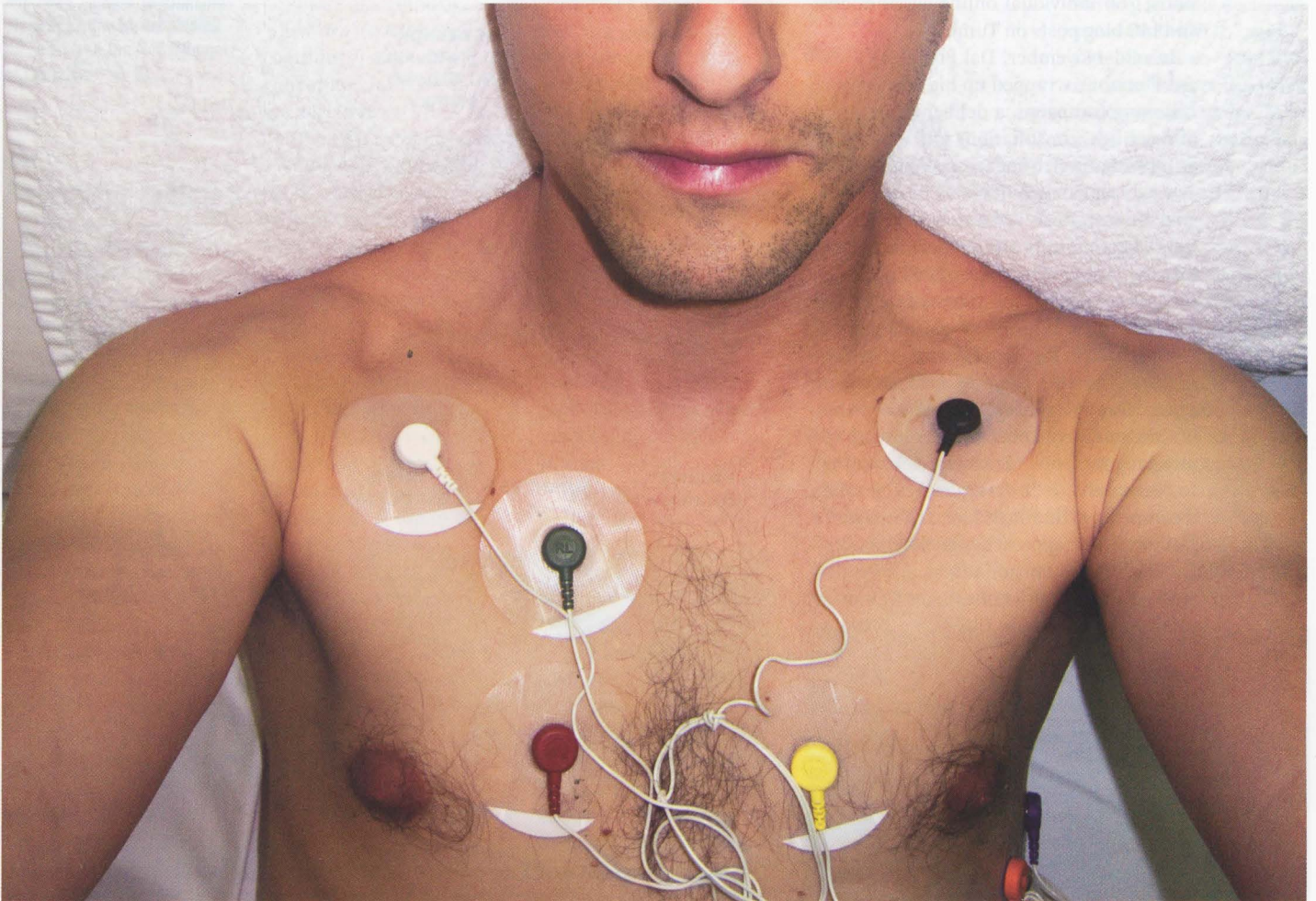
Currently, the president and the university's executive team are consulting to get reactions to the *100 Days* report and debate its findings. By June, the hope is to have refined the draft priorities into a strategic direction that would

go to Dal's Senate and Board of Governors for approval. The second half of 2014 would then be spent defining goals and timelines for each priority, leading to an integrated university plan by year's end.

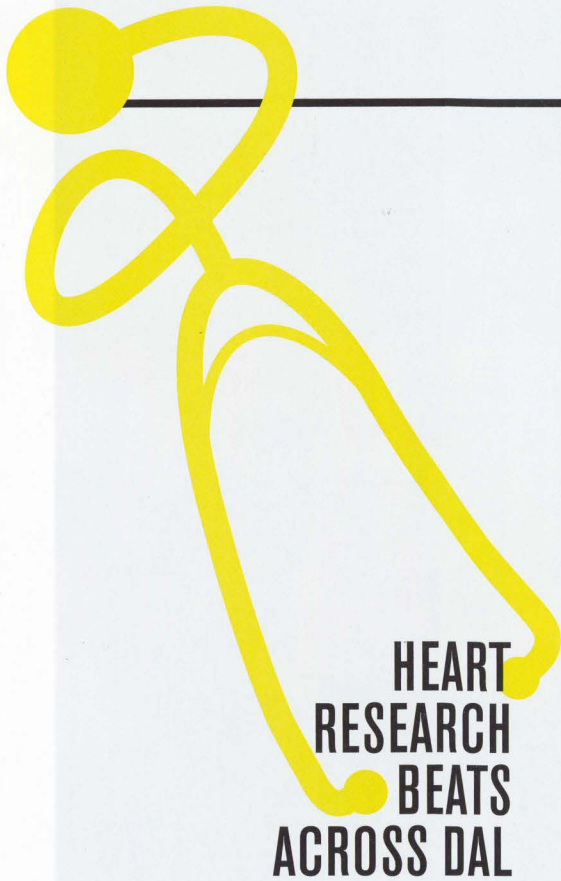
THE HEART OF THE MATTER



From medical research to philosophy and literature, the human heart is the focus of much study at Dalhousie. Its physical importance is clear, but it turns out its symbolic meaning is just as profound. By Matt Semansky



"IN HEALTH CARE THERE IS OFTEN A LONG GAP BETWEEN THE PROOF OF A NEW TREATMENT'S EFFECTIVENESS AND ITS IMPLEMENTATION IN THE FIELD."



1 HEART HEALTH

Although causation has not been proven, several studies have linked gum disease with heart disease, with researchers pointing to the inflammation caused by oral bacteria as the most likely connection. These studies led Debora Matthews, assistant dean, research at Dalhousie's Faculty of Dentistry, to suggest that "the route to a healthy heart may truly be through a healthy mouth."

2 HEALTH CARE

"In health care there is often a long gap between the proof of a new treatment's effectiveness and its implementation in the field. These delays threaten to exacerbate the health and economic impacts of heart disease." So says Jafna Cox, professor of medicine and community health and epidemiology at the Dalhousie Medical School. Dr. Cox has joined with Raza Abidi of the Faculty of Computer Science for the Integrated Management Program Advancing Community Treatment of Atrial Fibrillation (IMPACT-AF) study. Their hypothesis? That clinical decision support systems—computer applications that help health-care providers to make safe, standardized decisions based on the best evidence and data—can more quickly "bridge the gap between research and care."

3 CARE & AFFECTION

Natalie Rosen, director of the Couple and Sexual Health Laboratory at Dalhousie, has found evidence of tangible links between love and sex to accompany the many conceptual ones. In a study she conducted with women who experience pain during intercourse, having male partners who were more affectionate and helped women to cope with the pain by, for example, engaging in non-painful sexual activities, was linked to women experiencing less pain and more sexual satisfaction. "It's possible that intimacy and empathy had a direct impact on women's physical experiences," says Dr. Rosen.

HEART SMARTS

THE THOUGHTFUL HEART

The brain and the heart are often thought of as oppositional forces in their influence on human behaviour. But Duncan MacIntosh, chair of the Department of Philosophy, doesn't see it that way. Dr. MacIntosh's research into rational thought views the heart as the part of the nervous system where emotions are felt—emotions that in turn shape our goals and objectives.

"Rational decisions are supposed to be in the service of our goals, so without the heart and emotions, there could be no rational decisions."

THE MYSTERY REMAINS

Ronald Huebert, a professor in the Department of English, says literature has assigned an air of seductive secrecy to the human heart. From Hamlet protecting himself against those

who "would pluck out the heart of my mystery" to Sylvia Plath accusing the Daddy "who bit my pretty red heart in two" to the Ron Sexsmith song "Secret Heart," Dr. Huebert says "the language of the heart changes over time, but the desire to have the heart stand for a mysterious inwardness goes on."

"RATIONAL DECISIONS ARE SUPPOSED TO BE IN THE SERVICE OF OUR GOALS, SO WITHOUT THE HEART AND EMOTIONS, THERE COULD BE NO RATIONAL DECISIONS."

BIG DATA'S PROMISE

To its proponents, big data offers a big promise: insight into complex—and critically important—questions in health care, science, business and more.

IMPLEMENTATION IN THE FIELD

COULD BE NO RATIONAL DECISION.

BIG DATA DEFINED Big data is the buzz term used to describe data sets that are huge, flow fast and often contain different forms of data. Computer scientists and data analysts have come to use the three key "Vs"—volume, velocity and variety—to identify situations that require big data strategies. Though key, those three Vs don't cover everything. Big data also has to consider the veracity, volatility and validity of data sets. Needless to say, big data is complex: it's a challenge to collect, manage, store and analyze. But the last V sums it up quite nicely: big data can lead to big, valuable solutions.

BIG DATA'S DILEMMA

But its detractors say it poses big risks for individual privacy. Enter Dal's new Institute for Big Data Analytics, poised to explore this challenging new field of study.

BY NIKKI COMEAU

A premature baby sleeps in a hospital incubator,

monitoring devices set up to track heart rate, blood pressure, body temperature and more. In the past, those vital signs would have been checked at regular intervals—perhaps once an hour—with deviations signaling the need for medication or some other intervention. But what if, instead of just checking a half dozen vital signs once an hour, a computer monitored thousands of readings continuously? And what if the data from dozens of babies were analyzed to find correlations between vital sign shifts and the later development of infections or other health problems?

In the past, analyzing millions—even billions—of bits of data and mining it for these kinds of insights was impossible. It was literally too much information, the interrelationships too complex to unravel. But today, with increased computing strength and complexity, researchers are able to examine what's come to be called "big data," with the possibility of finding valuable insights in that stream of information more and more likely. In the case of the preemies, for instance, researchers in the Artemis Project at Toronto's Hospital for Sick Children used big data strategies to track babies' vital signs and discovered that changes in a baby's heart rate can indicate infection prior to any other signs or symptoms—an early warning that can have life-saving implications.

Those possible benefits—in health care, science, business and more—are what excites Dalhousie's Stan Matwin, Computer Science professor and Canada Research Chair in Visual Text Analytics. Dr. Matwin is the director of the Institute for Big Data Analytics at Dal, the first academic research institute of its kind in Canada. Since its official launch last summer, the institute has sealed several research deals with partners locally, nationally and internationally, to study topics ranging from traffic patterns in big cities to targeting search-engine users with ads for a specific online retailer. As well, the institute has conducted big data workshops for small businesses in Nova Scotia, teaching entrepreneurs the value that may be embedded in the data they can or do collect—everything from cell phone location data to GPS data from moving vehicles.

"We actually think about this data as an asset," explains Dr. Matwin. "What can we do to massage this data, how can we use algorithms on it, how can we extract [knowledge] from it? And, knowledge, as we know, is power."

BIG DATA AND HEALTH CARE'S BIG PICTURE

The benefit of tracking and analyzing vital signs in preemies is clear. But are there possibilities for improving the overall delivery of health care by collecting and analyzing even more massive amounts of data? Adrian Levy, department head and district chief of Community Health and Epidemiology in Dalhousie's Faculty of Medicine believes there is. A keen observer of technological advances in medicine and elsewhere, Dr. Levy sees an opportunity to explore big data strategies that could improve overall health care efficiency and delivery.

"Almost half of provincial and territorial budgets in Canada are being consumed by health-care budgets," he explains. "So really, it's among one of the biggest social concerns of any developed country in the world, including here in Nova Scotia and in the Maritimes." It's an area of particular concern for Dr. Levy, as principal investigator of the Canadian Institutes of Health Research-funded Maritime Strategy for Patient-Oriented Research. The strategy is focused on the implementation of innovative medical approaches; delivering high-quality, cost-effective health care; and ensuring patients receive intervention at the right time, leading to better health outcomes.

"As opposed to every other sector in society where we've seen huge productivity gains from improvements in computing speed, health care, up until now, has remained remarkably impervious to the benefits [of the whole IT revolution]," says Dr. Levy. Advances using big data in medicine have been happening, but they tend to be specific to an area of care or practice—like the preemies example—versus an approach that looks at overall systems and delivery.

Dr. Levy cites challenges like confidentiality issues that make IT integration across the many units in health-care environments difficult, but he still believes there's a role for big data to play. That's why he has been consulting with Dr. Matwin.

"Health care is an excellent source of big data," says Dr. Matwin. "More and more, we see computers infiltrating the health-care world in both the research and the delivery. And not just computers, but different devices that use data in massive amounts, like imaging devices. You have patient data, test data, genetic data. They're coming in totally different forms and just putting them together is a challenge."

How can it all be put together for the benefit of the health-care system? That's the question Dr. Levy and Dr. Matwin are exploring together. Dr. Levy explains, for example, that in some cases, often with patients suffering multiple chronic illnesses, tests can be duplicated. "Our computer systems [that capture data] aren't talking to each other," he says.

Before any type of integration strategy, however, Dr. Levy and Dr. Matwin need to first assess the landscape. They're currently looking at what data sets already exist and how they can best be analyzed and optimized to ultimately reach the goal of better health care in this region.

One project they're poised to launch involves geographic data. Dr. Levy wants to better understand Capital Health District Authority's patients and where they're coming from, since the health authority is the province's main referral centre. The plan is to display the data visually on an interactive map that can be used to better inform policy analysts and decision makers.

KEEPING PRIVATE DATA PRIVATE

But while big data collection and analysis may have benefits, confidentiality is a real concern. Will gathering data about preemie babies and infection rates, for instance, put individual children at risk of having their health information tracked and, say, shared with an insurer years in the future so they're denied insurance—or charged more for it?

Dr. Matwin is optimistic that such risks needn't come to pass: he believes that it's possible to collect plenty of data to analyze while at the same time creating security procedures that protect the privacy of those who've provided it. "In every project we do [at the Institute], we think about the privacy issues from the beginning," he says.

It's a concept called "privacy by design," a Canadian idea first proposed by Ontario Privacy Commissioner Ann Cavoukian. It means building systems that accommodate and analyze data with privacy methods already embedded in the original design versus as an afterthought. "If you have a system used to share and publish data information about individuals, and you only start thinking about making this data private by removing identifiable information once you've already built the system, it's too late," says Dr. Matwin.

Existing privacy methods aren't perfect and Dr. Matwin is among several researchers investigating ways to improve information privacy. Adding "noise" to the data—random, irrelevant values—acts as camouflage, and individual data points begin to lose any sense on their own, making it difficult to pull out an individual's data and use it for other purposes. Another method is called anonymization, where an individual data point is made to look like 50 others, 100 others, etc. Dr. Matwin compares it to the scenes in movies where someone escapes into a crowd. "You know, they're looking for you in a busy marketplace and you try to look like everybody else so it's harder to find you."

These two methods, however, require tweaking the data, and some critics argue this degrades its quality. "The dream here is to develop methods that, on the one hand, protect the data and, on the other hand, don't change it at all," says Dr. Matwin.

This magic method, he thinks, is a cryptographic one. "It's like a digital envelope," explains Dr. Matwin. The data's owner would seal an envelope containing raw data and send it through a system that could analyze it without having to actually open it and look inside. The envelope, now containing results, would be sent back to the owner. The method could even combine different sets of data from different owners, which is even harder to accomplish due to the usual legal framework around sharing data sets. This would be particularly beneficial with health data. However, the cryptographic method is still theoretical. Dr. Matwin says we're likely to see significant progress bringing it to the practical level within three to five years.

In the meantime, many citizens are willing to take part in such health-care studies with existing privacy standards in place. "Several focus groups have asked patients about the use of routinely collected administrative health data for patient care, even though they don't stand to benefit," explains Dr. Levy. "Patients want the data to be used. As long as you can assure them that anonymity and confidentiality are protected, people are pleased to see their data being used to improve the system."

Still, that willingness to share data may vary under other circumstances—the collection of data by, say, a retailer or social media company like Facebook or Twitter so they can target consumers with more effective advertising or, more controversially, the collection of national security data with the goal of spotting potential terrorist activity. Are there circumstances in which we should trade some privacy for some other benefit? These are questions Dr. Matwin believes need to be addressed as big data analytics and technology continue to advance. "There's a need [for society] to talk about the new deal for data. And it's not something that a bunch of university professors will make happen alone."

JOINING FORCES WITH IBM

Adding to Dal's big data portfolio is its participation in a unique collaboration between seven post-secondary institutions in Nova Scotia and IBM Canada. The goal of the Collaboration for Analytics Research, Education and Technology (CARET) is to help position Nova Scotia as a leader in big data analytics training and careers. IBM has provided CARET with a multi-million dollar shared computer system, or "cloud," which is hosted at Dal and is the first of its kind in the Atlantic region. The system forms a shared computing platform that will allow all the institutions to conduct research and create new curricula together.

FISHING FOR DATA

OVER 60 SPECIES and 34,000 individual animals. More than 66 million animal tracking records. Receiver lines that run as far as 250 kilometres and up to 200 metres deep. Other receivers mounted on wave gliders, buoys and seals, tracked via satellite. With that much information to work with, how could anyone make sense of the data spilling out of Dal's Ocean Tracking Network (OTN)?

"Oceans research in particular produces huge amounts of complex data," says Bob Branton, the director of data management for the network.

Why does understanding that data matter? Teasing out patterns and relationships among variables allows researchers to track where fish and other marine life travel, why they behave as they do and what factors disrupt their habitats, making it easier to designate new marine protected areas, set shipping routes and ensure oil and gas exploration takes ocean habitats into account.

And thanks to the tools and strategies associated with big data analytics, not only can researchers make sense of that huge volume of information, they are also uncovering unexpected relationships that cross disciplines. "Big data allows us to study patterns that would have been prohibitively difficult and expensive to study in the past,

and creates the opportunity to discover new relationships between marine organisms and the physics and chemistry of the ocean that we didn't even realize were there," explains Matthew Beck, an oceanography graduate student working in the observational branch of OTN under oceanographer John Cullen.

What does that data tell us? OTN's 86 completed projects and 75 ongoing projects—involving researchers from 16 countries and counting—include various projects by Fisheries and Oceans Canada. Research scientists at the Bedford Institute of Oceanography use data from the Halifax Line, the world's longest acoustic telemetry line, to learn more about species such as salmon, haddock, sturgeon, seals, sharks and cod, and to assess fishing stocks. They collect information on the movement of animals as well as related environmental parameters such as salinity, depth, water temperature and light conditions.

It's not a small task, but it is well worth the effort. Data collected on the abundance and distribution of these stocks is combined with environmental and migratory data. That sets the stage for social, economic and legal discussions of ocean governance of fisheries in Canada and around the world in an effort to avoid horrific species collapses like that of the Atlantic Cod, a stock that has

shown no signs of recovery since its fishing ban nearly 25 years ago.

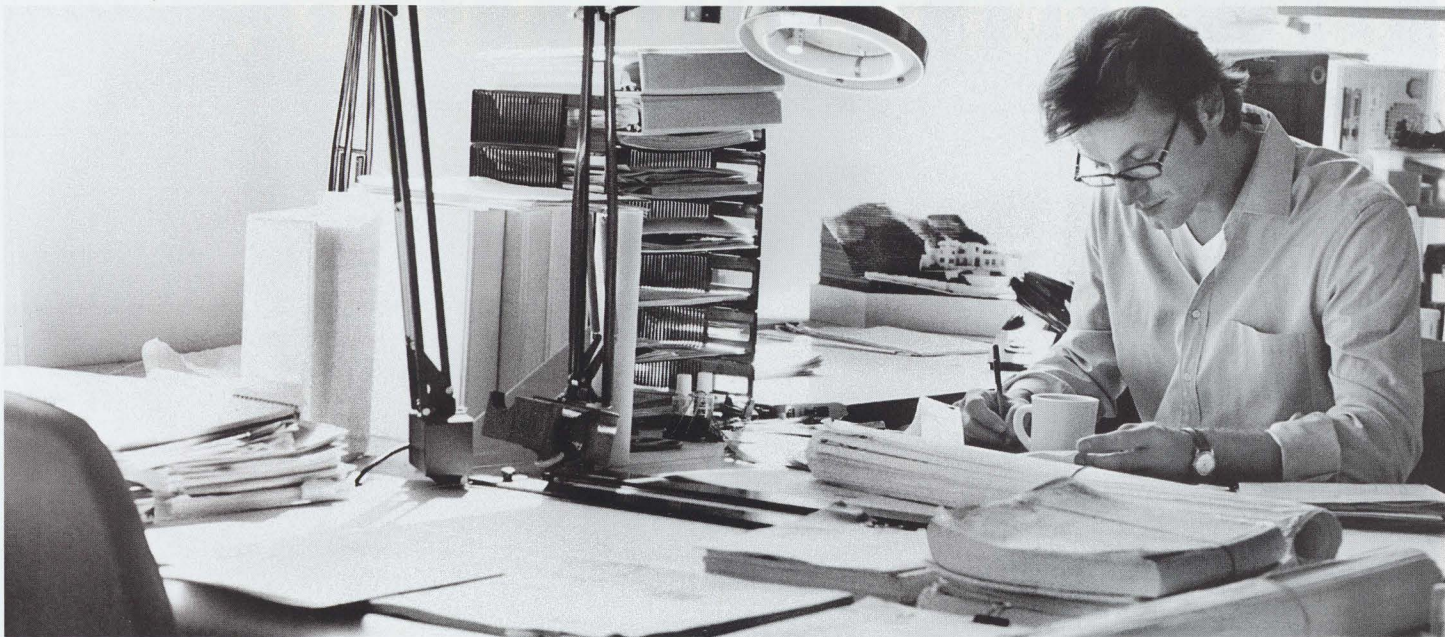
With OTN's main goal being conservation, many projects focus on at-risk species. Dal Oceanography Professor Jinyu Sheng's ocean modeling research group studies the American eel, whose high risk of being sourced from unsustainable fisheries has placed it on Greenpeace International's seafood red list. The data warehousing capabilities of OTN allow this group to incorporate a huge increase of observations of rapidly changing marine conditions into models examining eel swimming strategies and migration speeds. That in turn sheds light on how we can best manage and react to these changes in order to maintain populations of at-risk species like the American eel.

Almost 30 additional projects are awaiting approval. All projects are able to tap into the network's online database for project members so that the millions of pieces of data already collected can be mined for new insights and correlations. That data means that researchers can "study the ocean at an unprecedented resolution in both time and space," says Oceanography student Beck. "OTN provides the infrastructure and interdisciplinary connections that not only make this kind of research possible, but also make it relevant and accessible."

— Matthew Kennedy



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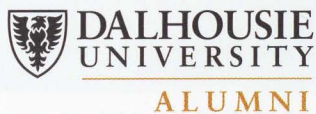
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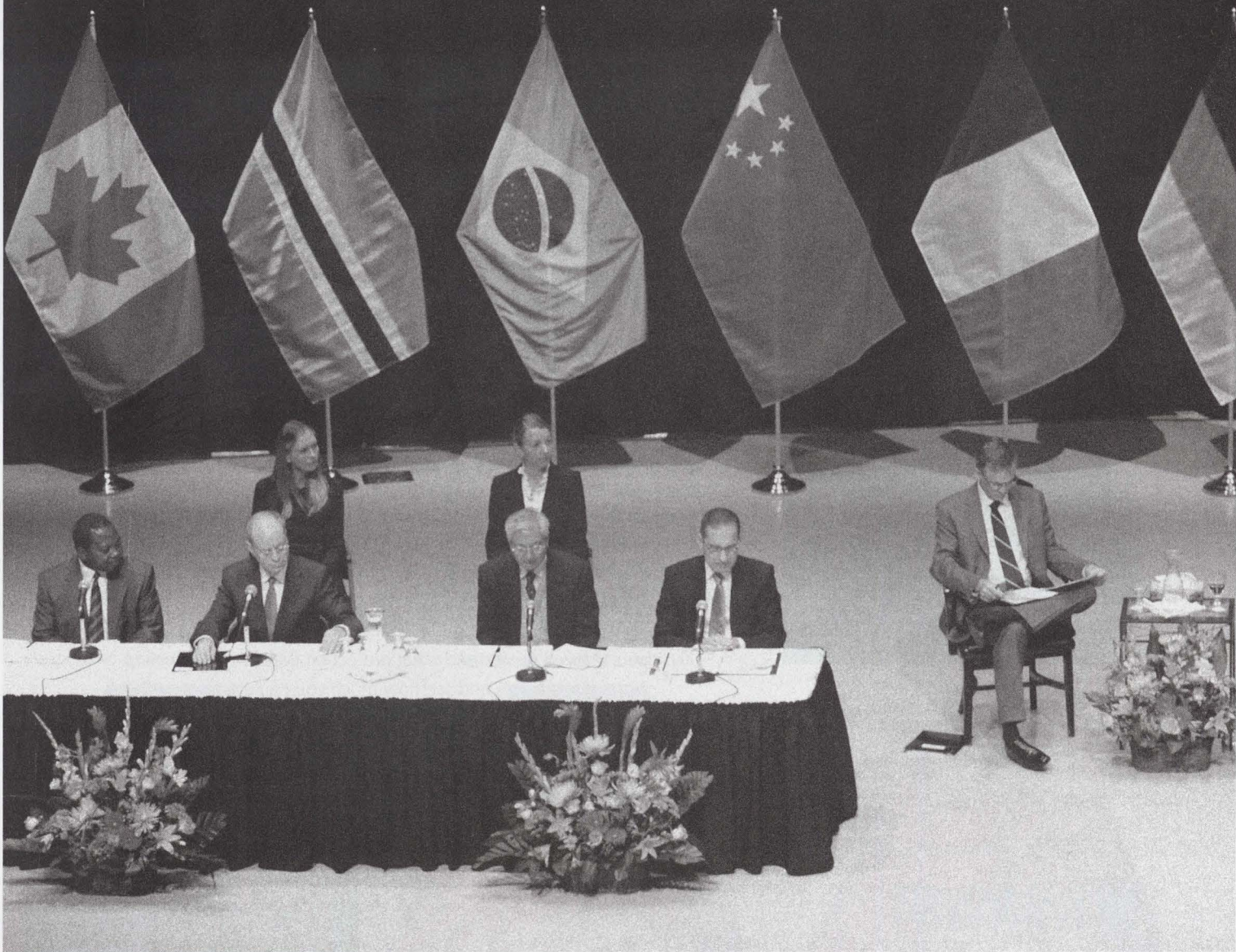
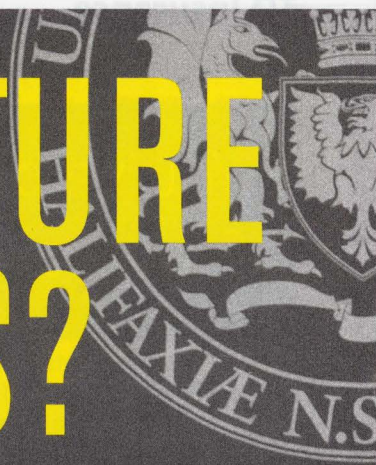
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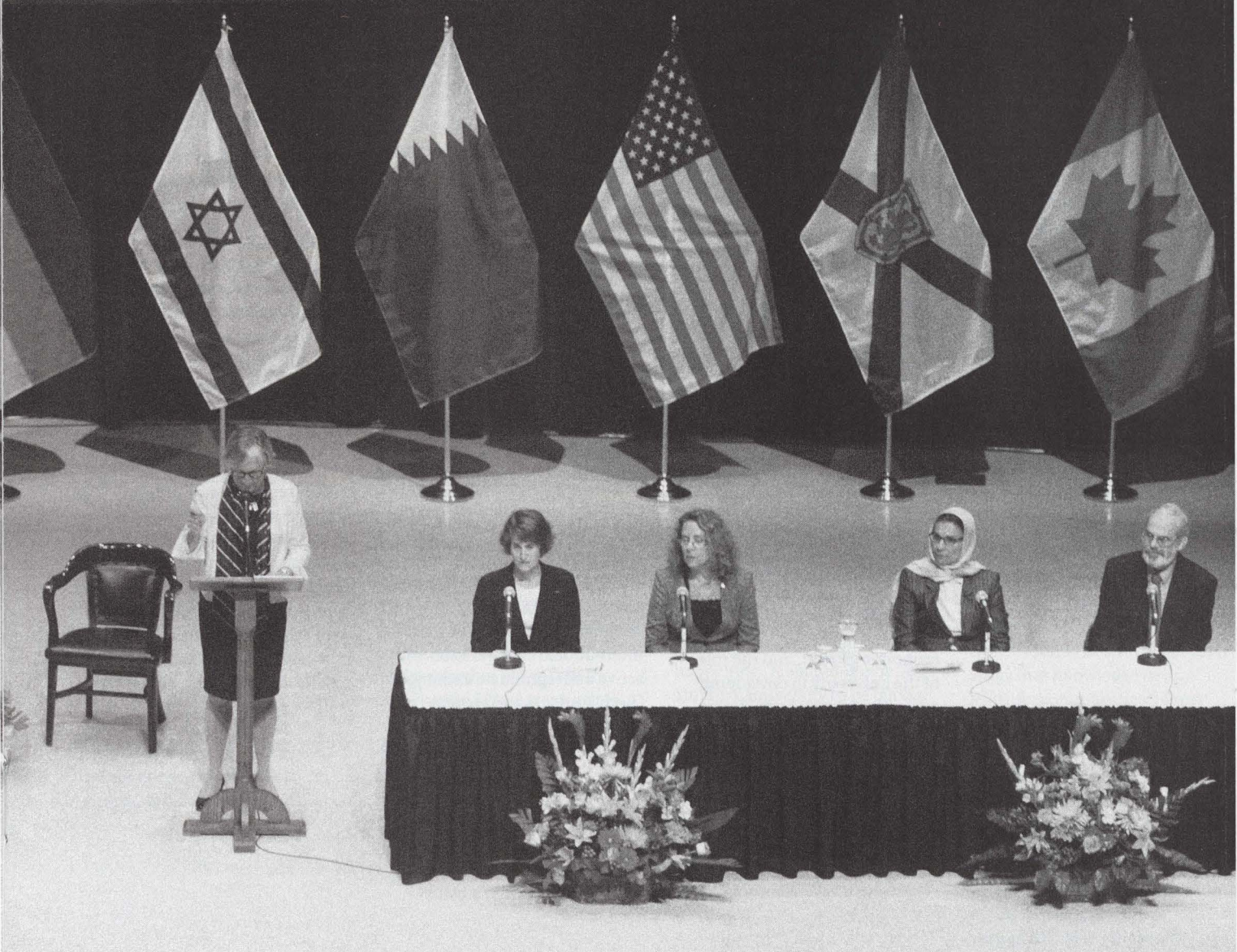
WHAT IS THE FUTURE OF UNIVERSITIES?



This page, seated from left to right: Dr. Bojosi Othogile, Dr. Joaquim Clotet Marti, Dr. Xu Zhihong, Dr. Gerhard Fouquet, Dr. Richard Florizone (translators standing)



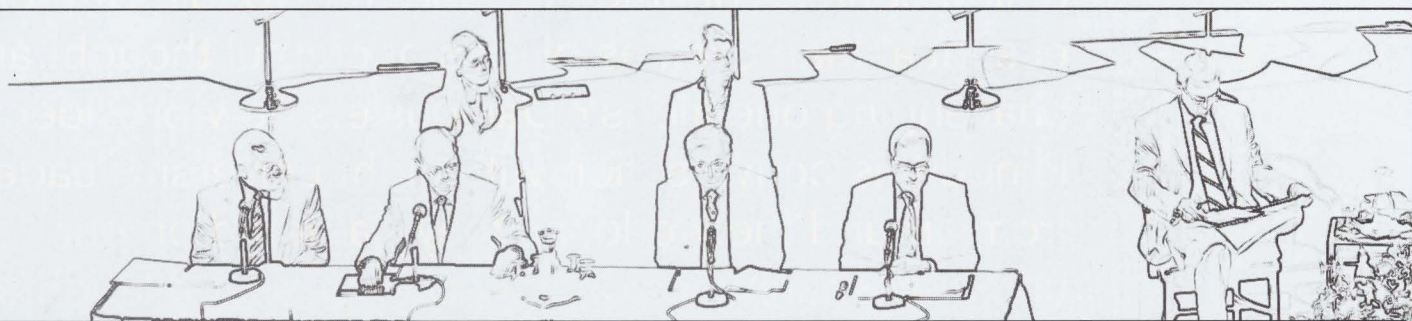
Are universities obsolete, about to be replaced by online courses beamed around the world? Or more essential than ever, as places of careful thought and challenging questions? Dalhousie's new president joined this conversation with eight university leaders from around the world, as they gathered on our campus, sharing insights, challenges—and laughter.



This page, from left to right: Dr. Martha Crago (moderator, standing), Dr. Marie-Christine Lemardeley, Dr. Rivka Carmi, Dr. Sheikha Abdulla Al-Misnad, Dr. Eric Grimson

INTERNATIONAL PRESIDENTS, INTERNATIONAL INSIGHTS

Eight university leaders share their experiences positioning their universities to tackle the challenges of the future



DR. BOJOSI OTLHOGILE
FORMER VICE CHANCELLOR,
UNIVERSITY OF BOTSWANA

His challenge: Inventing an institution that would foster the hopes of a relatively young independent nation, attracting and keeping its brightest minds rather than losing them to other countries.

His strategy: Partnering with universities internationally to expand the university's focus to include science and medicine programs.

His insight: "Technology will be an enabler but, in my view, will not replace campus experience. What is required of us is to blend the technology we have with the campus experience that is available in all our universities."

DR. JOAQUIM CLOTET MARTI
RECTOR, PONTIFICAL CATHOLIC
UNIVERSITY OF RIO GRANDE
DO SUL, BRAZIL

His challenge: Transforming academic achievement into entrepreneurial innovation, and supporting research collaboration and student mobility.

His strategy: The development of the first incubator-accelerator technology park in Brazil, called TECNOPUC, home to 60 world-leading technology companies, over 140 research and development projects and 18 start-up incubators. Also, under his leadership, the university has forged alliances with leading educational institutions in more than 25 countries.

His insight: "New knowledge is the most important factor in economic growth, and the role of the university in developing new industries and generating regional growth is evident nowadays. The contribution of the entrepreneurial professor, consulting and working closely with business, is currently a new paradigm."

DR. XU ZHIHONG
FORMER PRESIDENT OF
PEKING UNIVERSITY

His challenge: To help lead China's post-secondary educational reform.

His strategy: The establishment of the Beijing Forum on Higher Education, a gathering of university leaders from around the world to share educational philosophy, ideas and advances. Under his leadership, Peking University has emerged as a major scientific and scholarly powerhouse with a striking international reputation.

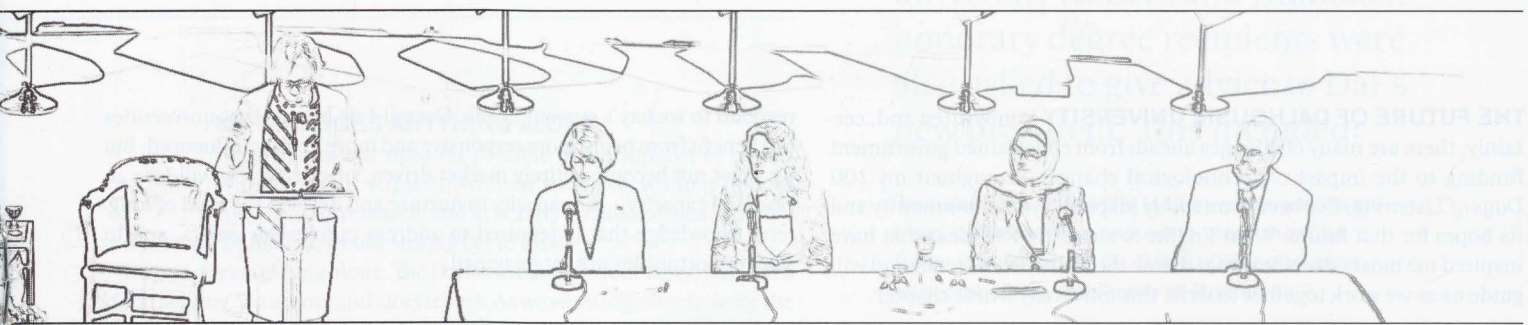
His insight: "Active international exchange and collaboration is very important if we want to become international leaders. That's why we really paid more attention in the past 20 years to stimulate professors, get more international collaboration and active undergraduate exchange. [Both students and faculty need to have] a global vision."

DR. GERHARD FOUQUET
PRESIDENT OF CHRISTIAN-
ALBRECHTS-UNIVERSITY
AT KIEL, GERMANY

His challenge: To carve out a position of stature on the world stage for his midsized university.

His strategy: To focus his university's resources, priorities and international cooperative efforts in key subject areas, such as ocean sciences, by establishing unique international partnerships with universities that share similar specialties, influence and stature.

His insight: "The university of the future needs a certain smallness. It is our individuality that engages our researchers and students. But of course the global perspective is still right.... It is the sphere of strategic partnerships with other universities. And it is the scope by which our results are measured."



DR. MARIE-CHRISTINE LEMARDELEY
PRESIDENT,
UNIVERSITÉ SORBONNE
NOUVELLE-PARIS 3

Her challenge: Strengthening the academic standing and student life experience at this centuries-old institution.

Her strategy: Under her direction, the university has forged new international connections, fostered new opportunities for students to contribute to their communities and beyond, and built on the university's reputation for pedagogical innovation by, among other efforts, expanding its distance education opportunities.

Her insight: "It's all about being 'glocal'—that is to say, global and local—offering students and researchers from all over the world the opportunity to experience first-hand what local societies and communities have to offer. This contact with local reality and universal thinking breeds open-mindedness, the driving force behind intellectual strength."

DR. RIVKA CARMİ PRESIDENT
OF BEN-GURION UNIVERSITY OF
THE NEGEV, ISRAEL

Her challenge: Leading a university established to meet southern Israel's unique educational, developmental and research needs.

Her strategy: Developing strength within Israel by encouraging closer relationships among her country's research universities and semiprivate colleges, and developing deep expertise on issues of pressing local concern—such as advanced water technologies and desert agriculture—thereby providing opportunities for leading-edge collaborative research relationships around the world.

Her insight: "[It is key to ask] what are the strengths in teaching and research, and what are the most attractive topics and issues that fall within the local needs, but also can attract the international interest from faculty, students and—what I think is more important—the level of collaboration between universities."

DR. SHEIKHA ABDULLA AL-MISNAD
PRESIDENT OF QATAR UNIVERSITY

Her challenge: To telescope into a few short years the development of a world-leading educational institution on a par with others that have decades—and even centuries—of history.

Her strategy: Involvement in improving all levels of education within Qatar, from pre-school to secondary levels, alongside leading the charge on post-secondary development. She has forged international relationships with leading universities around the globe, and played an instrumental role in the World Innovation Summit for Education—or WISE—conference.

Her insight: "Globalization should not be an aim, it's a process. It's how universities are influenced by what's happening. It should not be an aim for a university to be 'global' unless it defines what 'global' means to that university."

DR. ERIC GRIMSON
CHANCELLOR OF MASSACHUSETTS
INSTITUTE OF TECHNOLOGY

His challenge: Fostering innovation and entrepreneurship, and leading the way in creating a positive student life experience.

His strategy: MIT fosters innovation in many ways, beginning with offering more than 500 courses in innovation or entrepreneurship, creating incentives and opportunities for students and staff to create new businesses and inventions, encouraging innovation in both for-profit and public sector projects and contributing to the ecosystem of private research and technology companies that have emerged in the area around the campus.

His insight: "[In the future, students may sit in on lectures from around the world, but then apply that knowledge in local learning communities.] Every institution of higher learning has an opportunity to bring back in the local expertise, to put the local colour and flavour on it: flipping the classroom and enabling faculty to focus on active learning; group problem-solving; amplification of foundational material with practical exploration; and especially, leading the dialogue in the local community about where that matters."

THE VIEW FROM DALHOUSIE

At his installation ceremony, President Florizone reflected on the ideas upon which Dalhousie is built—and the ideas that will inform its future.

THE FUTURE OF DALHOUSIE UNIVERSITY is unwritten and, certainly, there are many challenges ahead: from constrained government funding to the impact of technological change. Throughout my *100 Days of Listening*, I've been immensely inspired by this community and its hopes for that future. What I'd like to share are five ideas that have inspired me most—five ideas that define the Dalhousie of today and will guide us as we work together to write this university's next chapter.

1. THE TRANSFORMATIVE POWER OF EDUCATION

The first of these ideas, and perhaps the foremost, is the transformative power of education: the power of education to transform the lives of individuals.

We welcome our students at important life transitions: undergraduates on the edge of adulthood, graduate students on the cusp of discovery and understanding. Here, they encounter and are often challenged by new ideas, new ways of thinking, a new global perspective on the world. Two-thirds of our undergraduate students say that when they leave Dalhousie to join the ranks of more than 120,000 Dal alumni, they do so as fundamentally different people than when they arrived here.

Our responsibility is to sustain this university as a place where those transformations are made possible. We do this by attracting and supporting outstanding professors; by increasing opportunities for experiential and applied learning, as well as innovating in our academic programs as with our College of Sustainability; supporting exchange and study-abroad opportunities; and working together with government, donors and other partners to increase access to higher education. Because every student deserves the opportunity to be transformed by the quest for understanding.

2. A PLACE FOR CAREFUL PAUSE

The ability to pause, reflect and challenge is what makes universities unique compared to other sectors of society. Academic freedom, with its right and responsibility to question orthodoxy, gives us the ability to ask the questions no one else is asking. It enables us to pursue discovery research that may well pay off in something extraordinary, and to start uncomfortable conversations that need to be had.

If we don't ask the hardest questions, who will? Other private and public sector entities certainly have a role to play, and are very important partners for the university. But companies are often time-bound by quarterly and annual results, and governments by electoral cycles. What we offer is a longer-term view, with a mode of inquiry that seeks to solve today's problems while also building the knowledge and capacity for an uncertain future.

This focus on the long term can make universities slower to adapt and

respond to society's current needs. Overall I do believe that universities can benefit from being more responsive and more market influenced. But we must not become entirely market driven, or else society will lose an essential capacity—the capacity to nurture and develop the kind of long-term knowledge that is required to address unforeseen events, and to seize opportunities not yet imagined.

3. WHERE THE WORLD COMES TOGETHER

Our story is strengthened by our diversity: in our ability to be a gathering place for ideas that transcend nationality, ethnicity, race and sexual orientation.

At Dal, diversity has been part of our DNA from the very beginning, when Lord Dalhousie sought to establish North America's first non-denominational university. This principle of embracing diversity, of bringing the world together at Dal, continues to this day. At the same time, we know Dal's record is far from perfect. This is a wonderful opportunity for Dalhousie and our region more broadly. A diverse and global campus is a stronger campus. An inclusive and global community is a stronger community. For the Atlantic region to grow and prosper, we need to open our doors to the world. Dalhousie should serve both as an example and a leader in diversity and as a place where the world comes together.

4. A CATALYST FOR OUR COMMUNITIES

A great university should serve as a catalyst for the intellectual, social and economic development of its communities. There are challenges and opportunities in Nova Scotia and Atlantic Canada today, and Dalhousie has an important role to play in addressing them.

To be sure, Dal, like other universities, serves its communities through the three ideas I've already discussed. But I am also inspired by Dal's unique capacity to respond to the needs of our communities. Seventy-five per cent of all the dentists working in Atlantic Canada and more than half of Maritime physicians studied at Dalhousie. Dalhousie researchers are crucial and credible voices in public policy discussions. Dalhousie faculty, students and staff reach out into our communities through services like the Dental Clinic, Dalhousie Legal Aid, the Imhotep Legacy Academy and the Outpost Nursing Program.

And Dalhousie has been a strong partner in nurturing some of this province's most significant recent economic opportunities including the play fairway analysis which has led to significant renewed investment in offshore exploration in Nova Scotia; the establishment of IBM's only Canadian Global Delivery Centre, here in Halifax; and the formulation of Irving Shipbuilding's Value to Canada proposition, which formed part of their successful bid.

Our communities serve us well, and at Dal we take seriously the aim of serving them well in return.

ADVICE FOR A NEW PRESIDENT

Along with their thoughts on the future of universities, the eight university leaders and Dalhousie honorary degree recipients were also asked to give advice to Dal's new president. This included:

"Overseeing a university is like working a jigsaw—every piece matters and every piece must be taken into account." Dr. Bojosi Otlhogile, past vice-chancellor, University of Botswana

"Nothing great has ever been achieved without a great deal of enthusiasm." Dr. Joaquim Clotet Marti, rector, Pontifical Catholic University of Rio Grande do Sul, Brazil

"We face challenges, difficulties and problems every day...we need to be optimistic." Dr. Xu Zhihong, past president, Peking University

"Error is not a weakness but a strength, dreaming is not a fume but fire." Dr. Marie-Christine Lemardeley, president, Université Sorbonne Nouvelle—Paris 3, translating a quote from philosopher and physician Georges Canguilhem

"You just have to love them all: the people who work and learn in your university, the weird entity that a university is by nature and research in all its shape and colours." Dr. Gerhard Fouquet, president, Christian-Albrechts-University at Kiel, Germany

"Beware of the send button.... Before you push this button, really be very careful." Dr. Rivka Carmi, president, Ben-Gurion University of the Negev, Israel

"The first 100 days you will be listening, but I think you have to listen beyond that." Dr. Sheikh Abdullah Al-Misnad, president, Qatar University

"Be bold, but grow a thick skin." Dr. W. Eric L. Grimson, chancellor, Massachusetts Institute of Technology

AND FINALLY, DR. CARMİ SHARED A STORY: A new university president was welcomed by his predecessor, who handed him two envelopes. The first, he told him, should be opened at the time of his first major crisis in the job; the second, at the time of the inevitable second crisis. When that first crisis came, the new president opened the first envelope. "Blame your predecessor," it said, and so he did. Then, some time later, came the second major crisis of his tenure, and he reached for the second envelope. The message inside was simple: "Prepare two envelopes."

5. NO ONE DOES ANYTHING ALONE

What makes our mission possible is the support of others. Without public support, without students, without donors, and without research and scholarly collaborations at home and abroad, Dalhousie would simply fail to exist.

No one does anything alone. The Dalhousie story is your story, with each of you serving as authors and storytellers. As we work together to write the next chapter, let us continue to be pioneers, guided by the strength of our mission; inspired by the values that shaped it; supported by those who share it. I truly believe that Dalhousie has more great accomplishments—your great accomplishments—in the unwritten pages ahead.

There's a fresh Atlantic wind in Nova Scotia. It blows almost continuously, and it is filled with tremendous energy and potential. Let it inspire us to strive for bold new achievements for Dalhousie, for our region and for the world.

Dr. Florizone's remarks were condensed and edited for publication. If you would like to watch a video of his address and hear his remarks in their entirety, go to <http://www.dal.ca/news/2013/10/04/richard-florizone-officially-installed-as-dal-s-11th-president.html>.



Dr. Florizone listens to insights shared by visiting international university leaders.

Letters
FROM
Uncle
HAL



A doctor who had taught generations of ob-gyns and transformed the way women have babies in Canada also helped change the way a kid in Alberta saw the world.

BY JENNIFER ALLFORD

The official looking plaque—all engraved letters on gold—seemed very important. And when I asked Uncle Hal why it was hanging over his toilet, he said that’s where he’d see it most.

I was 11, and completely understood the logic.

The award was one of many honouring my great-uncle for his pioneering work in natural childbirth. I was a long way away from knowing or caring what that was about, but I did understand that Uncle Hal—or Dr. Hal Benge Atlee as was spelled out in the fancy writing above the toilet—was a Very Big Deal in medical circles. And more importantly, he became a very big deal to me.

As chief of obstetrics and gynecology at Dalhousie from 1922 until 1958, Uncle Hal spent his career teaching doctors, caring for women and delivering babies. Shockingly for the time, he treated women as equals. Radically, he told them to get up and move around the day after having a baby, would deliver those babies without routine anesthetics and argued that abortion should be a “matter of demand.”

He was well into his 80s in 1974 when my mom took out a loan to bring her four kids from Edmonton to Halifax to spend time with her favourite uncle. He served us delicious meatloaf (when asked for the secret ingredient, he said the trick was not washing your hands for a week), told us stories about relatives we’d never met and asked for our opinions.

I had just started thinking about the world and Uncle Hal made me think harder. Back in Edmonton, he’d write me letters: “What is your feeling on the following: Women’s rights, The Indian’s rights, and the disadvantages of being a teenager or any other subjects you care to discuss.”

I sent him a Grade 8 essay that assumed there was equality between the sexes, blue loopy scrawl suggesting the angry women should just “cool down.” I didn’t know yet there was a feminist struggle (there didn’t appear to be a problem at Parkview Junior High). I just thought everyone should get along.

I was being too tough on the “the women-libbers” Uncle Hal typed back. “Every great movement has its fanatics and lunatic fringes but they are after all only warts on the face of a great movement for feminine freedom.”

He wrote that married women who stay home are often “made

willy-nilly a chronic beggar” waiting for their husbands to “dole out” money, something I hadn’t really thought about because my divorced mom went to work every day. He went on to argue that women at home should get a regular salary, or “just split the yearly profits from his business.”

We exchanged clippings, including “a very saucy” letter to the editor where he tore a strip off a “gent” who had evidently been speechifying against abortion. Uncle Hal argued: “If contraceptives were further improved and made as readily purchasable as meat and potatoes, that is, if we adults got over some of our sillier fears on the whole subject of sex and faced it sanely and resolutely with our children we could practically banish abortion by making pregnancy a truly voluntary affair.” I was still some years away from worrying about birth control, but I understood that logic too.

Uncle Hal was, after my mom, my first feminist. He adored women, most of all his wife, Margaret, who had dropped dead in the garden in 1967. She had been his partner, editor and supporter—and she kept him laughing too. He wrote of an incident after they’d been canoeing one afternoon: “Her pants dropped on her in front of the old Halifax hotel where some men were sitting smoking. Without missing a step she stepped out of them leaving them to their fate and the old men gaping,” he wrote. “It was one of the slickest things I ever saw her do.”

He was pretty slick himself. On a second visit to see him, I had admired an old photo and charmed by the sepia, I told him he looked like Clark Gable. The photo later arrived in the mail for me, signed “Yours lovingly Clark Gable” in the corner. “Anything new in heart throbs?” he asked in another letter. “If there isn’t I have but one comment: the male teenagers of Edmonton have no initiative.”

At 86, the ardent atheist wrote: “I feel I have lived long enough and it’s time I took off.” He died two years later. By then, I was 16 and beginning to discover first-hand the need for champions of “feminine freedom.”

Every now and then I haul out the stack of letters and try to remember being the kid who received them. But mostly I remember Uncle Hal. And I think of him pretty much every time I throw in a load of laundry—as I look up to see my university degrees hanging above the washing machine.

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Alumni support
makes it possible.

Support from the Dalhousie Fund permitted our Dalhousie Supermilers team to achieve a 9th place team best at the 2013 Shell Eco-marathon Americas competition. Thank you!

Allison Chua, BEng'11, Master of Engineering student

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DAL WINTER 2014

“Women are just as clever and capable as their male counterparts.”

TEACHING
FURTHER

BUILDING A BETTER WORLD

Opening the Lab Door

After being told ‘girls can’t be scientists’, Nancy Jane Lane (MSc’60) became a leading researcher in cell biology at Cambridge University. By Mark Campbell

For nearly 25 years, Nancy Jane Lane, OBE, has been travelling the world encouraging women to consider a future in science. To her, science is not a profession; it’s a calling, a wonderful way of life.

“It’s intellectually absorbing,” says Dr. Lane, who obtained her BSc and MSc at Dalhousie before going on to earn a doctorate of philosophy at Oxford and a doctorate of science at Cambridge (she was also awarded an honorary doctorate by Dal in 1985). “You have the opportunity to travel the world and the potential to help mankind is great. So whenever the opportunity presents itself to disseminate this message, I take it.”

A leading researcher in cell biology and lecturer at the University of Cambridge, Dr. Lane was raised in an era when science was not considered a suitable career option for women. There were times when she felt discouraged, and wondered if she was making any headway at all, “but then,” she says, “I meet women who tell me how I inspired them and never to give up, because what I do is important to them.”

Originally from Halifax, it was Mother Nature—specifically the Atlantic Ocean—that nurtured Dr. Lane’s interest in science. Dr. Lane knew she wanted to study that world, but her career advisor at Queen Elizabeth High School dismissed such notions. “The advisor said girls can’t be scientists; they can only be lab technicians. That’s like being in a kitchen and not being allowed to cook. I thought, ‘I’ll show you that I can be a proper scientist.’”

She would find a much more supportive academic environment at Dalhousie, which she chose because it had offered her a scholarship and enabled her to live at home. “I did well and the fact I was a girl was never held against me,” says Dr. Lane. “There was no reluctance to consider me as a potential scientist.”

She also found a mentor and inspiration in Prof. Dixie Pelluet, who taught courses in invertebrate zoology and genetics. “She was a remarkable educator and very supportive. To see a woman teaching at a

university at that time was somewhat rare, so in that way she was a role model for me.”

Upon graduation, Dr. Lane was awarded an Imperial Order of the Daughters of the Empire scholarship and was accepted at Oxford University for doctoral studies. But Dr. Lane did not find Oxford as friendly as Dalhousie had been, at least not based on her male colleagues in the zoology departmental laboratory. “One had always to exhibit confidence in oneself, otherwise you were not well regarded. I used to think of myself as having an external carapace behind which I hid my anxieties. But years later, Oxford male classmates told me they had been frightened of me. There were not many women doing graduate studies in Oxford at that time, especially in science.”

Following post-doctoral work at the Albert Einstein College of Medicine in New York and Yale University, Dr. Lane was hired by the University of Cambridge in 1968 and has been a lecturer and researcher there ever since. Her focus is cell biology, not just the internal structure of cells, but also how they connect to one another in organisms. As she notes, when cells lose the ability to hold themselves together, they become migratory and form tumors, so research such as this is vital in the field of cancer prevention and treatment.

“In this research, you’re standing on the shoulders of giants,” observes Dr. Lane. “Unless you’ve won a Nobel Prize, it’s difficult to pin down how you’ve made a difference. But I like to think my work is contributing to and advancing our understanding of such diseases.”

There is no mistaking her achievements in encouraging more women to pursue a scientific career, though. At the invitation of then British Prime Minister John Major, she chaired the committee that published *The Rising Tide* in 1994, a landmark report on opportunities and barriers for women in science, engineering and technology (SET). She also co-founded The Athena Project, which, by virtue of its Silver award, now determines whether universities can apply for research grants based on their record of recruiting, retaining and promoting women in SET posi-

Kyle J. Peterson, Partner (J.D. '04)
The Hon. David C. Dingwall, P.C., Q.C., Counsel III (B.
Fiona Campbell, Associate (LL.B. '10)

DAL WINTER 2014



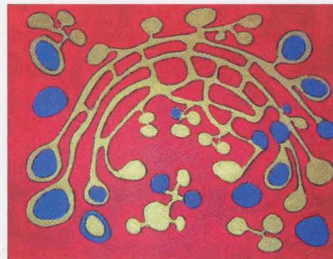
Dr. Lane is not just a researcher of cellular structures; she paints them. Some of her paintings have appeared on the covers of scientific journals and David Hockney selected several for inclusion in the Royal Academy of Arts' Summer Exhibition in 2005. "That was exciting," says Dr. Lane. "It was an opportunity to show the beauty of the ultrastructure of the tiny cells of which we are all composed." **BOTTOM**, Dr. Lane in her early days in the lab.

tions. And she established WiSETI—the Women in Science, Engineering and Technology Initiative at Cambridge in 1999, which promotes and supports women in achieving SET positions at the university.

Though these undertakings have gradually increased the number of women employed as scientists, Dr. Lane sees there is more work to be done. If anything, she believes more young people—men and women—should be encouraged to study science.

"There are so many of the young floundering today, and they all have the potential to make a difference. They just need to be inspired. Science is a way to do that, but we need to raise more awareness of its excitement as a career. So I visit schools and universities, write articles—whatever I can do to communicate that message."

And if her legacy rests on her efforts to encourage more women to enter the field and not her particular advances in cellular biology, she has no complaints. "Women are just as clever and capable as their male counterparts. So to see evidence that the barriers are coming down and to see an increasing number of women employed as scientists, well, that's a wonderful legacy to have."



For nearly 200 years, Dalhousie alumni have made extraordinary contributions that positively impact the lives of others. We're featuring just some of these graduates in our Building a Better World series. **READ ABOUT OTHER INSPIRATIONAL ALUMNI AT ALUMNI.DAL.CA/STAY-INFORMED/BUILDING-A-BETTER-WORLD.**

PORTRAIT: NIC MARCHANT; OTHERS: COURTESY NANCY J. LANE

“Working on Camp Triumph showed me what I was capable of. I took on bigger challenges and leadership roles because I knew I could handle it.”

GIVING BACK BETTER WORLD

Summer Lessons

When five architecture alumni volunteered to design and build a summer camp, they got as much as they gave

It was a learning experience that none of us will ever forget.”

That’s how Matthew Kennedy (BEDS’09, MArch’13) describes the summer he and four of his fellow graduates spent at Camp Triumph, a Prince Edward Island–based summer camp dedicated exclusively to children who have a family member with a chronic illness. The camp itself was started by another Dal grad, Dr. Jordan Sheriko (MD’11), who received the Dalhousie Alumni Association Christopher J. Coulter Award last fall in recognition of his efforts.

Immediately following their graduation from the Faculty of Architecture in 2009, Kennedy, Andrew Choptiany (BEDS’09), Samuel Lock (BEDS’09, MArch’13), Mark Erickson (BEDS’09, MArch’11) and Clayton Blackman (BEDS’09, MArch’13) headed to the camp’s new 13-acre site in P.E.I.’s Cabot Beach Provincial Park. The young men worked 16-hour days, completing the master design plan and building the kitchen, dining hall and washroom—the camp’s first permanent structures. Until then, the camp had been operating using rented facilities.

“The project taught us rich personal and professional lessons,” says project lead Kennedy. That included lessons like the importance of perseverance, flexibility and collaboration and the positive vibe that comes with giving your time and experience freely to a great cause.

The team finished the heavy labour just in time to welcome the first campers of that summer, staying on as volunteer counsellors. “It was the best feedback you could ask for,” says Blackman. “We learned so much from being in the space we’d designed and built, from using it and seeing how others reacted to it. No other experience could have given us that insight.”

The impact of that summer still resonates today, more than five years later. “That experience really launched our careers,” says Kennedy. Their Camp Triumph project was featured in several architectural publications such as *Twenty + Change*, *Archdaily* and *Canadian Architect*. All five went on to complete a Masters of Architecture; four did their graduate work at Dal, including Clayton Blackman.

“Working on Camp Triumph showed me what I was capable of,” says Blackman. “It had a big impact on the way I structured my master’s degree. I took on bigger challenges and leadership roles because I knew I could handle it.”

Today, while the men live in different Canadian cities, they remain close and collaborate professionally whenever they can. “We find ways to work on projects together,” says Kennedy. “It’s a lasting relationship.”—Elizabeth Thompson



TOP, the Camp Triumph build team carries in lumber to begin the project. LEFT, Mark Erickson hard at work.



LEFT, the dining hall, in progress. MIDDLE LEFT, team members Mark Erickson, Clayton Blackman, Matthew Kennedy, Andrew Choptiany and Samuel Lock. MIDDLE RIGHT, campers enjoy lunch in their new dining hall. BOTTOM LEFT, the hall at night. BOTTOM RIGHT, even the bathrooms look great.



PHOTOS: COURTESY MATTHEW KENNEDY

“Airlines take advantage of Canadians who know very little about their rights. I would like to change that.”

SPOTLIGHT

Flight Fighter

For mathematician Gábor Lukács, forcing airlines to treat passengers fairly just adds up

If your airline treats you with consideration when flight cancellations throw your March escape to a Caribbean island into chaos, spare a kind thought for Gábor Lukács.

Dr. Lukács—a Killam Postdoctoral Fellow in Dalhousie’s Department of Mathematics and Statistics in 2005–06—is leading a charge to transform the way airlines treat their customers in Canada. Although he’d rather be researching and refining category theory, he’s known outside mathematical circles for tirelessly pushing an industry many travelers love to hate to act with fairness and decency.

Searching through Canadian Transportation Agency (CTA) records reveals dozens of decisions and complaints bearing Lukács’s name, including one from last August requiring Air Canada to dramatically increase compensation paid to travelers bumped from overbooked flights. “Airlines take advantage of Canadians who know very little about their rights,” Lukács says. “I would like to change that and provide passengers with information and guidance.”

The still-boyish math prodigy who, at the age of 20, garnered a PhD and Governor-General’s Academic Gold Medal at York University, is building a grassroots campaign (airpassengerrights.ca) to empower consumers. Lukács’s activism was inspired by a few lousy customer service experiences, most notably one that caused him to miss an important conference. He’s fought and won several skirmishes in small claims court, but he now focuses his considerable energy on bringing airlines’ poor business practices before the CTA—even practices that have never personally affected him.

In fact, now that he’s back in one of his favourite cities, the Hungarian-born 30-year-old is looking for ways not to travel. Dalhousie and Halifax can work that kind of magic on a young man.

“From my very first day [here as a postdoctoral fellow], I felt welcome, not only by the faculty, some of whom I had already met at conferences, but also by the administrative staff. The math and stats department had a great atmosphere, with kindness and friendliness dominating the



tone. People knew how to get along, and I found no signs of factions or backstabbing that so often cripple academic units.

“This sense of self-restraint, of looking broadly at the good of the department, and not only at one’s own personal interests, has made a very deep impression on me, and on my idea of what a healthy academic environment is like.”

Lukács, now working as a freelance mathematician, feels buoyed by the simplicity of working with “paper, pencil and a garbage can” like history’s great minds. “The only thing I truly miss is teaching,” Lukács says. “Teaching consumes a lot of time and energy, but these are well-spent hours and days. Even the greatest victory against airlines dwarfs compared to the pleasure of seeing my students succeed after a semester of hard work.” —Richard Levangie

DANNY ABRIEL

Get in the picture at an upcoming alumni event!



ALUMNI EVENTS

Meeting and Mingling



FAR LEFT, Heather Roseveare (BA'83,MPA'09), Renee MacKay-Lyons (BEng'09), Sarah Glickman (LLB'10), Gillian Ritcey (MPA'11) in Toronto. **TOP LEFT,** Sarah Varley (BSc'07), Erin O'Hanley (BA'07), Jane Lang (BA'07) **TOP RIGHT,** Ian Dunsky (LLB'92), Dr. Chris Moore (Dean, Faculty of Science), Lauren Heyer (JD'12), Stefanie Butt (BA'07), Charles Porteous (MBA'91) at the Montreal reception. **ABOVE,** Daniel Barteck (BComm'13), Madeline Clement (BMgmt'13), Dapo Ajisafe (BScR'13) **LEFT,** Jennifer Fry (BComm'93), with Ralph Cochrane (BA (Econ)'90) **BELOW,** President Florizone with door prize winners at the Toronto event

Dalhousie President and Vice-Chancellor Richard Florizone had a lively introduction to alumni events on November 7 in Toronto. The record-sized crowd of over 500 ranged from our most recent graduates to long-time residents of the city. Mingling with a pint of beer or a glass of wine at Steam Whistle Brewery, alumni met the president, caught up with classmates and made some new connections.

Later in November, alumni in Montreal gathered at The W Hotel for an evening reception. President Florizone then greeted almost 200 alumni in Ottawa who came out to this year's event at the National Arts Centre on December 5.



ALUMNI EVENTS ARE SLATED FOR:

- VANCOUVER: MARCH 20
 - NASSAU: APRIL 11
 - EDMONTON: APRIL 30
 - CALGARY: MAY 1
 - BERMUDA: MAY 15
 - LONDON, U.K.: MAY 17
 - NEW YORK: JUNE 5
- FOR DETAILS, VISIT ALUMNI.DAL.CA/EVENTS.

PHOTOS: SUBMITTED

“Her family and roots in Cape Breton were very important to her.”

DONOR PROFILE

Honouring Raylene

Raylene Rankin Memorial Bursary honours beloved songstress and her Cape Breton roots

Halifax criminal lawyer Stan MacDonald (LLB '87) says Raylene Rankin wasn't the most outspoken student during their Dalhousie Law School days. Coming from a small Cape Breton community, she felt a little intimidated when professors called on her to answer a question in class, he recalls. “But ask her to sing and she had a totally different aura. She'd take the stage and sing her heart out.”

It may be hard for fans of The Rankin Family to picture founding member Raylene as shy, or a lawyer for that matter. But the Mabou native, who delighted audiences around the world, articulated with Truro law firm Burchell MacDougall after earning her degree in 1987 and was admitted to the Nova Scotia Bar in 1988. “She could have been a very successful lawyer,” says MacDonald.

When Raylene passed away in fall 2012 after a battle with cancer, several class of '87 alumni decided to do something to honour her life and work. They initiated the Raylene Rankin Memorial Bursary, which will provide financial assistance to first-year students at the Schulich School of Law.

Chris Hale (LLB'87), a Toronto-based intellectual property lawyer, says preference will be given to students from Mabou, Inverness County or Cape Breton, with financial need, academic performance, community involvement and accomplishment in musical studies and performances also being considered. “Her family and roots in Cape Breton were very important to her, as was giving back to the community. We felt the bursary should provide a benefit to the place where she grew up and reflect her spirit of generosity.”

Heather Rankin thinks her sister would have been both delighted and humbled by the bursary in her honour. “She was not the type to put herself on a pedestal. She would have taken great satisfaction, knowing that a young, deserving person with a dream of achieving what she had worked so hard to achieve would receive some assistance in her name.”



LEFT, Raylene Rankin.
BELOW, The Rankin Family in concert.



Janice Younker (LLB'87), MacDonald and Hale spearheaded the fundraising. More than 50 alumni and friends have contributed to the fund to date, which Hale says demonstrates the profound impact Raylene had on everyone she knew. He hopes the fund—which has raised close to \$26,500 as of November 2013—will have a similar impact. “Ideally, if it can support students who share the same traits that she had to pursue a career in law, then it is a very good thing.”

The fund is still open and accepting donations. Cheques may be sent to the law school with a note stating that they are intended for the Raylene Rankin Memorial Bursary. —Mark Campbell

CLASS NOTES

1950s

'53

JOHN VACHAL, BEng (NSTC), continues to enjoy retirement after a career working as a mechanical engineer. He retired from the Boeing Co. in 1995. He can be reached at jvachal@hotmail.com.

1960s

'62

LOUIS BERNARD, BEng (NSTC), MEng'64 (NSTC), has worked in the mining and metallurgic industries for 50 years. His BEng (Mining) and MEng (Extractive Metallurgy) have allowed him to work competently in both fields, and to cross over into managing million-dollar geological exploration projects. He has provided engineering services in several countries around the world, and continues to do so with no thoughts of retiring. He sends his best wishes to his '62 and '64 classmates.

1970s

'72

MARK REYNOLDS, BSc (Pharmacy) and his team were honoured with the first award for a pharmacy team by the Pharmacy Association of Nova Scotia. It was granted in recognition of exceptional teamwork and commitment to the advancement of pharmacy services and the profession of pharmacy in Nova Scotia. Mark and his wife Janice moved to Liverpool 36 years ago to buy a small drug store. They have two children: Tracy, an opera singer living in Toronto, and Luke, who graduated from Dal Medical School in 2012 and lives in Ottawa, where he specializes in urology.

'76

INGRID C. DANDANELL (LANGHAMMER), MLS, was the recipient of the 2011 Canadian Association of Special Libraries and Information Services (CASLIS). The award was granted in recognition of Ingrid's unique contributions to special librarianship with a focus on leadership in the area of government documents in academia at Queen's University, the University of Alberta and, most importantly,

TOP 5 FINISHERS AT 1976 MONTREAL OLYMPICS

- USSR, 125 MEDALS
- UNITED STATES, 94 MEDALS
- GERMANY, EAST, 90 MEDALS
- GERMANY, WEST, 39 MEDALS
- ROMANIA, 27 MEDALS

CANADA'S MEDAL COUNT: 0 GOLD, 5 SILVER, 6 BRONZE

Source: World Almanac and Book of Facts 1978

the Alberta Legislative Library. For a recent article reflecting on her 35 years as a librarian, contact ingrid.langhammer@shaw.ca.

MIKE PERRY, LLB, has published his fourth novel, a dramatic work entitled, *The Meddlesome Priest*. His earlier novels were *Child of Grail*, *Mickey and Angie* and *For Love and Glory*. Catch up with Mike at his website, www.mikedavidperry.com.

DR. CAROL ANNE WIEN, MA, PhD'91, recently published *The Power of Emergent Curriculum: Stories from Early Childhood Settings*. The book explores alternative approaches to early childhood education. Carol Anne is currently a professor in the Faculty of Education at Toronto's York University.

1980s

'80

REAR-ADMIRAL JOHN NEWTON, BSc, BScHC'81, was appointed to Commander of Maritime Forces Atlantic (MARLANT) and Joint Task Force Atlantic (JFTA) on July 12 in Halifax.

'84

MARIAN CHISHOLM, BA, was presented with a Diamond Century of Service Challenge Award for her contribution to and support of arts and culture in Halifax. The award was part of a 40th-anniversary initiative of the Nova Scotia division of the Duke of Edinburgh's Award program. The presentation ceremony has held on May 3, 2013 at All Saints Cathedral. Classmates can contact Marian at marianchisholm@yahoo.com.

'87

DR. IAIN CHRISTIE, BSc, MSc (Physics)'89, has been appointed executive vice president of the Aerospace Industries Association of Canada (AIAC), effective June 2014. Iain will leave Neptec Design Group, where he worked for 22 years and served as CEO.

'89

SHAWN HILTZ, BComm, has been named CEO of INFO/NATION International, leaving his position as Dow Jones & Company's vice president of marketing, Asia-Pacific. Shawn has also worked for the Walt Disney Company and News Corporation.

WALDEMAR KUNYSZ, BEng (TUNS), received his PhD (Electrical and Computer Science Engineering) from the University of Calgary. He is working on an indoor positioning system at a start-up company in California's Silicon Valley. He recently received a GPS World Award and his ninth U.S. patent. Waldemar also co-authored a textbook entitled *GPS/GNSS Antennas*. He sends his best wishes to classmates in the Maritimes.

1990s

'92

REAR-ADMIRAL PONGSAN TWINPRAWATE, DEng (TUNS), is a rear admiral in the Royal Thai Navy. He is also an associate professor at International Maritime College Kasetsart University in Thailand.

'96

MARNI TUTTLE, BA, BSc'96, MEc'12, CFRE, and Shane Turner, BSc'96, welcomed baby Kate Marjorie Turner Tuttle on August 16, 2013. Kate joins sisters Ada (9), Jane (6) and Tess (4) in a very busy household near Halifax. Shane continues to work with NewPace Technology Development in Bedford, and

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TOP 3 SOCIAL MEDIA SITES OF AUGUST 2009

- FACEBOOK
- MYSPACE
- TWITTER

Source: *The World Almanac and Book of Facts 2010* | comScore Media Metrix Inc.

Marni will be taking leave from her position as corporate director of philanthropic relationships at Northwood.

2000s

'00

STEVEN COTÉ, BSc, and Brooke are pleased to announce the birth of Connor

Ephraim Nicholas, brother to Cole. Connor was born nine days overdue at 2:43 p.m. on Sept. 15, 2013 at the Civic Hospital in Ottawa, Ont., and weighed just over nine pounds. Both Brooke and Connor are doing great and looking forward to visiting Nova Scotia in the next few months.

'06

ARIEL AMARAL, BComm, was named Great Lake Surfers' girl of summer. Ariel was the first woman to complete the SUP4MS 65-kilometre paddle of Lake Ontario in support of multiple sclerosis. She is a level 3 PaddleFit coach, is WPA Class 1 certified and is a Paddle Canada SUP (stand up paddle) instructor.

'07

SLIM BEN GHALBA, BEng, received several job offers and was hired before graduating with his electrical engineering degree in 2007. He now works in DSP and digital communications at Ericsson, the world leader

in telecommunications. He credits the strong DalTech program for his success.

'09

ALEX MIFFLIN, BA, and his brother Tyler had their eco-adventure series *The Water Brothers* renewed for a second season. Episodes air Tuesdays at 7:30 p.m. EST on TVO, and can be streamed online after they air at thewaterbrothers.ca.

MATTHEW KENNEDY, BEDS, MArch'13, and Mark Erickson, BEDS, MArch'11, have recently set up their own design build practice, Studio North, in Calgary, Alta. Check out their website at www.studionorth.ca.

2010s

'12

CHRISTOPHER CARSON, BMgmt (Entrepreneurship & Innovation), extends his sincerest thanks to Dean Peggy Cunningham and the entire faculty of the Bachelor of Management. Christopher, who was hired upon graduating, works his dream job as an online marketing executive for Symposium Café Restaurants & Lounge. He is thankful for the support of everyone at the Faculty of Management, and is proud to be representing Dalhousie in his community. Christopher lives in Guelph, Ont.



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IN MEMORIAM

**PHYLLIS (SKEEN) ROSS,
JEAN CREELMAN (MACRAE)
BORDEN**, BA'26, Toronto,
Ont., on September 12, 2013

LLEWELLYN GREER MARKS,
BEng'41, Dartmouth, N.S., on
August 24, 2013

JOHN A MCLEAN, DDIP'41,
Eureka, N.S., on October 31,
2013

**MILTON MACRITCHIE
ULOTH**, BEng'42, Burlington,
Ont., on November 17, 2013

**ISABEL HELENA (MCKEAN)
POPE**, BA'42, Hantsport, N.S.,
on November 30, 2013

**GEORGE MACDONALD
HALIBURTON**, BEng'43,
Halifax, N.S., on September
1, 2013

JOHN JUNIOR LEMOINE,
LLB'43, Amherst, N.S., on
September 8, 2013

**HILDA EVELYN (TYLER)
FERGUSON**, BA'43, DEd'44,
Halifax, N.S., on September
22, 2013

KEVIN JOSEPH BARRY,
LLB'45, BA'46, St. John's,
N.L., on October 18, 2013

KENNETH GERARD WILSON,
LLB'48, Halifax, N.S., on
October 20, 2013

MARY FRASER SINCLAIR,
DPhrm'48, Thorburn, N.S., on
November 17, 2013

RUSSELL EWEN BANKS,
BSc'49, MSc'52, Stittsville,
Ont., on August 1, 2013

CYRIL MELVIN BECK,
BEng'49, Arnprior, Ont., on
October 22, 2013

JOHN PATRICK MARTIN,
LCMus'49, Dartmouth, N.S.,
on November 27, 2013

**DONALD FREDERICK LIO
TRIVETT**, BA'50, Halifax, N.S.,
on October 8, 2013

JAMES ELLIS SEARY,
BEng'50, Halifax, N.S., on
November 13, 2013

**WILLIAM MARSHALL
BISHOP**, BA'51, MA'73,
Wolfville, N.S., on September
2, 2013

**JAMES ARTHUR
MACDONALD**, LLB'51, BA'52,
Oshawa, Ont., on October
28, 2013

VAUGHAN LAWSON BAIRD,
LLB'52, Ste Agathe, Man., on
August 17, 2013

JAMES SIMPSON PALMER,
LLB'52, LLD'87, Calgary, Alta.,
on August 27, 2013

HENRY J MACDOUGALL,
BEng'52, Dartmouth, N.S., on
September 28, 2013

ARTHUR MAXWELL HOUSE,
MD'52, LLD'98, St. John's,
N.L., on October 1, 2013

**DOROTHY MARGARET S.
COONS**, BA'53, BEd'55,
MA'56, Halifax, N.S., on
September 1, 2013

EVA BALAZS, PGM'53,
Norwalk, Conn., on October
13, 2013

**HYMAN SOLOMON
GOLDBERG**, BA'53, Halifax,
N.S., on December 3, 2013

**ANN ELIZABETH (MCKAY)
HANES**, BA'54, New
Glasgow, N.S., on September
19, 2013

**ETHEL WINNIFRED (SMITH)
HALL**, BA'55, Mont-Royal,
Que., on August 24, 2013

ROBERT FRASER GOSS,
LLB'55, Calgary, Alta., on
November 22, 2013

**FLORENCE EVANS
(LARRAMORE)
MACGILLIVRAY**, DTSN'56,
Halifax, N.S., on September
9, 2013

JOSEPH CLAIR CALLAGHAN,
BEng'56, DEng'01, Halifax,
N.S., on September 26, 2013

DONALD ANDREW WEIR,
MD'56, Dartmouth, N.S., on
November 1, 2013

J. BILL TAYLOR, BEng'59,
Saint John, N.B., on November
13, 2013

DOROTHY JEAN GOGAN,
DNSA'62, Bedford, N.S., on
October 21, 2013

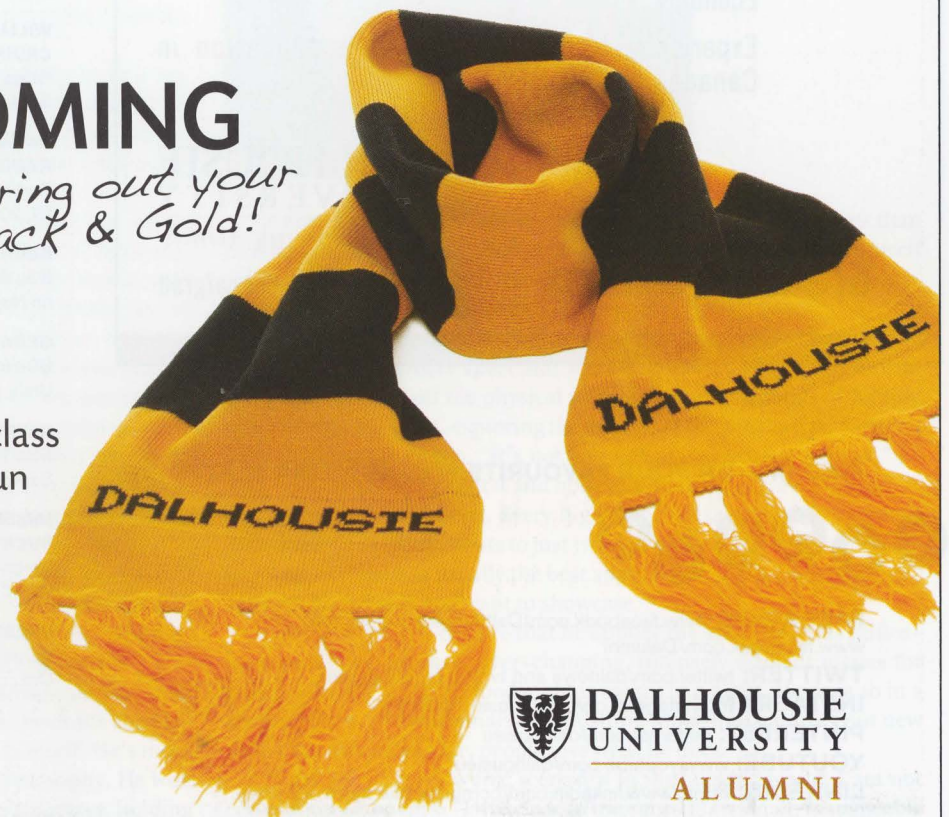
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DUGALD ALEXANDER TAYLOR, BSc'64, MSc'68, PGM'76, Blue Springs, Mont., on September 18, 2013

WALTER MAJAK, MSc'65, Kamloops, B.C., on August 7, 2013

FRANCES MARIE (FLEMMING) INGLIS, BEd'65, St-Jean-Sur-Richel, Que., on August 21, 2013

FLORENCE LORRAINE DUNLOP, DNSA'65, Halifax, N.S., on October 24, 2013

RUSSELL DUNCAN WEBSTER, MD'66, Rothesay, N.B., on August 11, 2013

JAMES ALBERT ARCHIBA MACKINNON, BA'67, Halifax, N.S., on August 1, 2013

ALISTAIR WILLIAM WATT, BA'67, BEd'74, BSc'84, Baddeck, N.S., on August 26, 2013

WALTER OWEN NEWTON, LLB'67, Port Williams, N.S., on August 27, 2013

WILLIAM CHRISTIAN ACKER, MD'68, Halifax, N.S., on September 13, 2013

WILLIAM RALPH CRUIKSHANK, DEng'68, BEng'70, Toronto, Ont., on September 20, 2013

PARAMESHWAR RANGASWAMY, PHD'68, Dartmouth, N.S., on October 27, 2013

KENNETH ERNEST WEST, BSc'68, Bragg Creek, Alta., on November 17, 2013

GERALD HARVEY ROSS, BSc'69, MD'74, Bountiful, Utah, on October 29, 2013

DAVID MICHAEL KENNETT, BSc'70, Halifax, N.S., on September 5, 2013

JAMES GORDON BUCHANAN, BEd'70, Dartmouth, N.S., on October 27, 2013

PRESTON EARL MILBURY, BCom'72, MBA'93, Kanata, Ont., on October 11, 2013

DAVID WILLIAM MORROW, BCom'73, Toronto, Ont., on September 8, 2013

SUSAN FRANCES (GREEN) GOODMAN, DPA'74, Toronto, Ont., on August 30, 2013

STEPHEN JAMES WHALEN, BEd'74, Halifax, N.S., on September 3, 2013

KAREN ELIZABETH ANN ZED, BScPh'74, Halifax, N.S., on September 19, 2013

HEATHER ENA DEVLIN, BN'74, Dartmouth, N.S., on October 17, 2013

CAROLYN DENYSE (LANDRY) BUTLER, BA'75, MSW'78, Charlottetown, P.E.I., on November 14, 2013

MARGARET MARY ROSS, MEd'78, Ottawa, Ont., on September 30, 2013

SUSAN PATRICIA PICKETT, MLS'78, Moncton, N.B., on November 25, 2013

JAMES DARRYL PISTONE, MEd'79, Halifax, N.S., on September 25, 2013

CHERYL LOUISE DOWNTON, BA'80, BSW'84, Halifax, N.S., on November 4, 2013

RUBY BARTER, CPA'85, MHA'87, Dartmouth, N.S., on August 30, 2013

BRANT DAVID WISHART, MPA'87, Halifax, N.S., on October 11, 2013

WILLIAM HUGH MARSHALL, MBA'90, Halifax, N.S., on August 24, 2013

BARBARA ANN (JEWERS) JEWERS, BEng'90, Fort McMurray, Alta., on September 17, 2013

YUN SUN LEE, BSc'92, BScAMC'93, MBA'96, New York, N.Y., on September 11, 2013

STACEY ANN SCHWARTZ, PGM'93, Halifax, N.S., on September 13, 2013

ESTEN BLAKE GERRIETS, BA'05, Pickering, Ont., on November 10, 2013

He got his start as a Steve-O-Reno's barista and sandwich maker. Now, he's one of New York's hottest chefs, with his own restaurant, Luksus.

SPOTLIGHT

Top chef

His kitchen is tiny, but restaurant critics say Daniel Burns' (BSc'98, BA'98) culinary influence is growing

Even Daniel Burns (BSc'98, BA'98) sometimes finds it difficult to believe that he opened a restaurant in New York City—but he's getting used to the idea.

"There's not many crazier things to do. It's pretty wild," says the Dartmouth, N.S. native.

That's some classic Canadian understatement coming from a guy whose name sizzles on New Yorkers' tongues these days as one of the city's hottest chefs. With rave reviews and listings on many critics' year-end picks, it's proved a boon to start Luksus, his new restaurant, in the world's most unforgiving culinary city.

All of this might seem far-fetched for a former barista and sandwich maker at the popular Halifax café Steve-O-Reno's. However, Burns hasn't learned from merely world-class chefs: the restaurants he worked at have rocked the foundations of fine dining. In the last 10 years, he moved from Heston Blumenthal's Fat Duck (three Michelin stars), to Fergus Henderson's St. John, to Rene Redzepi's Noma (three-time winner of the world's best restaurant), and finally, became head of research and development for David Chang's Momofuku empire.

And now, in a small space behind a bar in Brooklyn that you might miss if you blinked, Daniel Burns has set out to follow in their footsteps. The name Luksus means "luxury" in Danish, but it's an ironic statement, he says. He believes you can experience luxury in the back of a bar.

"Fine dining does not have an arrow pointing in one direction. I think it points to 12 million different ones now." His Scandinavian-influenced, seven-course menu features finger foods and beer pairings. He prepares your meal in an open kitchen you can nearly touch.

Journalists often mention Burns' degrees in mathematics and philosophy from Dalhousie, searching for an elusive gastronomic correlation, and he admittedly finds it hard to identify one himself. He's more likely to talk about soccer than to discuss analytic philosophy. He won two bronze medals competing as a Dal Tiger, and he still plays, holding an annual charity tournament for chefs.



Being a chef is not an "airy artistic pursuit," says Burns. "You've got to work at it and hone it. Consistency is everything."

At Dal, Burns thought more about theorems and Greek letters than owning a restaurant. But after graduation, he couldn't imagine himself teaching high school math. He had discovered a more profound pleasure: working with his hands in a kitchen.

If there are lines to draw to his time at Dal, one could say that cooking is a precise craft where sport and science intersect. Every day, he's in the game, thriving off the physical and intellectual demands of putting order to abstract ideas, exploring the science of cooking and performing daily feats for his guests. "It's not any sort of airy artistic pursuit," he says. "You've got to work at it and hone it. Consistency is everything."

Less is more, he insists. Every ingredient is essential. "To narrow a dish down from 20 elements to just two or three is more difficult to do," he explains, "but it is usually the best approach. It's just finding out exactly which flavours you want to showcase."

In some ways, you can see that he applies the same rigorous philosophy to life. He prepares ever-changing, intensely difficult menus for critics who will judge his food and his career in a night. He does so in a spare kitchen, with minimal staff, pushing himself to hammer out new flavor axioms. And so far, people love what he does.

"There are so many worse scenarios in the cooking world, I am not complaining," he says. "I live close to the shop. It's a small, manageable entity. It's awesome." —Andy Murdoch

DAL DNA: DIVERSITY

Acceptance. Respect. Celebration of uniqueness. Our understanding of diversity at Dalhousie has evolved over time—and continues to broaden. Are we perfect? No. Are we striving to be evermore inclusive? Yes. By Jane Affleck (BA'00)

1999

The Dalhousie Senate and Board of Governors approve the university's sexual harassment policy. Its purposes: education and increased awareness; prevention; and fair handling of complaints.

2002

DalOUT begins offering education, support, and network-building for the LGBTQ community at Dalhousie and beyond.

2008

Dalhousie's Women in Technology Society (WITS) is established, addressing the gender imbalance in traditionally male-dominated fields like computer science.

2012

The Dalhousie Women's Centre, originally established in 1993, changes its name to South House Gender and Sexuality Resource Centre (South House, for short). The name change reflects that the centre has long welcomed people of all sexual orientations and genders.

1818

Since its founding, Dalhousie has admitted students of any religious denomination—a progressive stand, given that many other Canadian universities maintained strict quotas on non-Christian students even into the 20th century—particularly significant for Jewish students in the 1930s who were barred from U.S. universities because of quotas.

1881

Dalhousie accepts its first female students, putting it ahead of runner-up McGill, where “co-education” happened in 1884. George Munro, local publishing magnate and major donor, also encouraged women to apply for the bursaries his donations supported.

1898

James Robinson Johnston is the first African Nova Scotian to graduate from Dalhousie's law school. Almost a century later, Dal established the James Robinson Johnson Chair in Black Canadian Studies, “to bring Black culture, reality, perspectives, experiences and concerns into the academy.”

1919

Eliza Ritchie, class of 1887, returned to Dal in 1901 to teach philosophy. Ritchie's appointment to Dal's Board of Governors happened 18 years later—making her the first woman in Canada to hold such a position.

1970

First year of the Transition Year Program, created to address the historical disadvantages Black and Aboriginal students have faced in accessing post-secondary education.

1989

Dal's law school establishes the Indigenous Blacks and Mi'kmaq Initiative (IB&M) program, ensuring that Mi'kmaq and African Nova Scotian students have equitable representation in the law school—and in the justice system. More than 150 Black and Aboriginal students have graduated from the program.

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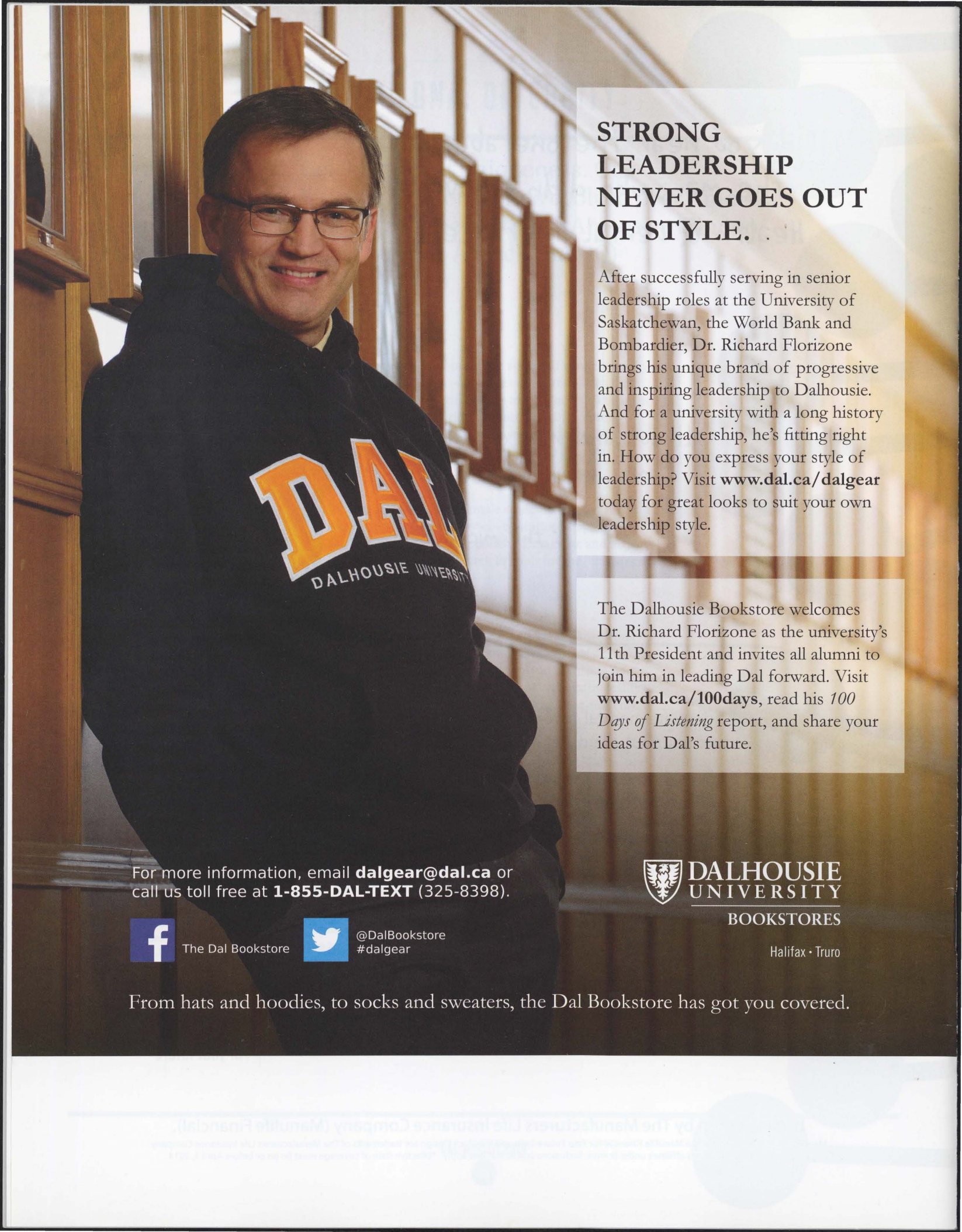
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The Dalhousie Bookstore welcomes Dr. Richard Florizone as the university's 11th President and invites all alumni to join him in leading Dal forward. Visit www.dal.ca/100days, read his *100 Days of Listening* report, and share your ideas for Dal's future.

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