



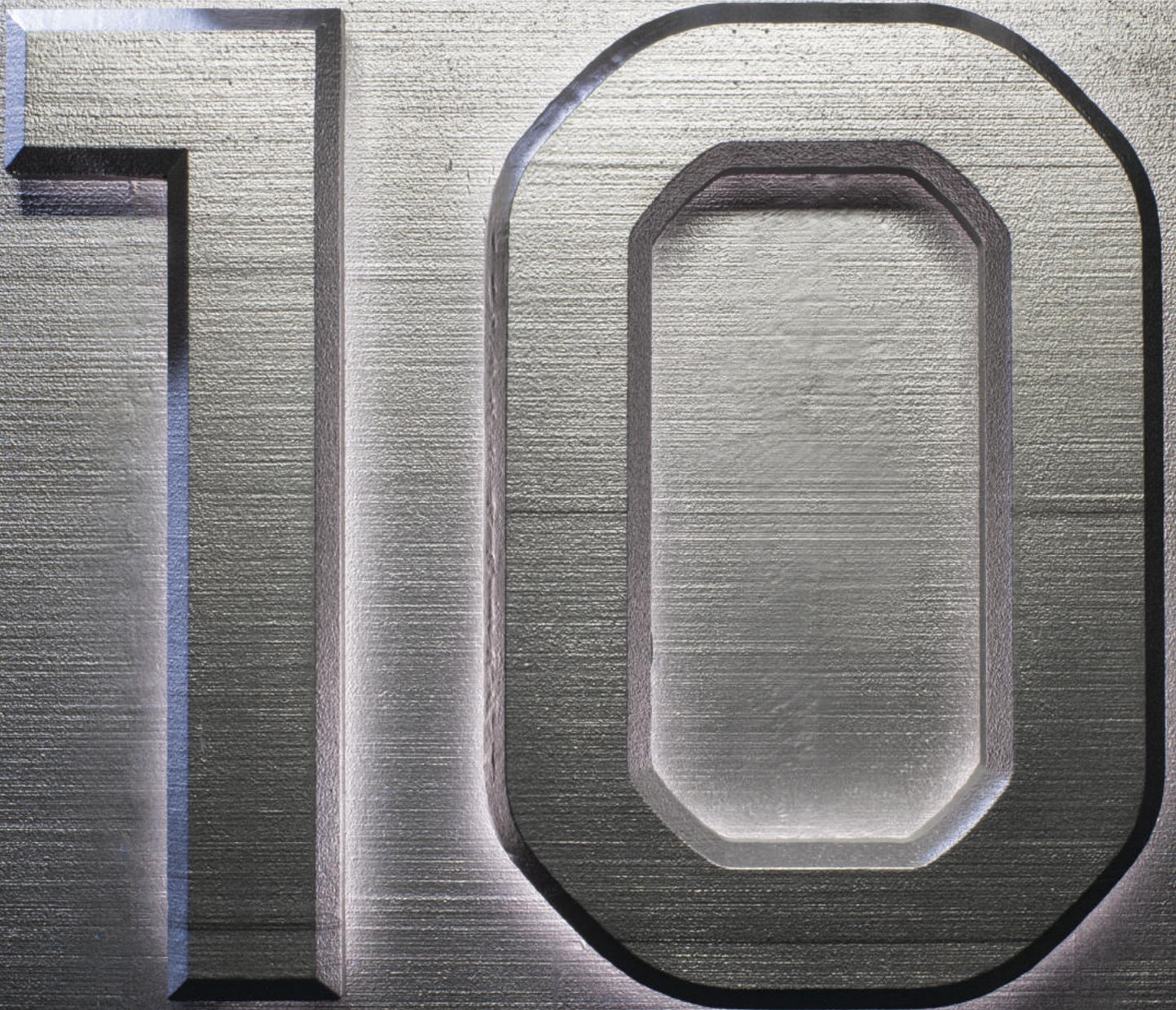
ALUMNI TECHNOLOGY INNOVATION

V11.1 2017

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ANNIVERSARY ISSUE
2007 | 2017

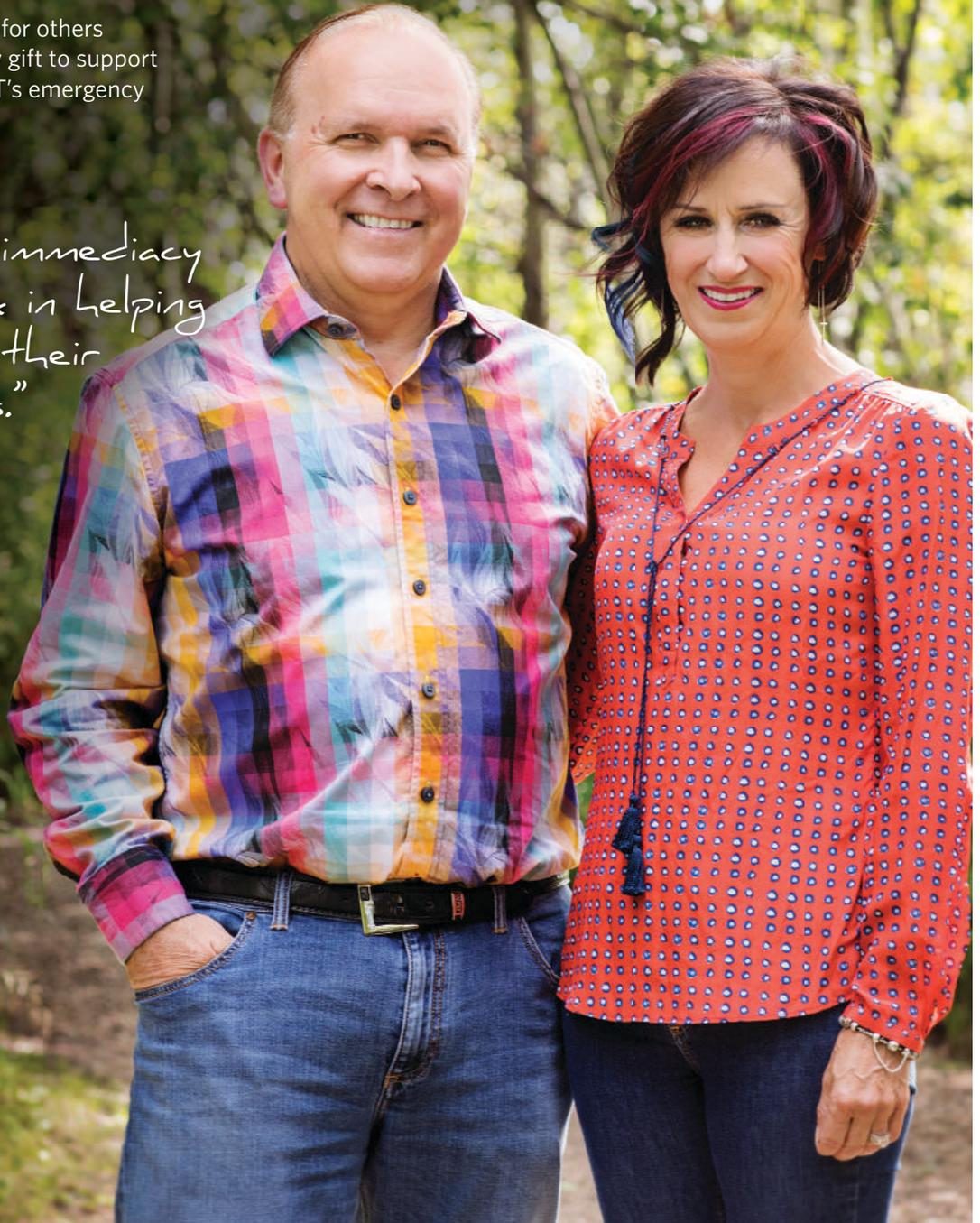
A CARING LEGACY

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(Paramedic '85)



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Cover photo
by Blaise van Malsen
3D metal printing
by Jens Kilden (see p. 16)

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Selina Zheng - Landscape Architectural Technology '16 (p. 65)

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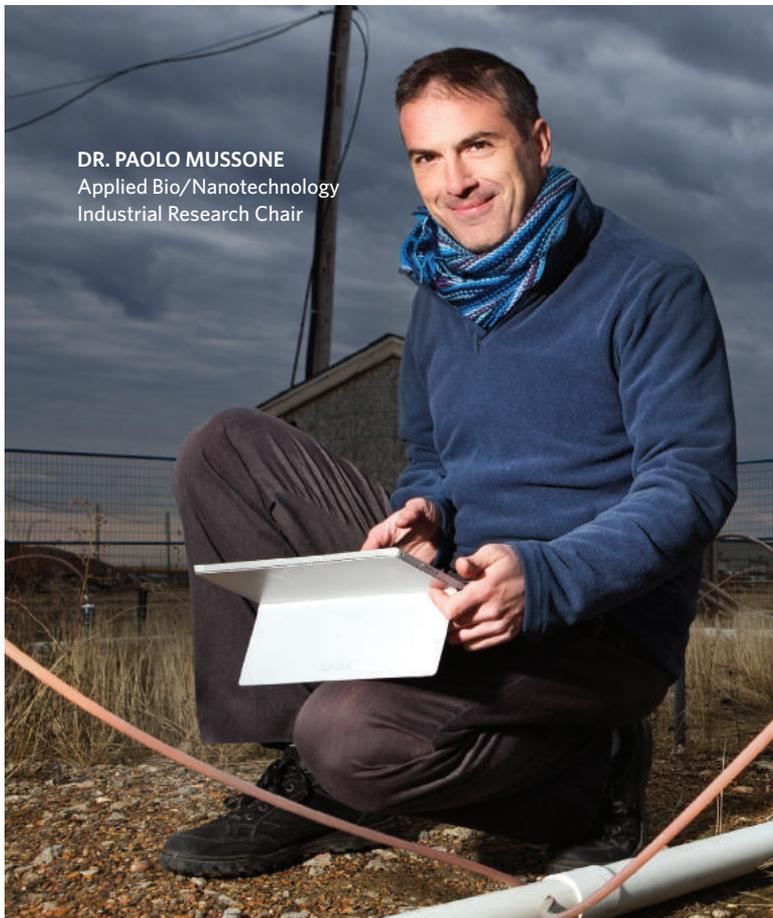
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THE LATEST FROM techlifetoday.ca

Between print issues of *techlife*, we regularly post new content at techlifetoday.ca. For NAIT news, inspiring stories about alumni and how-to articles to help you with everything from cooking to car maintenance, sign up for our e-newsletter at techlifetoday.ca/subscribe. Here's a sample.



ALL FIRED UP

A look at the life of an Alberta wildfire fighter with author and crew chief Harold Larson.

techlifetoday.ca/wildfire



COFFEE TALK

How two entrepreneurs put NAIT's 3D metal printer to work in their pursuit of the perfect cup of pour-over java.

techlifetoday.ca/pour-over-coffee



GET THE LED OUT

NAIT breaks new ground in environmental sustainability with its first all-LED construction project, the Productivity and Innovation Centre.

techlifetoday.ca/pic-led



ECLECTIC AVENUE

How Mary Ann Aquino and the Carrot Coffeehouse are transforming an Edmonton neighbourhood through food and art.

techlifetoday.ca/carrot-coffeehouse



SERENITY NOW

A beginner's guide to meditation, with yoga instructor Amanda Bell-Tardif.

techlifetoday.ca/meditation



LEARN CREE

Five life lessons in one of the languages of Treaty 6 territory.

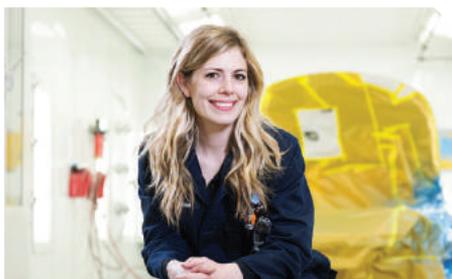
techlifetoday.ca/tipi-teachings



SHINING A LIGHT ON GUATEMALA

The Alternative Energy Technology program brings solar power to a remote region in Central America.

techlifetoday.ca/guatemala



A NAIT FIRST

Women-in-trades advocate Cecile Bukmeier makes history as NAIT's first female Auto Body Technician instructor.

techlifetoday.ca/cecile



MUSIC MAN

How award-winning rapper Arlo Maverick's unique mix of beats and business sense make him an artist to watch.

techlifetoday.ca/arlo



V11.1 2017

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NAIT web and digital media team lead **Shelly Decker** is a busy mom of two who enjoys exploring the outdoors whenever she can. As a former communications adviser for the Centre

for Autism Services Alberta, Decker brought a unique perspective to this issue of *techlife*, where she covered a family-friendly wellness program for those affected by autism.

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To make sure the cover of this issue turned out perfectly, **Jens Kilden** (Nanotechnology Systems '12) spent a weekend watching over the machine that made it - NAIT's 3D metal printer.



The innovation services technician uses the printer to make unique parts and prototypes for clients from business, industry and, apparently, magazines. In addition to being an alum and staff member, Kilden is also a NAIT student, currently completing a Bachelor of Technology in Technology Management.

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As a young schoolboy, photographer **Adam Blasberg** organized his desk in a precise, symmetrical way. Pencils would line up perfectly with books and nothing would touch anything else. Crazy? No

way. Obsessive? Absolutely. His desk was a veritable homage to modern design and composition and thus launched a lifelong odyssey into the world of visual storytelling. He returns to *techlife* by reshooting alum Tom Shepansky, whose photo Blasberg took for the cover of the inaugural issue in 2007.

PAGE → 66

Tim Potter is currently enrolled at NAIT in the Photographic Technology program. Potter has been the photo editor for the *NAIT Nugget* student newspaper since his first semester in school. When not at work on improving his photography skills, he thinks about petting dogs. For this issue, Potter shot images for the feature by Shelly Decker (above) and more.



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FEEDBACK

RE: ALL ABOUT MARNI (VOL. 10.2)

I just wanted to say thank you for putting alumna **Marni Panas** on the cover of your fall 2016 issue, and addressing some of the negative response in the spring 2017 issue.

I am not a member of the LGBTQ community, but felt it was exciting, refreshing and a symbol of progress to have her on the cover, and it made me feel proud to be a NAIT alumna. I am happy to know that NAIT continues to work on diversity and inclusivity, and even happier that when faced with criticism, you won't back down from those values.

This kind of solidarity will be so important for Alberta's future, and is important to see from our educational institutions.

Karlie Nelson
 (Alternative Energy Technology '15)

JUST FINISHED READING issue V10.2 2017 pretty much cover-to-cover. Especially enjoyed the articles Cave Crusader, Glamour Farmer and The Apprentices' Advocate. Congratulations on another great issue of *techlife*.

John Ross
 (Instrumentation Engineering Technology '70)

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A New Energy

"Producing a magazine that communicates with such a diverse group of readers has provided us with an exciting opportunity to tell stories from the points of view of many different people who have one thing in common – **a connection to NAIT.**"

– EDITOR'S NOTE, INAUGURAL ISSUE, 2007



BACK IN 2007, we launched *techlife* after hearing from alumni and friends of NAIT. You told us you wanted to read about people, about how technology impacts your daily lives, and what NAIT is doing around the world and on the innovation and applied research fronts.

We promised to bring you information and advice from NAIT experts, and to tell relevant and interesting stories about alumni, staff and students and the contributions they make in Alberta and beyond. Like **Tom Shepansky** (Marketing '83), who graced the cover of that inaugural issue and whose agency, Rethink Communications, helped create a new visual identity for NAIT in 2006, including a new look for the magazine.

Among the first stories was a feature on the namesake of the business school – communications magnate and NAIT honorary diploma recipient JR Shaw, whose legendary philosophy and business ethic continues to inspire business students today. We shared tips for taking better photos, announced a new Bachelor of Technology program and gave readers a look inside the just-opened Spartan Centre for Instrumentation Technology and the Petro-Canada Centre for Millwright Technology. We celebrated a new mandate to conduct applied research and the distinction of being named one of Alberta's top employers for the second year in a row.

Ten years, 20 issues and hundreds of stories later, NAIT has strengthened its brand, embraced its identity as a top

polytechnic and continues to be recognized as a top employer. Alumni continue to make a difference in their workplaces and in their communities and here, at *techlife*, we're still excited about sharing their accomplishments, challenges and insights.

In this special anniversary issue, we celebrate the best of the last 10 years and even brag a little about the awards we've won. (Check out our top stories feature on p. 29). We check back in with Shepansky (p. 66) about designing a logo for his alma mater and what its like to look back on that first cover. We freshened up *techlife's* appearance, too, in honour of the occasion!

And that goal we had in 2007? It still motivates us, both in the pages of this magazine and at techlifetoday.ca. Let us know how we're doing, we'd love to hear from you. In the meantime, here's to another 10 years of storytelling.

Sherri Krastel
Editor
techlife@nait.ca



TEN YEARS OF techlife

HAPPY ANNIVERSARY TECHLIFE! This issue marks 10 years since the launch of NAIT's magazine - and what an incredible decade we've captured in these pages.

Since fall 2007, we marked NAIT's 50th birthday. We opened the doors to several new buildings - including the largest capital project in our history, the Centre for Applied Technology, home to some of the best simulation facilities and hands-on learning experience in Canada. We conducted countless applied research projects that have had a direct impact on this province, such as work being done at our Boreal Research Institute, where we are advancing forest reclamation and peatland restoration. We're on the verge of opening yet another new building: the Productivity and Innovation Centre, a place where industry and businesses will come to succeed (see p. 36 for the story).

And, of course, we graduated thousands of students who've gone on to make incredible contributions to their communities.

These are important stories. They help define us as a leading polytechnic. NAIT is an essential part of Alberta;

we exist to serve this province. Flip through the pages of any issue of this magazine and you'll see proof of that - whether it's reporting on what happens in our classrooms, in our labs, our community or even in Abu Dhabi, site of WorldSkills 2017, in which three of our alumni and students competed (that story is on p. 24). Personally, I think it all makes for a pretty good read.

We've had many milestones over the years and we have many more to come. I look forward to reading about even more ways that our staff, students and alumni help industry and our province to be successful.

Glenn Feltham, PhD
President and CEO
glennf@nait.ca

THE FUN IN FUNICULAR

Enjoying Edmonton's river valley through technology. →



Jesse Banford led the construction of Edmonton's funicular, designed to make the river valley more accessible.

JESSE BANFORD (Construction Engineering Technology '01) loves his city and the river that runs through it. He hopes his latest project will help show it off like never before.

As a director of facility infrastructure delivery at the City of Edmonton, Banford has led the construction of the \$24-million Mechanized River Valley Access, which includes a funicular that will run south from downtown to the North Saskatchewan River. Started in 2015, it will be completed this fall.

"The primary objective behind this project is accessibility," says Banford. "It's for people who have trouble with the incline – families with strollers, bikes and anyone else who wants to

“
The primary
objective
behind this
project is
accessibility

go into the valley or up to downtown without having to make the climb." Banford equates the funicular to an electrically driven, glass elevator that carries roughly 20 passengers (including strollers, wheelchairs and bicycles) on an angle along the riverbank. Riders from the city centre will arrive at an 850-square-metre (9,150-square-foot) promenade with benches, lawn and public art. The trip to the river valley below takes two minutes.

From the promenade, a bridge leads pedestrians across a busy road to a lookout that extends out over the water. Among the sights are Edmonton's signature river valley, as well as the University of Alberta to the south and



the iconic Fairmont Hotel MacDonald situated directly above to the north.

While the funicular is a practical part of the city's mission to make the North Saskatchewan River valley a place everyone can enjoy, Banford sees the fun in the project as well. "It's every child's dream to have a fort at the top of the tree," he says, "and that's where the promenade and lookout are located - right at the top of the trees, with an amazing view of the river and the city."

— *Dylan McConnell*

PHOTO BY BLAISE VAN MAUSEN

Thelma Chalifoux, a life well lived

ON SEPT. 22, NAIT lost a champion of student success in Thelma Chalifoux, who passed away at the age of 88. Chalifoux was the first Métis woman to be appointed to Canada's senate. She was also a regular presence at the polytechnic, where she was an Elder at the Encana Aboriginal Student Centre. In 2000, NAIT created the Senator Thelma Chalifoux Award, presented annually to individuals or organizations that have demonstrated a commitment to Métis and First Nations student success. In 2002, she was named a Distinguished Friend of the Institute and received an honorary diploma in business administration in 2003. "While Senator Chalifoux will be greatly missed, her contributions will live on. Truly, a life well lived," said Dr. Glenn Feltham, NAIT president and CEO.

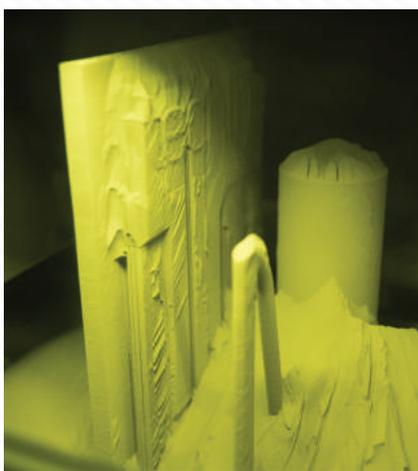
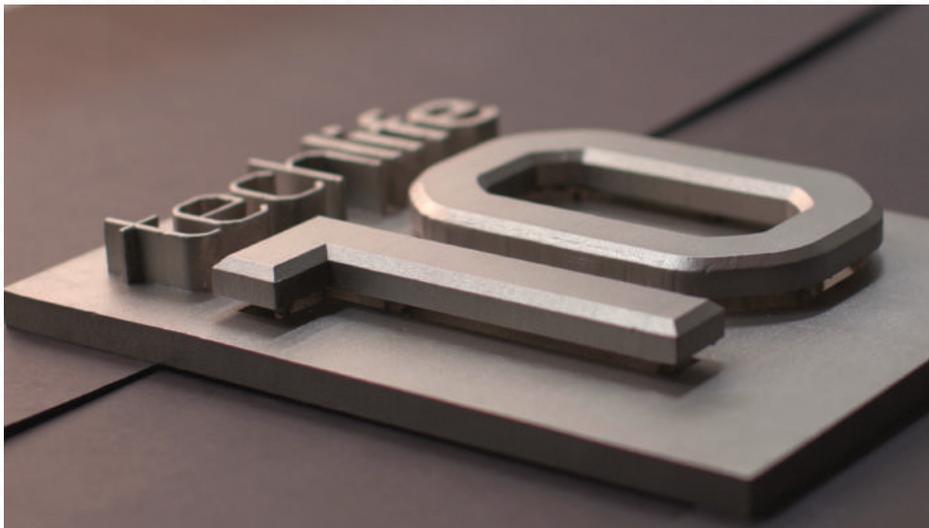
— *NAIT staff*



NAIT Elder Thelma Chalifoux was Canada's first female Métis senator.

+ WEB EXTRA

Learn more about Chalifoux at nait.ca/thelma-chalifoux



The 3D metal plaque photographed for this issue's cover by Blaise van Malsen was made using layers of stainless steel powder, as seen above.

The cover story

MAGAZINE COVERS are always printed, of course, but never quite like this. In search of a unique way to mark 10 years of *techlife*, we reached out to NAIT's Innovation Services, home of the polytechnic's 3D metal printer. While technician **Jens Kilden** (Nanotechnology Systems '12) usually keeps busy with prototyping for clients from industries including oil and gas, aerospace and medicine, he eagerly put the printer to work building a commemorative cover out of stainless steel.

Construction took about a week and required 5,666 fifty-micron layers (20 of those layers add up to a millimetre) of steel powder, melted into the shape of the magazine's nameplate and a number 10. The end result: the shiny, 22-by-28-centimetre (8.7 by 11

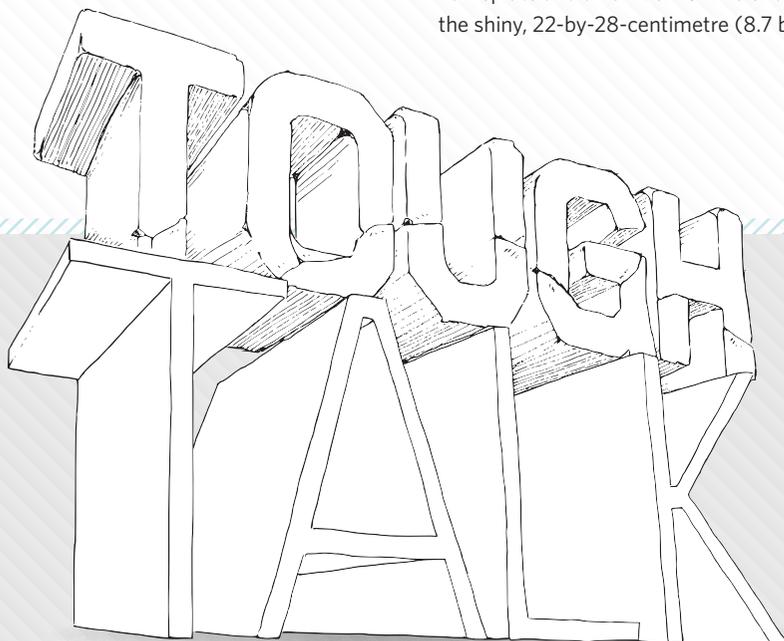
inches), 4.9-kilogram (10.75 pounds), 3D plaque pictured on the front of this book – and a testament to what the machine can do.

Kilden says the metal *techlife* cover was one of the biggest of the 30 builds completed so far by the printer. He saw it as a unique opportunity to contribute to the magazine in a way no other alum could, but also as a chance to safely “stress out our machine” and test its limits. “It’s also great exposure for our equipment,” says Kilden, who points out that it’s available to anyone in Alberta’s business community. “We want to bring in more people” – and help industry members create unique projects of their own.

— *The techlife team*

+ WEB EXTRA

Watch the making of *techlife*'s 3D cover at techlifetoday.ca/cover



WHAT'S TOUGHER? Working 20 days straight, or admitting to a co-worker that you're depressed?

Because of the stigma that remains associated with mental health issues, “It’s a very difficult subject to broach,” says **Don Boomer** (Plumber/Gasfitter '89, Steamfitter/Pipefitter '92), associate dean of the School of Skilled Trades. But it's one he knows is necessary. In Alberta, the highest rates of suicide occur among males who are students,



A new whey to fertilize

DISPOSING OF WHEY, a byproduct in cheese and yogurt making, in a safe and environmentally conscious manner has long been a challenge for producers. Due to its high nutrient content, whey can boost bacteria and algae growth in sewer systems and lead to lower oxygen levels in rivers and lakes.

Culinary Arts instructor Alan Roote says that, between September and April, NAIT produces more than 600 litres of whey per month in its artisanal cheese-making program. This summer, he teamed up with the polytechnic's gardeners to divert it from the drain, where it had previously gone following expensive water treatment.

After researching the matter to ensure there would be no negative environmental impacts, the grounds crew applied a 1:1 solution of water and whey to a 100-square-metre section of grass throughout May and June. In addition to protein and sugar, whey contains nitrogen, phosphorus and potassium – three nutrients that can contribute to plant health and faster growth.

"There's limited information about whey as a fertilizer, so this is kind of a test," says grounds supervisor Cheryl Bailey, who also wanted to make sure the disposal method wouldn't harm grass. "We were worried about the acidity, salt content and odor."

The result: a new method of dealing with whey, though not necessarily a fertilizer replacement. Treated grass remained green but did not grow greener, thicker or faster. After three applications of approximately 300 litres of diluted whey, however, the crew successfully disposed of all of the program's stored waste (without any lingering smells).

Next season, the gardeners will continue to spread whey over campus lawns. In the winter, the cheese program will give much of the whey to a local farmer who mixes it into feed for his cattle.

— *Dylan McConnell*

“

Everyone needs to know that there's help out there

agricultural workers and professionals from industry and the trades. Overall, no other province in Western Canada sees more deaths by self-inflicted harm.

To help students recognize signs of distress in each other and to encourage them to talk more candidly about their own mental health, all second-year apprentices and full-time trades students are now required to participate in "Tough Enough to Talk About It" – a program developed at the Suicide Prevention Resource Centre in Grande Prairie.

The hope is that the seminar, along with the polytechnic's other mental health support services (including recently increased access to counsellors at all campuses), will help address feelings of depression and isolation among tradespeople, particularly men, before it escalates to suicide. "It can be very emotional for people who have been touched by mental illness, but everyone needs to know that there's help out there," says Boomer.

— *Jordan Allan*



For the surefooted only

I'M STANDING ON a massive steel structure, looking down at the ground more than 12 metres (40 feet) below. I steady myself, then sway uncertainly as I move one foot in front of another. My legs feel like Jell-O. Suddenly, I stumble and plummet forward ... and land safely on a rubber mat, 15 centimetres below.

I remove my virtual reality headset and share a laugh with Ironworker program chair **Nicole Mahoney** (Ironworker '06). For more than a year, she's worked with NAIT Learning and Teaching Commons (LTC) staff to develop a custom, virtual reality beam-walking simulator. It's the first of its kind in North America to use Oculus Rift + Touch technology.

It's also an imaginative response to Alberta Apprenticeship and Industry Training's new requirement that second- and third-year ironworker students demonstrate an ability to manoeuvre at heights, which is where ironworkers spend most of their day. Mahoney was investigating safe training spaces when a co-worker with tech-savvy grandkids suggested virtual reality.

LTC, which supports student-focused efforts at the polytechnic, started designing a virtual environment for its Oculus Rift headset. In February 2017, Oculus released Touch hand controls to accompany the headset; LTC repurposed these for feet, printing ankle straps

of its own design on a 3D printer in the NAIT Library. Now, students can see their feet on the virtual beam, which is precisely mapped to the physical beam.

This September, the Ironworker program began using the technology on a two-metre (6.5-foot) long iron beam in a storage room with padded floors. "Other than the Oculus Rift hardware, it was completely made in-house at NAIT," says Mahoney.

Currently, the program is only designed for a walk in a straight line. To further students' beam-walking proficiency, Mahoney plans to expand the virtual environment to include a 90-degree turn and an uphill section.

— Jordan Allan

3 new programs

NAIT's offerings are set to grow this January. Here's a preview.



Foundation Drill Rig Operator

Unique in North America, this two-year certificate responds to an industry call for comprehensive training in a profession essential to the construction industry.



Baking and Pastry Arts

The current one-year certificate will expand to a two-year diploma and include courses in confectionary, advanced frozen desserts, entrepreneurship, product innovation and more.



Business Administration - Entrepreneurship & Innovation

This new diploma will put a sharp focus on small business management, entrepreneurial practice and new venture creation – activities that contribute to, on average, 30 per cent of each province's GDP.

— NAIT staff

+ WEB EXTRA

Read more about the programs at techlifetoday.ca/three-new-programs

First female executive

FOR THE FIRST TIME since it was established in 1964 to enhance the student experience, the NAIT Students' Association is being led by an all-female executive. In that inaugural year, the female representative was Betty Whittle (Industrial Laboratory '64) in the role of "women's athletic chairman." Back then, women made up 33 per cent of the student body (excluding apprentices); today, they account for 42 per cent. Elected by students in spring 2017, the historic leadership team includes (from left in photo) Doris Car (president), Naomi Pela (vice-president external, Accounting '16), Brenda Needham (vice-president academic, Human Resources Management '15) and Calli-Rae Barker (vice-president student services). They'll hold their positions throughout the 2017-18 academic year.

— NAIT staff





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**LIFE LESSONS FROM
THE TRADES**
UNEXPECTED LEARNINGS
FROM WORLDSKILLS 2017

DON'T FEAR THE SERVER
AN INSTRUCTOR EXPLAINS THE
VIRTUES OF CLOUD STORAGE



4 HACKS FOR BETTER LIVING

PREP OATMEAL OVERNIGHT for a quick breakfast before an early workout, says **Amy Eversley** (Personal Fitness Trainer '10). "Oats fuel our muscles for strength exercise and endurance activities, plus they help stabilize our blood sugars, which means you'll avoid the mid-workout crash." Mix equal parts oats and liquid and let soak overnight, or try one of the many recipes online.

+ How to get motivated for an early morning workout:
techlifetoday.ca/early-morning-workout

IF YOUR CELLPHONE PHOTOS LOOK OFF-KILTER, try changing your settings. "We recommend you always use the grid," says NAIT photographer **Leigh Kovesy** (Photographic Technology '01). The grid splits your screen into nine sections, with two lines running horizontally and two vertically to help compose your shot. You can find it under the Settings function in your phone.

+ Visit techlifetoday.ca/iphone-camera-tips
for more ways to improve your pictures

IF YOU NEED TO SLICE STEAK VERY THIN, say for a stir fry, put it in the freezer. Professional Meatcutting and Merchandising chair **Rob Povey** (Retail Meatcutting '07) says to wrap it in cellophane first. "Place it in the freezer for 20 to 30 minutes, just long enough to firm up the meat. Unwrap and slice against the grain."

STRUGGLING TO HAMMER A NAIL IN STRAIGHT? A simple grip change may be the fix, says Roger Cloutier, Millwork and Carpentry chair. Don't hold the hammer too close to the head. "Rather than choking up on the handle, you want to choke back." Avoid swinging your arm way back, too. "Swing in such a fashion that the weight of the hammer is what puts the nail in."

— *Liz Pittman*



David Whitaker enjoys a glass of homemade mead with his bees.

THE BUZZ ABOUT MEAD

Culinary Arts' David Whitaker transforms honey into a drink for the ages

FOR DAVID WHITAKER (Cooking '83), simplicity ranks among mead's sweetest attributes. The alcoholic beverage is so easy to brew that it almost certainly predates wine and beer, with possible origins in Africa 20,000 to 40,000 years ago. In the millennia since – from 8,000 years ago when it was fermented on the island of Crete, to the Middle Ages when it graced English tables and taverns, to now as it enjoys a comeback as one of the fastest growing segments of the alcoholic beverage industry – it has never required more than water, yeast and honey, which are all of the ingredients Whitaker uses to make mead in his north Edmonton kitchen.

"My style is low technology and natural," says the Culinary Arts instructor.

Whitaker began making mead last year, using tips from a workshop held by a community gardening organization. Inspired largely by YEG Bees, a co-op that piloted beekeeping in the city in 2014, he also started a hive in his garden, against a sunlit back fence. "This would be pretty cool," he recalls thinking. "I have bees, I have honey." What's more, he adds, "It's fun to make and great to drink."

Mead also fits Whitaker's food philosophy, which is earthy and uncomplicated. Once his bees begin making enough honey, he envisions a hyper-local production line, with primary ingredients travelling no more than a few metres from hive to fermenter to dinner table, and undergoing little processing other than what transpires with the introduction of sugar-eating, ethanol-excreting yeast. In the meantime, here's how he applies age-old wisdom to make a beverage that has stood the test of time.

— Scott Messenger

BREWING

Mead is a versatile drink, its base ingredients accommodating all manner of additions. While Whitaker's first batch was just three litres of liquid honey in nine litres of room-temperature tap water, he soon got creative. In one follow-up, he added cinnamon-infused poached pears. In another, he added local sour cherries. In neither case did he use anything resembling a recipe.

"Think about what tastes great with honey and mix it," he says. "Don't be scared. Just do it."

"Don't be scared.
Just do it."

— DAVID WHITAKER
CULINARY ARTS INSTRUCTOR

FERMENTING

Whitaker combines ingredients in a five-gallon (19-litre) pail that's been sterilized - like anything that will touch the mead from here on in - with a food-grade cleaner purchased from a brewing supply store. He measures the initial sugar content of the mix with a tool called a hydrometer before adding a package of the same yeast used to make champagne. Then he savours the transformation.

Each day, Whitaker checks to see if the temperature is an optimal 24 C, stirs the mix with a long-handled spoon, tastes it, sniffs it and listens to the delicate popping of carbon dioxide bubbles produced by the yeast as it turns sugar into alcohol. "I'm using all my senses to observe what's happening," says Whitaker.

AGING

Once the brew has stopped bubbling and fermentation is complete (usually a week or two), Whitaker siphons it into a glass carboy he has plugged with an airlock, a water-filled device that lets excess CO2 out but nothing in. After another week or two, the airlock will cease to bubble and particles suspended in the mead will have settled to the bottom of the carboy. It needn't be perfectly clear, according to Whitaker.

"My mead is a little cloudy," he says. "I look at it as extra flavour."

Before bottling, he takes another hydrometer reading, comparing it to the initial measurement to determine the final alcohol content (roughly 14 per cent for his first batch). Then he siphons it into sterilized 750-millilitre bottles. In theory, it should sit, or cellar, at 15 to 18 C for as long as a year, during which time the flavours will mellow. In practice, Whitaker never waits that long. He's too eager for a taste of the smooth, richly aromatic drink, which he enjoys like wine with dinner (or without).

Whitaker counts his first mead - his most basic - as his favourite so far. "I'm so proud of how it turned out," he says. "I don't want to drink it too fast so it will last. But I can always make more."

A MEAD FOR ANY NEED

Traditional
Contains only honey, water and yeast



Metheglin
Fermented or flavoured with herbs or spices, including rosemary, thyme and sage



Braggot
Made with malted grain, usually barley



Melomel
Fermented or flavored with fruit



Cyser
A melomel made with apples, apple juice or cider



Pyment
A melomel made with grapes or grape juice



Hippocras
A pyment with spices such as cinnamon and ginger



LIFE LESSONS FROM THE TRADES

WorldSkills participants reveal the true value of their recent competition in Abu Dhabi

Roughly 1,300 tradespeople - including three from NAIT - competed in 51 events at WorldSkills 2017, held in October in Abu Dhabi.

WORLDSKILLS MAY PUSH COMPETITORS to their limits, but the event leads to much more than just professional development. The biennial event - sometimes called the Olympics of the trades - involves close to 60 countries, well over 1,000 competitors and more than 50 events emulating the extremes of all manner of skilled professions. Held in a different country each time, it celebrates top talent and promotes the fact that great careers are made in the trades. As NAIT-educated apprentices Ryley LaFrance, Ryan Matsuba and Aaron Taves have realized after many skills competitions leading up to WorldSkills 2017 in Abu Dhabi this October, the event gets personal too. We talked to them about what months of training taught them before they found themselves on this world stage for the trades, where each went on to earn a medal of excellence.

— Scott Messenger



+ WEB EXTRA

Visit techlifetoday.ca/worldskills-2017 for a look at the event through the eyes of president and CEO, Dr. Glenn Feltham, who reported from Abu Dhabi.

Ryan Matsuba

(Refrigeration and Air
Conditioning Mechanic '17)

Age: 22

Event: Build a refrigeration system

PREVIOUS MEDALS

Silver – Skills Canada Alberta 2014
Gold – Skills Canada Alberta 2015
Bronze – Skills Canada 2015
Gold – Skills Canada Alberta 2016
Silver – Skills Canada 2016



What do you like about this field?

It's fascinating. There are so many components and moving parts in a refrigeration system. [The work] is both hands on, which I like, and mentally challenging. You need to know about a lot of different [parts]. It's crazy how all those different things work toward a single goal. It's fun putting it all together.

What has training for WorldSkills involved?

We build a refrigeration system from scratch. For the past month or two [August and September] I've been training after work for two, three hours. Now I've come to NAIT for three weeks before I leave [for Abu Dhabi] and I train all day, train on the weekend. It's definitely a lot but it's going to be worth it.

What have you learned about yourself through competing?

In every competition, there have been setbacks and adversity. It's just a matter of how you handle those and keep your head in the game and not get too frustrated. You know the project, so just keep on moving forward. Your training will take over.

Ryley LaFrance

(Electrician '16)

Age: 22

Event: Build an industrial control system

PREVIOUS MEDALS

Gold – Skills Canada Alberta 2015
Bronze – Skills Canada 2015
Gold – Skills Canada Alberta 2016
Gold – Skills Canada 2016

What is industrial control?

It's kind of an industrial computer – an automated process that streamlines [industrial plant] facilities. The plant we are currently working on [at my job] is similar to a car factory where there's an automated process to manufacture a car. But the sky is the limit. It's used in nuclear facilities and oil refineries, mining operations.



Other than training, how do you prepare for competitions?

The day before the competition I'm up a bit later, just thinking about the first 10 steps I'll do. After I run through that, I think about if step 1 fails, what's plan B, plan C, plan D. I just keep going through the different possibilities. It can be a bit taxing but I find with exercise and a good diet you do just fine.

What are your thoughts about going to Abu Dhabi?

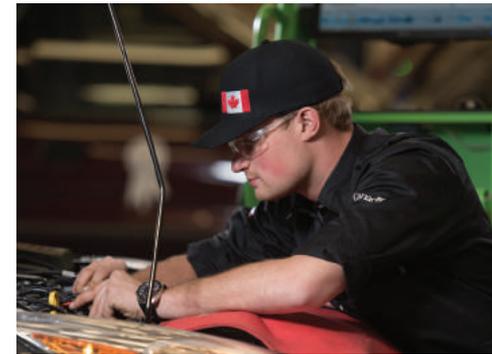
Obviously a bit nervous for taking the final step in my journey but I'm excited. It's really cool to get to see a different culture. And not just the culture of the United Arab Emirates but all the different cultures that will be there. It's a learning experience not just for the competition but for personal development. I could go on for hours about the cool cultural difference that I'm trying to incorporate into my life now. Like generosity, for one. When I was in China [for the China International Skills Competition in June], they were so generous and accommodating. It opened up my heart a bit.

Aaron Taves

(Automotive Service
Technician apprentice)

Age: 20

Event: Troubleshooting and repairs



PREVIOUS MEDALS

Gold – Skills Canada Alberta 2015
Silver – Skills Canada 2015
Gold – Skills Canada Alberta 2016
Bronze – Skills Canada 2016

What do you like about your trade?

Anyone can switch out [vehicle] parts. That's not the reward of the trade. It's being able to figure out things [other] people can't. For each problem, you have to go through the same systematic approach to it, like a riddle. Once you're able to figure out the root problem, you can implement your fix, see that it works and have the reward in that.

How did you feel when you learned you'd go to Abu Dhabi to compete?

I felt there was a long road ahead of me. I've learned an indescribable amount from where I was to where I am now. I'm confident in myself but when you know what's on the line it's hard not to be nervous.

What are your future plans?

Regardless of where my career goes, I intend on always contributing to the Skills Canada organization. I want to help with either the judging or making of the competitions in any way I can. [The value of participating] is extraordinary. For those planning on making their life career in their chosen trade – if they end up winning – it's the best thing you can put on your resumé.

THE MAGIC CLOUD

An instructor's argument for storing your data online

WHEN NETWORK ENGINEERING TECHNOLOGY instructor Ralph Worgul (Systems Support Specialist '98) talks about the Cloud, he mentions Arthur C. Clarke's third law of technology. "Any sufficiently advanced technology is indistinguishable from magic," the British science-fiction writer once wrote. Indeed, it seems as if the data you upload to the internet simply disappears, yet with the tap of a finger or the click of a mouse, it's back. "Ta-da!" says Worgul.

That apparent mystery - and the security concerns it conjures up - helps explain lingering skepticism about the web's reliability as a data-storage tool. After all, says Worgul, "Storing data on the Cloud is not a one-to-one relationship." Online drives such as DropBox, Google Drive and OneDrive send data to servers users can't identify, and sometimes duplicate this data on to multiple servers anywhere in the world. You're storing stuff but you don't know precisely where. "That's where the magic comes in," says the instructor.

After suffering data losses from physical devices in the past, Worgul has embraced the Cloud and its nebulousness. Here's why he thinks you should, too.



- **It has his back**

Worgul considers hard drives, discs and the like vulnerable to destruction or theft and therefore unfit for storing valuable data. "People talk about the emotional importance of pictures," he says. "Put them into the Cloud. If you have a fire, they'll be there."

- **He takes responsibility for security**

First, Worgul carefully crafts a password. "The longer the better," he says. He suggests creating a passphrase, such as a sentence from a book, or a composite of the first and last letters of each word of a sentence. Switch out the odd letter for a number or symbol and use random uppercase characters. Second, Worgul encrypts sensitive documents using online software before uploading them. Then he files them with care in folders he creates and keeps private or shares only with trusted people. He also ensures that he understands the privacy policies of any service he uses, which means he takes the time to read through all that legalese - something you should do, too. "Read the stuff. Have a coffee. Then have more coffee."

- **It's convenient**

Worgul trusts the Cloud to provide 24/7 access wherever there's WiFi. It keeps him in mobile music too, relieving this self-professed "old hippy" from hauling around beloved CDs because he's uploaded the music to the web. Despite being a Cloud convert, he isn't interested in Cloud-based streaming services - although he admits this has more to do with age than with online security. "I think it's a generational thing," says Worgul.

— Scott Messenger

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GOOD STUFF

We look back on 10 years of *techlife's* most popular stories in print and online

AFTER 20 ISSUES and 10 years of *techlife* – and just as long online – we ask ourselves, What have we accomplished?

“In many ways, we’ve captured the spirit and character of NAIT,” says Susan Cline, executive director of marketing and communications, which produces the magazine. “The polytechnic provides an exceptional hands-on education, but it’s also a place for new ideas and industry innovation. *Techlife*, and now *techlifetoday.ca*, was created to help us celebrate those stories and the impact NAIT has on this province.”

Mike Meldrum, associate vice-president of advancement, which includes alumni relations, also sees the spirit of NAIT in the magazine and website. He does so through the lens of the accomplishments of our more than 200,000 alumni. Meldrum sees those as contributions: a grad builds a business that in turn helps build the city; another puts his passion for firefighting to work protecting the environment; another channels her quest to live an authentic life into improving human rights

in Alberta. He believes these stories have a cumulative effect.

“As students read these stories, it’s encouraging,” says Meldrum. A standard is set, and they can begin to imagine how they might follow those grads who went before them. Alumni readers are no different, he suggests. “They see the impact they can have as a group.”

While *techlife* can’t take credit for that impact, we like to believe that the publication has served as a source of inspiration. That’s why we’ve created this list of our most popular stories – about the things alumni do, about the accomplishments of the polytechnic and how it’s growing so it can continue to build on its contribution to Alberta. This list isn’t definitive nor final. If one thing is certain, stories born from the experiences of those connected to NAIT – and the good stuff that comes of that – will continue.

— *The techlife team*

TOP 5 ALUMNI STORIES

THE REAL MARNI PANAS

First published in *techlife* magazine, Volume 10, Issue 1 (Fall 2016)



As a transgender woman, Marni Panas (Management '91, Computer Systems Technology '02) is driven to live as authentically as possible – and ensure that others are able to do the same.

techlifetoday.ca/marni-panas

DOWNTON EMPIRE

First published in *techlife* magazine, Volume 9, Issue 1 (Fall 2015)



How Jay Downton (Finance '02) the co-founder of oilersnation.com and president of Oodle Noodle became one of the leaders of Edmonton's creative economy.

techlifetoday.ca/jay-downton

A LOOK INSIDE LIFE AS AN ALBERTA WILDFIRE FIGHTER



First published at techlifetoday.ca, August 2017

Extreme heat, 6,000 calories daily and 12-hour shifts – it's all in a day's work for author and crew Harold Larson (Forest Technology '13).

techlifetoday.ca/harold-larson

DION DARLING PARTS WITH THE WORLD OF PRO HOCKEY

First published at techlifemag.ca, November 2011



A bittersweet goodbye to a game that defined Dion Darling (Power Engineering '11) – once one of the toughest names in pro hockey – and how education eased the transition to a new career.

techlifetoday.ca/dion-darling

CECILE BUKMEIER MAKES HISTORY AS ADVOCATE FOR WOMEN IN TRADES

First published at techlifetoday.ca, June 2017



After more than 50 years, the Auto Body Technician program hired its first female instructor. A profile of women-in-trades advocate Cecile Bukmeier (Auto Body Technician '15).

techlifetoday.ca/cecile-bukmeier

TOP 3 HOW-TO STORIES

A CASE STUDY IN TRANSFORMATIONAL LEADERSHIP: GLENN FELTHAM

First published at techlifemag.ca, May 2012



What makes a truly effective leader?

Marketing instructor

Teresa Sturgess

(Marketing '83) and a colleague examines the hallmarks in a study of NAIT's own president.

techlifetoday.ca/transformational-leadership

THE NAIT GUIDE TO FOOD AND DRINK

First published at techlifemag.ca, November 2013



Never go hungry for ideas of where to eat again, thanks to this ever-evolving list of

restaurateurs, chefs, and food and drink makers, each a NAIT grad.

techlifetoday.ca/restaurant-guide

EMAIL ETIQUETTE: 15 TIPS FOR BETTER WORKPLACE EMAIL

First published in *techlife* magazine, Volume 4, Issue 1 (Fall 2010)



How to send the right message with your messages.

techlifetoday.ca/email-etiquette

TOP 3 FOOD STORIES

THE FINE ART OF FOOD

First published in *techlife* magazine, Volume 6, Issue 1 (Fall 2012)



For NAIT's 50th anniversary issue, we look back on five decades of weird and wonderful food trends.

techlifetoday.ca/food-trends

MOVEABLE FEASTS

First published in *techlife* magazine, Volume 5, Issue 2 (Spring 2012)



How Nevin Fenske (Cook '05) helped rev up Edmonton's food truck scene.

techlifetoday.ca/food-trucks

THE DILEMMA OF DOG ISLAND BREWING

First published at techlifetoday.ca, January 2017



Ben Fiddler (Electrician '02, Instrument Technician '03) and Chad Paulson

(Instrument Technician '09) put their trades training to work in craft beer brewing.

techlifetoday.ca/dog-island

TOP 3 NEWS STORIES

PRODUCTIVITY AND INNOVATION CENTRE CONSTRUCTION UPDATE

First published at techlifetoday.ca,
July 2017



A time-lapse of progress on NAIT's new front door for industry, where businesses will come for

productivity enhancement, prototype development and more.

techlifetoday.ca/pic-construction

A VIRTUAL TOUR OF NAIT'S CENTRE FOR APPLIED TECHNOLOGY

First published at techlifetoday.ca,
September 2016



Take in the sights at the polytechnic's largest capital project in history.

techlifetoday.ca/cat-tour

MEN'S OOKS HOCKEY TEAM ENTERS HALL OF FAME

First published at techlifetoday.ca,
February 2017



The 1984-85 men's Ooks hockey team enters the Alberta Sports Hall of Fame for their legendary perfect - and

championship - season.

techlifetoday.ca/ooks-hall-of-fame

6 AWARD-WINNING STORIES



DECLARATION OF INDEPENDENCE

First published in *techlife* magazine, Volume 4 Issue 1 (Fall 2010)
Alberta Magazine Awards, Best Alberta Story
Council for the Advancement and Support of Education District VIII, Silver

How James Ahnassay (Civil Engineering Technology '88), former chief of the Dene Tha' First Nation, re-envisioned education in his northern Alberta community.

techlifetoday.ca/james-ahnassay



GLENN FELTHAM'S NEW ASSIGNMENT

First published in *techlife* magazine, Volume 4 Issue 2 (Spring 2011)
Council for the Advancement and Support of Education District VIII, Gold

For Dr. Glenn Feltham, the only way to get to know NAIT upon his arrival in 2010 was to roll up his sleeves, put on some steel-toed shoes, and try every program.

techlifetoday.ca/glenn-feltham



STRANGE BREWS

First published in *techlife* magazine, Volume 6 issue 2 (Spring 2013)
Council for the Advancement and Support of Education District VIII, Bronze

Before there was the Alberta craft beer boom, there was Stu Chell (Culinary Arts '05), who once poured his creativity as a cook into brewing in St. Albert.

techlifetoday.ca/stu-chell



CITY OF TOMORROW

First published in *techlife* magazine, Volume 6 issue 2 (Spring 2013)
Council for the Advancement and Support of Education District VIII, Gold

Chris Dulaba (Urban and Regional Planning Technology '99) tackles an overdue update of Edmonton architecture with Sylvancroft, a modern urban development.

techlifetoday.ca/sylvancroft



CALIFORNIA DREAMIN'

First published in *techlife* magazine, Volume 4 Issue 2 (Fall 2011)
Council for the Advancement and Support of Education District VIII, Grand Gold

Former NAIT business incubator client Jim Barr gets the opportunity of a lifetime in San Francisco.

techlifetoday.ca/jim-barr



FRAZ DAZZLER AND THE SUNNY DAY DELAY

First published in *techlife* magazine, Volume 1 Issue 2 (Spring 2008)
Council for the Advancement and Support of Education District VIII, Silver

Ryan (Electronics Engineering Technology '05) and Tanya Clarke (Graphic Sign Arts '02) win over players around the world with their creative take on guitar effects pedals.

techlifetoday.ca/dr-scientist

WEB EXTRA: Visit techlifetoday.ca/top-stories to see our award-winning design and photography from the last 10 years.

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THE FABULOUS FIVE

Why these alumni award recipients stand out from a crowd of more than 200,000 grads.

EACH SPRING, a small group of NAIT grads are chosen as recipients of the Alumni Recognition Awards. They come from a variety of industries, professions and stages of career. But they all have one thing in common: they make a real and lasting impact on their communities. Here are this year's honourees.

STORIES BY **SHAWNA GREER**

PHOTOS BY **BLAISE VAN MALSEN AND LEIGH KOVESY**



THE INDUSTRY LEADER

RENA NATHANAIL

(Court Reporting '84)

Alumni Award of Distinction

When Rena Nathanail started working in the 1980s, she was among the country's few real-time closed captioners. Today, she's an industry leader and a major employer of fellow NAIT graduates who are increasing Canadians' access to information.

It began with her ability to recognize and seize an opportunity. In the early days of her career, closed captioning was a fledgling industry. The Canadian Radio-television and Telecommunications Commission had recently passed a policy for television broadcasters to provide captions to make programming more accessible to deaf and hard-of-hearing people.

So, in 1988, Nathanail set out on her own, landing contracts with TSN, CTV and CBC - incorporating what would become the country's largest live closed captioning service provider. "I was in the right place at the right time," she says.

As demand for closed captioning grew, Nathanail's high standards set her apart. Court reporting graduates from other schools in Canada fulfilled requirements of 165 words per minute; NAIT's graduates clocked in at 225 or higher. Other companies simply couldn't compete with her.

Based in Calgary, National Captioning Canada now has more than 100 employees and provides more than 1,800 hours per week of closed captioning and real-time transcription services for news, sports, entertainment and government proceedings across the country.

nait.ca/Rena2017

Know a NAIT graduate who is doing great things?
Nominate them for 2018 Alumni Recognition Awards
at nait.ca/nominate



THE COMMUNITY BUILDER

JOSH CLASSEN

(Radio and Television '96), Alumni Award of Excellence

CTV Edmonton's meteorologist Josh Classen admits the climate in Alberta's capital region is not without its challenges – the weather can change on a dime on any given day. In between providing Edmontonians with live updates on the 6 o'clock news, he's up at the crack of dawn providing real-time coverage on the station's weather app and to more than 50,000 followers on Twitter.

But Classen believes his role is about more than forecasting weather. For many years, he's run the weekly Weather Watchers segment to inspire budding weather enthusiasts and has led weather presentations at the Telus World of Science. In 2017 alone, Classen has visited more than 80 classrooms in the capital region, sharing his enthusiasm for broadcasting and teaching young people about the weather.

Giving his own time to the community is an important part of the job, says Classen. He emcees close to a dozen different fundraising events throughout the year, including the Stop Abuse in Families Red Shoe Gala and Brain Matters Charity Golf Tournament for the Brain Injury Centre.

"I hope lending my voice helps raise money for these important causes," he says.

nait.ca/Josh2017

Peter Keith had a career-defining moment at the Culinary Olympics in Erfurt, Germany, in 2012. At just 21, he earned a gold medal – and gained a hunger for competition.

The following year, Keith received the Skills Alberta Alumni Award. A certified journeyman and Red Seal and Blue Seal chef, he has competed at more than 15 cooking events. Just one month after his success in Germany, he earned another gold medal at the WorldSkills Americas competition at São Paulo, Brazil.

Keith also knows an opportunity when he sees one and has co-founded a charcuterie company. Opening in 2018, Meuwly's features Alberta-raised meats and artisanal products and preserves – the first of its kind in Edmonton.

But Keith hasn't completely left the competition world. He volunteers with the Edmonton Apprenticeship Committee and judges the High School Culinary Challenge – the first competition he entered and the one he credits for setting him on the culinary path. He's also a volunteer coach for Culinary Team NAIT, mentoring students at world competitions in Singapore, Hong Kong, Dubai and Germany.

"When I started cooking competitively, it was about reaching my own personal goal and performing at that elite level," says Keith. "It is amazing to be able to help someone else gain that experience."

nait.ca/Peter2017



THE MENTOR

PETER KEITH

(Cook '12), Spirit of NAIT Alumni Award

THE PATIENT-CARE ADVOCATE

SHAWN KNIGHT

(Emergency Medical Technology – Paramedic '96)
Alumni Award of Excellence

During Shawn Knight's time as a paramedic, he experienced nearly every patient care scenario imaginable. He learned the importance of ensuring Albertans are cared for by the right practitioner at the right time and place. Today, he devotes himself to making that level of care a reality.

Knight carried those lessons from his days as a paramedic into his role as executive director for the Ministry of Health, Health Human Resource Planning and Strategy Branch. Knowing what it took to meet patient needs as a first responder, he worked to get the paramedic profession included in the Health Professions Act – the same act that applies to physicians and registered nurses.

Before being included in the Act, paramedics were primarily responsible for providing immediate treatment and transporting patients to hospitals. Now, they will have the opportunity to divert patients from emergency rooms altogether by giving them the treatment they need on site. This also allows Alberta Health Services to expand the Community Paramedic program, so paramedics can conduct more medical tests in a patient's home and provide medication until the patient can access a pharmacy.

Knight no longer treats patients but his intimate understanding of the profession has helped make sure Albertans receive exceptional care as efficiently as possible. "The projects I'm working on today carry the potential to have a large amount of impact on the lives of Albertans for years to come," he says.

nait.ca/Shawn2017



THE STARTUP BOOSTER

MEAGAN SCHRODER

(Accounting '06, Business Administration – Accounting '08)
Spirit of NAIT Alumni Award

Meagan Schroder's advice and support for up-and-coming entrepreneurs comes from having been there herself. After five years as an auditor, Schroder began thinking about starting her own business.

After two more years honing her skills as a controller at her father's oilfield company near Slave Lake, she took the big step.

With a former colleague, Schroder started Roth Schroder Professional Corporation, an Edmonton-based accounting firm that provides bookkeeping, controller services and auditing advice. They've grown steadily on a foundation of strong client relationships and by hiring like-minded accountants.

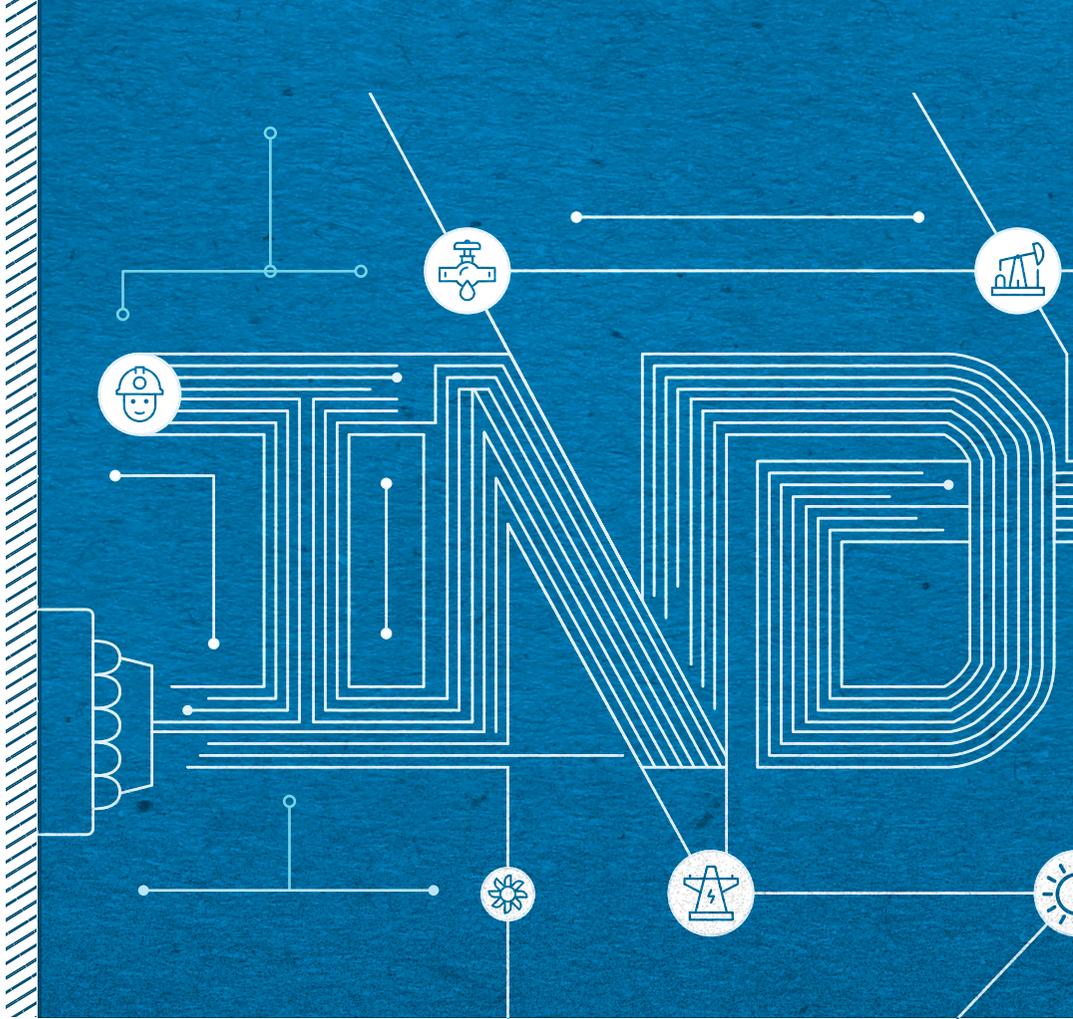
"You really need to communicate with clients and get to know them," says Schroder. "Every industry I work with has changing needs so, as an accountant, you need to adapt."

Whenever she can, she brings her knowledge to indigenous communities, including her home, the Bigstone Cree Nation, more than 300 kilometres north of Edmonton. There, she supports other entrepreneurs by sharing her expertise with owners and managers of small and medium-sized businesses and potential startups.

nait.ca/Meagan2017



FRONT DOOR FOR



What NAIT's Productivity and Innovation Centre will mean to Alberta – and beyond

DARYL KRUPER KNOWS what it takes to build a business that competes globally while keeping a strong foothold in Alberta. As the president and CEO of Simmax Corp, he is proud of what he has accomplished over 35 years. Kruper (Electrician '84) has expanded his business to manufacture, sell and service power generators, power plants and industrial engines, not only across Canada and across multiple sectors, but also for many of the world's largest utility, mining and oil and gas companies.

An industry success story, Kruper has brought his knowledge and insight to NAIT's board of governors since 2013. As a business leader he is excited about two of NAIT's game-changing projects – the development of the Productivity and Innovation Centre (PIC) and a renewed vision to serve industry.

"Innovation is critical in driving our economy forward," says Kruper. "NAIT's commitment to an integrated industry services model and the new Productivity and Innovation Centre will give businesses in our province

access to the expertise and equipment they need to accelerate growth and come to practical solutions to address the challenges they face. Ultimately, they'll become more competitive globally."

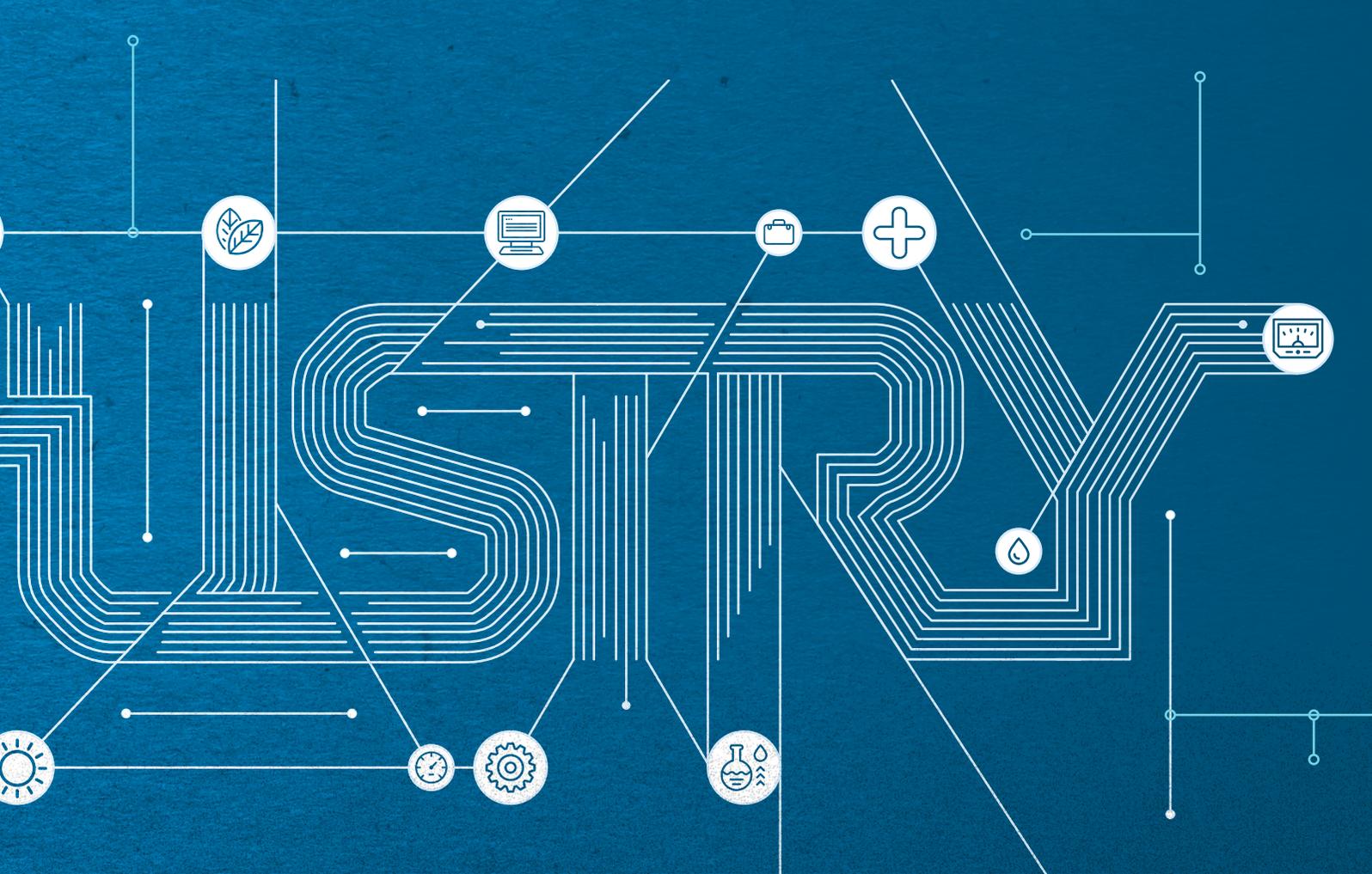
In October 2016, Amarjeet Sohi, minister of infrastructure and communities, announced \$34.98 million in support of PIC through the federal government's Post-Secondary Institutions Strategic Investment Fund. NAIT will contribute more than \$45 million.

Scheduled to open for business in fall 2018, the 17,650 square-metre (190,000-square-foot) facility will bring together a number of NAIT's applied research centres, productivity enhancement services, prototyping and product development services, and workforce education, among other solutions to help industry succeed.

Not all industry services offered at NAIT will exist within PIC. The Boreal Research Centre is an example of applied research that will remain in its current home in Peace River, where researchers work with industry partners

"The productivity education that our people received helped Fountain Tire improve operating costs, enhanced our competitiveness, and improved our overall productivity."

— BRENT HESJE
CEO, FOUNTAIN TIRE



on reclamation activities. What will change for all industry-serving areas at NAIT, however, is that the connections across services will become seamless, providing an opening to new opportunities.

“NAIT is not a newcomer to serving industry and many successes have come from our partnerships. Still, we believe we have more to offer,” says Dr. Sue Fitzsimmons, vice-president academic and the lead of the industry services guidance committee. “We know we need to be vigilant about keeping the customer in the center of the conversation. As we listen deeply to understand what companies envision for their future, we can offer a broader range of solutions that will make their experiences with us even more valuable. PIC is like our front door, but of equal importance is our ability to make connections and coordinate our efforts – both internally and with other organizations who work to support industry.”

Those close to the centre’s development see it as a natural progression. Since its inception in 1962, NAIT has served industry – and Alberta’s economy – with skilled graduates. Ten years ago, the polytechnic received a mandate to conduct applied research and began working directly with industry to tackle the challenges they faced. Corporate training and productivity enhancement had also emerged as a staple for workforce education.

Fountain Tire CEO Brent Hesje witnessed NAIT evolve in his time as Board chair from 2013 to 2016. His role gave him

a deep understanding of all NAIT has to offer. His staff also came away with benefits that they continue to use.

“The productivity education that our people received helped Fountain Tire improve operating costs, enhanced our competitiveness, and improved our overall productivity,” says Hesje, who now lends his talent and experience to the industry advisory council for PIC. “Learning project management at a deeper level has dramatically improved our success on new initiatives. NAIT’s Industry Services helps businesses like ours and others to adapt and implement new technologies as they emerge.”

NAIT’s commitment to industry services and the work that ensues complements the polytechnic’s role preparing graduates for employment and advancement in their chosen fields. One supports the other.

“NAIT’s commitment to help our industry partners to be among the best in the world and globally competitive is critical,” says Dr. Glenn Feltham, president and CEO. “We see the support we give industry tied in so many ways to our students and their future. We know that when industry succeeds, so do we all through a strong and prosperous economy. The superior quality of NAIT’s industry services combined with the tremendous growth in capacity to serve our partners through the launch of the Productivity and Innovation Centre will be transformative for our city, province and country.”

— Susan Cline

WEB EXTRA:

Follow the progress of the building at techlifetoday.ca/PIC-construction

A Family Matter

How a mother's epiphany about her own health led her to make fitness more inclusive for autistic people.

STORY BY **SHELLY DECKER**
PHOTOS BY **TIM POTTER** AND **LEIGH KOVESY**

FOR ZITA DUBE-LOCKHART (Personal Fitness Trainer '16), the hardest and most important day of her life was when her son Samuel fell to the ground flailing and screaming at an outdoor Edmonton festival in 2014.

Samuel, who was three years old at the time, has autism. He doesn't speak and he jumps constantly. He'd become overwhelmed at the festival, and Dube-Lockhart struggled to carry him up a steep hill to their vehicle so they could return home. She was stressed and out of shape, and weighed about 275 pounds. It was then that she realized something had to change.

"It occurred to me in that moment that my child, who was in complete crisis, was always going to need me to pick him up," says Dube-Lockhart. "Always. This was our normal. And if it was going to be our normal, I was going to have to do something dramatic about my health."

She began a strength-training program that would see her lose more than 100 pounds (45.4 kilograms), then realized she wanted to make a profession in fitness and well-being. Dube-Lockhart quit her job as a

business consultant and enrolled in NAIT's Personal Fitness Trainer (PFT) program with the ambition of making a difference for other families dealing with autism spectrum disorder, a lifelong developmental disorder that can include challenges to communicate and interact with others, repetitive behaviours, rigid interests and sensory sensitivities.

Three years after that day at the festival, Dube-Lockhart is using her experience and her fitness training to try to make that difference. She is the creator of DiversiFit, a wellness program designed for autistic people and their families. Developed during her studies at NAIT, DiversiFit is unique in Edmonton for its multi-faceted focus. It teaches trainers how to address the needs of people with autism, and gives their clients an opportunity to experience all the physical and psychological benefits of physical activity. Just as importantly, however, it includes their families, emphasizing the need for them to manage their own well-being. DiversiFit attempts to help caregivers of people with autism achieve the same sort of transformation Dube-Lockhart experienced, and help it come from something positive rather than a crisis.

Zita Dube-Lockhart was inspired to start DiversiFit by her experiences with Samuel, her autistic son.





Zita Dube-Lockhart used her time at NAIT to help develop an exercise program for autistic people and their families.

“No one is going to do it for us”

The DiversiFit concept (with “Fit” standing for family-integrated training) had already begun to take shape in her mind when Dube-Lockhart enrolled in the PFT program in 2015. As she formalized her plan, DiversiFit also began to take shape in her coursework. “I absolutely could not have designed it without the formative support of the PFT team.”

“My motivation was to fill a need and to help empower families [with] the knowledge, the resources and the skills needed to live healthier lives, because the reality is no one is going to do it for us,” says Dube-Lockhart, who’s now 36 years old.

There’s a strong need for increased health and wellness programs for this population, says Brooke Pinsky, support services manager with Autism Edmonton, a non-profit that assists autistic people and their families. According to the Centers for Disease Control and Prevention, one in 68 children has autism. Obesity rates within this group are about 32 per cent; within the general population, it’s 13 per cent.

“The family component is very important,” says Pinsky. Specialized activity programs typically only target individuals with autism. Assistants are frequently required, adding expenses for families that often prove prohibitive, as many of them are households in which one parent works while the other takes on the provision of extra care.

Many of Dube-Lockhart’s autistic participants had previously tried community sport and fitness programs but often experienced anxiety, says Pinsky. The DiversiFit pilot would prove to be different.

Supported by NAIT instructors and Autism Edmonton (and a \$10,000 GoodLife Kids Foundation grant that allowed the program to be offered at minimal cost), Dube-Lockhart piloted the program for seven weeks starting in February 2017. The 68 participants, including 22 individuals with autism, were found through her personal network and Autism Edmonton. It included a mix of fun physical activities, such as obstacle courses, for one hour every week at No More Excuses, an Edmonton fitness studio. Dube-Lockhart also provided in-home training for families who struggled to make it to the gym. She ended all sessions by sharing information on a range of topics, including nutrition and goal setting, and even provided an exercise manual and equipment so exercise could continue at home.

The pilot was meant to help participants and their families regain a sense of ownership over their health together. “One thing we did determine was that having a caregiver and siblings actively involved was critical to help the family continue to be physically active after the program,” says Pinsky.

After surveying participants, Dube-Lockhart found that 100 percent of respondents (90 per cent of the surveys were completed and returned) felt it was a positive experience. “At the start, I had kids who literally told me ‘I don’t want to be here’ and refused to come into the room,” she says. “By the end of it, I had them doing yoga. By the end of the sessions, everyone was participating in their own way to the best of their abilities. It was awesome.”

“By the end of the sessions, everyone was participating in their own way to the best of their abilities. It was awesome.”

– ZITA DUBE-LOCKHART, FOUNDER, DIVERSIFIT

A fundamental part of life

PFT instructor Lorraine Glass was so impressed with Dube-Lockhart's program she arranged for three of her students to do their practicums with DiversiFit's pilot. "You're instilling health and wellness from the ground level," says Glass.

For some parents, the benefits for them and their autistic children were eye-opening, says Dube-Lockhart. Many were living sedentary lives.

"What struck them was that their needs had to be accounted for as much as their children," she says. "You have to put your own oxygen mask on first."

Mel-Sue Bakke says that, prior to DiversiFit's pilot, activities usually revolved around the interests of her 10-year-old grandson, Ayden. Often, that meant going to a playground or classes where she would sit and watch.

"This is a place for you to come and share this experience with your kids, which is great," says Bakke, who has been raising her grandson for the past five years. "Because sometimes it's hard to build relationships with these kids and find something you can do together and have fun with them."

It was good for both of them, she adds. Ayden laughed and engaged with kids in an environment where there was no need to worry about his behaviours being misunderstood. And Bakke continues to work out three times a week. "I didn't realize how good I was going to feel. I feel great."

With the pilot program over, Bakke longs for a future in which Ayden can continue to have a welcoming place to exercise and find an accepting community as he gets older.

DiversiFit may be one option. The program will run for another year with themed workshops starting in November and weekly sessions starting in January, thanks to a No More Excuses fundraiser for Autism Edmonton, which will fund it. Dube-Lockhart has created an adult-specific program in addition to the family program. One day, she'd like to see DiversiFit offered in other cities. Finding a way to make health and fitness accessible for a lifetime is vital, says Dube-Lockhart. "Autism affects an individual but impacts a family," she says.

Her own son, Samuel, is still too young for the program (though he has attended with his four-year-old sister, Charlie, and their father, who helped run the sessions). But, being active is a value Dube-Lockhart shares with Samuel at home. It's part of his life.

It's a fundamental part of hers now, too. "I learned that my self-care is every bit as important as his," says Dube-Lockhart.

"I am a better parent. I was so very lost and drowning in the idea of it all ... the stereotypes and the stigmas and the fears and incessantly being told how difficult my life was going to be. That's not my experience now. We have a really functional, happy, well-established family unit." ■



Being active is a value for the Dube-Lockhart family.

A Matter of Identity

Until a few months ago, Jackie Ryan thought she understood the best way to refer to someone who has autism.

The director of teen and adult services at the Centre for Autism Services Alberta used person-first language, such as *individuals with autism* rather than *autistic individuals*. Many professionals continue that practice.

However, Ryan changed her mind after Centre adult advisers advocated for the use of *autistic individuals* during a meeting in June, 2017. "Nobody is more surprised by that than me."

She researched the topic, which is close to her outside of work. Her adult son, Sean, has autism and she was diagnosed three years ago at age 53.

"It's been hard for me to get there because there's so much stigma still attached to that. But it's part of taking back ownership, and destigmatizing that label is to own it and be proud of it and not hide it behind something else. Because most people who are autistic will say that being autistic is essential to who they are."

For Zita Dube-Lockhart, there is no question about how to refer to her son, Samuel.

"There is no Sam without autism," says Dube-Lockhart. "All information that he takes in, he takes in through the lens of his neuro-divergent brain. So what message are we telling him when we say that autism doesn't define him? Of course it does."

Nevertheless, people with autism spectrum disorder who are able to share their preference should have it respected, says Ryan.

"Whoever has the label gets to decide."

THE RAIN MAKER

STORM CHASER NEVIN DEMILLIANO HAS
TURNED WEATHER PREDICTION INTO AN
AGRICULTURE-BASED BUSINESS.
ARE THERE CLEAR SKIES AHEAD FOR THE
YOUNG ENTREPRENEUR, OR DO STORMS
BREW ON THE HORIZON?

STORY BY
SCOTT MESSENGER
PHOTOS BY
BLAISE VAN MALSEN
SUPPLIED



CLEAR SKIES TO GATHERING CLOUDS

It's not hard to picture Nevin deMilliano as a kid. He's nearly 30, but he's still marked by the wonder and hopefulness of the very young. DeMilliano is trim and long-legged, and boyish enough to likely still be ID'd. His straight, dark hair can look slightly unruly even if recently combed. And when he talks about things he likes – such as the severe thunderstorms and tornadoes he chases as a hobby – a broad, unrestrained smile takes over his face.

What's hard to picture is that boy of four or five being afraid of those storms. Like many of us – and like many storm chasers, he says – deMilliano was the kid who couldn't sleep at night as lightning flashed and thunder crashed. Unlike many of us, he was able to identify the source of his fear: a knowledge gap. What was happening in the sky? he wondered. So he hit the library in his hometown of Fort Saskatchewan and faced his fears with armloads of picture books.

By the time he was in school, it was virtually all deMilliano wanted to learn about. “In Grade 1, I always got in trouble for staring out the window at the clouds,” he says on a recent overcast but calm summer day at NAIT. “My head was always in the clouds.”

"CLOUDS ARE FINE... BUT IT'S STORMS THAT GOT ME GOING."

- NEVIN DEMILLIANO, STORM CHASER AND ENTREPRENEUR



It still is – but now he’s being encouraged to keep it there. After a semester of university-level atmospheric science, deMilliano came to NAIT in 2014 planning to build a business that could be described as boutique weather forecasting. Especially from the perspective of a meteorologist, Alberta is vast. A TV weatherperson can cover the major centres but conditions can change within an hour’s drive. That can leave many of the more than 40,000 farms in the province guessing at when to carry out highly weather-dependent work. Agricast, a subscription service for custom forecasting that deMilliano launched this summer, is designed to take some of the guesswork out of agriculture.

“It’s about communicating [climate data] so that other people understand the weather better and make decisions that benefit their business or life,” says deMilliano, who’s finishing his studies at the JR Shaw School of Business. “That’s what fascinates me now.”

Almost, that is, as much as storm chasing.

CLOUDS TO RAIN

DeMilliano couldn’t have been a TV weatherperson. He has the personality and energy for the job, and the ability to translate complex systems into “pack an umbrella” or “cover the tomatoes.” But the studio isn’t for him. He wants to tell people about the weather but he also wants to see it for himself, and usually up close.

“Clouds are fine,” says deMilliano, recalling his Grade 1 distraction, “but it’s storms that got me going. Just the dynamics at play, the motion. There’s nothing like it. I always say, if you’ve ever seen a rotating thunderstorm, what we call a supercell, even the pictures and video that we take pale in comparison to watching it live.”

Along with three other storm chasers in Alberta and Saskatchewan (historically Canada’s top provinces for tornadoes), deMilliano posts that footage on Twitter @PrairieChasers. With a reach of more than 14,400 followers, it offers a whirlwind tour of probing funnel clouds and alarming but stunning, anvil- and mushroom-shaped formations over Western Canadian skies. It’s also an invaluable resource for weather television.

“Eyes on the ground are always better than radar,” says CTV meteorologist Josh Classen (Radio and Television ’96). With respect to severe weather, “There’s always some time lag when you’re getting that [radar] data and a bit of



uncertainty whether you're getting the full picture. To be able to have pictures and video from guys who know what they're looking at is really helpful."

Classen, who studied meteorology through Mississippi State University, counts deMilliano among those "guys." They fill a gap he can't. During stops on chases, deMilliano would meet curious farmers who'd tell him that the weather forecast for the nearest major centre often didn't apply to them – which ultimately led to the Agricast concept. While Classen can use storm chasers' real-time reports to tailor a warning of hail or even a tornado for a given rural outpost, he can't devote himself to predicting their weather.

"I only have so many hours in the day and so many minutes on TV," says Classen. "If I only had 12 viewers, I could spend a lot more time on what might happen in their neighbourhood." He's happy to leave that to Agricast. "They're trying to scale [forecasting] to the point where they can provide the level of service that broadcasters can't. They're trying to localize that, acre by acre."

Classen points out that the climate data farmers need isn't hard to get. Alberta Climate Information Services provides a deluge of current and historical information from 350 weather stations across the province.

"The problem is: what do you do with that information?" he says.

With two business partners (meteorologists based in Manitoba), deMilliano turns those numbers into two-day forecasts for the nine farms that are part of the business's first phase, capped to keep the workload manageable and to refine the model to meet farmers' needs. Though less exciting for Twitter followers, the activity is similar to pinpointing an Alberta weather event that might blow up into something worthy of the six o'clock news.

When deMilliano chases a storm, he knows not only where to go, but exactly when to hit the road, often driving hours and arriving right on time to catch the action. He understands the mechanics of a storm in a way that allows him to predict funnel clouds that materialize minutes later. And he always learns enough about any given weather system to have mapped out an escape route.

He puts this kind of effort into forecasting because he knows the Prairie Storm Chasers' audience – locals, weather geeks and meteorologists alike – needs to know what's happening up in the troposphere, that sliver of the atmosphere where most of our weather occurs. He applies the same rigour to his farmers' forecasts. He knows their livelihood depends on it.

This rotating thunderstorm produced a tornado near Rocky Mountain House in July 2017. Photo by Nevin deMilliano.



A lightning storm in Texas photographed by Braydon Morisseau, a member of the Prairie Storm Chasers along with Nevin deMilliano.

RAIN TO STORMS

A perfect supercell storm comes from an ideal alignment of circumstances. In most thunderstorms, warm air rises from the ground, meets cooler air and produces precipitation. This causes a downdraft that blocks the entrance of more warm air that would strengthen the storm, and the storm dies. A supercell is what happens when it doesn't. Winds tilt the system and set it rotating, allowing the cold downdraft to exit in a way that allows the warm updraft to reach and feed the storm. Tornadoes are the storm chaser's prize, produced by just a small fraction of all supercells, with some researchers putting the number at about 10 per cent.

That proportion, coincidentally, also represents the number of startups that go on to become successful. Conditions must be perfect for the full potential of one to be realized. With his business off the ground, deMilliano has to ensure he can continue to fuel the system.

"I'm the least entrepreneurial person there is," says Classen. But as a broadcaster, he thinks scalability is one challenge Agricast may face. He sees the need for deMilliano's business to expand and make the hours that go into forecasting worthwhile but not at the cost of sacrificing service.

Tyler Graham, one of Agricast's current clients, sees a similar need. Based in Lamont, about 70 kilometres northeast of Edmonton, Graham's 1,200-acre mixed farm, and his business as an agricultural consultant, lie outside

the reliability of a forecast tailored to the capital. "Pretty much everything we do is outside and weather dependent – whether you're making hay, spraying crops, seeding or harvesting," says Graham. "To watch the news is not really a local forecast. [We're] trying to get a better handle on one of the main variables in our operation to help us make better day-to-day decisions."

Since May, he's received detailed two-day forecasts from Agricast as emailed reports that he keeps handy on his phone. But in a business that can require knowing the very hour that rain will fall, he finds that his forecasts can falter by the end of that second day. He knows weather changes quickly but he needs the information he's given to remain as accurate as possible if he's to renew his subscription to deMilliano's service in 2018.

As an entrepreneur himself, Graham sees this as an opportunity for developing Agricast – something he'll share when deMilliano surveys his clients post-season. An Agricast app now being planned may be part of the solution, and a winter of work directed by customer feedback may lead to more improvements.

For Graham, the need for Agricast in the agricultural community is clear as deMilliano's drive. The young forecaster is doing something, he points out, that no other entrepreneur has had the knowledge and courage to attempt before in Alberta. "I put my trust in him to develop that product," he says.



"THAT'S BLISS FOR ME... THAT'S MY HAPPY PLACE"

- NEVIN DEMILLIANO, STORM CHASER AND ENTREPRENEUR

BLUE SKIES

That trust – and deMilliano's willingness to build it – will determine the success of Agricast as much as the product itself. As Sandra Spencer (Accounting '10, Bachelor of Business Administration '13) points out, reaching out for feedback shows he's acknowledging that entrepreneurship can involve a kind of partnership with clients. "A business needs a customer," says the CEO of Nimble Strategizing, a firm that coaches entrepreneurs. "A product doesn't necessarily equate to a business."

Jay Kryslar also sees value in the openness of deMilliano's approach. "The biggest thing that he's doing right now is he's testing things out," says the JR Shaw School of Business instructor who taught deMilliano subjects including new venture creation and business planning. Kryslar invokes the "corridor principle" to justify that exploration. An entrepreneur, says the instructor, should be willing to investigate doors that open along the way as he or she heads to the light at the end of the hall. "Will [Agricast] change from the business plan he did last year? Yeah, sure, once he gets feedback from his test sites. [But] that's a key entrepreneurial competency." And one he feels deMilliano has.

Apart from that, he possesses a rare determination, adds Spencer, who in a previous role as a NAIT manager for services for startup entrepreneurs oversaw workshops deMilliano once participated in. He's a dedicated student but his ambition was bigger than a degree, she recalls. "He was obviously not there just to get a piece of paper," she says. "The fact that he's still pursuing this" – on a student budget, no less – "is impressive."

Agricast isn't likely to see a shortage of customers next season, given deMilliano's decision to limit his client number this year. He's also investigating market expansion, including the construction industry and outdoor event planners. All of this makes Classen wonder if deMilliano hasn't tapped into some form of the future of forecasting. Recently, the CTV meteorologist read an article suggesting that artificial intelligence could undermine his profession. Agricast may represent a way for the human touch to prevail over algorithms. "If you are the kind of guy who can give people information to act upon and tell them how to act upon it, I think there's a real future for that," says Classen.

DeMilliano has already proven himself capable of giving that kind of advice when storm chasing, he adds. He's also proven able to face things other people won't, be it his own fears, or a supercell turning eerily in the Prairie sky. DeMilliano talks about watching a storm the way others might talk about a tropical sunset. In place of a pleasant breeze, there's the thick rush of warm air at his back as he watches transfixed.

"That's bliss for me," he says. "That's my happy place."

That place can lead to disaster or to witnessing something extraordinary. DeMilliano is aware of that any day that he wakes up and smells what he swears is the scent of a storm brewing. Blue skies aren't always going to be part of the forecast as he develops Agricast. But if bad weather looms on the horizon, he's not likely to just wait for it to come to him. ■

Top left, a supercell storm takes shape near Lethbridge in 2016 (photo by Braydon Morisseau); throughout the summers, Nevin deMilliano reports on severe weather via social media @PrairieChasers.

Table YEGs

Oliver Apt. builds furniture to celebrate the city it's made in

WHEN LANDON SCHEDLER (CARPENTER '10) CREATED HIS MADE-TO-ORDER furniture company in 2011, its name, Oliver Apt., reflected his reality of living in an apartment in Oliver, a vibrant neighbourhood in central Edmonton.

His latest collection - the "Edmonton line" - carries on that tradition. Each solid-wood piece is designed, built and finished in-house and named after an Edmonton landmark or neighbourhood.

"We did it to show people that we're an Edmonton-based company and that we do operate downtown," says Schedler. "Our shop is right in the heart of the city and we all live and work here, and this stuff is made

right here. It's not outsourced; it's not brought in from overseas."

The response from customers has been great so far, he says. "I got an email from someone interested in the Doon table. They said, 'I loved the table, and then I read the name and the story and I loved that, too.'"

We've created a map that connects the furniture - available in a variety of woods, shapes and metal leg colours - with the Edmonton landmarks and areas they're named after. Think of it as a view of the city, as seen from Oliver Apt.

— *Marta Gold*

THE VICTORIA BENCH

When Schedler lived in his Oliver apartment, he would walk down his block to the Victoria Promenade, sit on a bench and relax. "You can see the golf course, the river valley, the University of Alberta - it's a great view," he says.

THE HIGH LEVEL TABLE

The iconic 1913 bridge, suspended 48 metres (157 feet) above the North Saskatchewan River, inspired the creation of this tall, spindly table. The table is attractive but designed for everyday use, much like the bridge that connects the city's south side to the north.

HAWRELAK PARK



THE STRATHCONA COFFEE TABLE

People like to gather around this coffee table, just as they do in the popular and lively neighbourhood of Old Strathcona, Schedler explains. Like the other pieces in the collection, its refined quality also reflected the changing needs of the Oliver Apt. crew. "As we transitioned in life, moving to areas like Strathcona and Bonnie Doon, we needed to upgrade our own furniture."

109 STREET

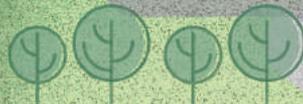
THE CENTRAL TABLE

It's named for the heart of the city, where Oliver Apt. got its start and still operates. The workshop and by-appointment-only showroom are now located even further downtown (at 10225 - 100 Ave.) where Schedler and three other carpenters work (including **Ilia Bizi, Carpenter '16**).



KINNAIRD PARK

JASPER AVENUE



MILLCREEK RAVINE

THE DOON TABLE

This circular table is named for Bonnie Doon, the southeast Edmonton neighbourhood just minutes from downtown and known for its five-pronged traffic circle. The distinctive circle will soon disappear with the construction of the southeast leg of the LRT, but Schedler feels good knowing it will forever be memorialized in his furniture.



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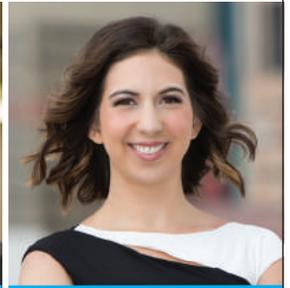
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ON THE RISE

How three alumni are taking
Edmonton baking to new heights

STORY BY
MARTA GOLD

PHOTOS BY
LEIGH KOVESY & BLAISE VAN MALSEN

Jennifer Stang
at work in her
shop, La Boule
Patisserie
+ Bakery.



Amy Nachtigall opened Sugared and Spiced following a wildly successful crowdfunding campaign.

NOT LONG AGO, GROCERY-STORE SLAB CAKES, COFFEE-SHOP SCONES AND BIG-BOX-STORE muffins were the dominant options for baked treats in Edmonton. These days, however, high-end bakeries are springing up faster than a perfect croissant, giving local pastry lovers a buffet of delectable new choices.

Edmonton has become a haven for fancy, patisserie-style shops offering French specialties like pain au chocolat and macarons, along with elegant cakes and tarts.

Why now? Why here? And is the market for deluxe baking big enough for everyone to get a slice of the pie? We talked to three of the newcomers to find out.

MARKET MATURATION

Amy Nachtigall (Baking '13) | Sugared and Spiced, 10334 - 82 Ave.

It took a while for Edmontonians to fully appreciate the quality and craftsmanship of a boutique bakery but they've made up for lost time with their enthusiasm, says Amy Nachtigall.

"I feel like Edmonton has been a little bit behind some of the bigger cities until now," she says. "It's this sense of people waking up and recognizing that there's all this great food and talent in our city. It seems that people are just starting to realize that and want that."

The proof has come in the strong support Amy and husband Jeff received from the community before they even opened their shop

in a funky back alley off Whyte Avenue.

An Alberta BoostR crowdfunding campaign the couple launched in 2016 raised its entire \$20,000 goal in less than 24 hours. In total, they raised more than \$50,000 over the 45-day campaign, which sought contributions from supporters in exchange for bakery rewards.

Essentially, their proposal was to continue a journey they'd begun five years ago, when Nachtigall started selling gourmet cookies at a local farmers market. She branched out to beautiful, custom cakes and in-house baking for a couple of local restaurants. Nachtigall

still makes those cookies and cakes but has broadened her scope by adding danishes, scones, tarts, meringues, cinnamon buns and macarons. It's a mix of the products one would find in a traditional French patisserie and in a home-style bake shop, and appeals to fans of each.

"I think for a long time there was the convenience trend," says Nachtigall. "You could buy cookies or a cake in the grocery store, and people wanted cheap and fast. I think people are tired of that - they want quality and craftsmanship and fresh." She finds that they're willing to pay a little more for that.

Which is good, because with booming competition comes the challenge of running an efficient, high-end bakery. Planning is crucial: trying to balance the right amount of product and staff, along with the long hours of a small-business owner and the early morning hours of a baker. "We're working 15, 16 hours a day," she says. "I feel like we're running a really long marathon and we can't see the finish line yet."

Despite the challenges, Nachtigall is thrilled to be up and running in her own space. "I love what I do. I love seeing the reaction from customers and being part of their events in some small way. And I love having a place to call home where people can visit us and be a part of this."



After an initial focus on baked goods such as tarts, Jennifer Stang is branching out into breads.



THE DUCHESS EFFECT

Jennifer Stang (Culinary Arts '08)
 La Boule Patisserie + Bakery
 8020 - 101 St.

Edmontonians' newfound passion for pastry has left Jennifer Stang scratching her head. "I wish I knew what it was all about, quite honestly," says the pastry chef who opened La Boule last December, just south of Whyte Ave. "We went years and years with essentially one powerhouse in this city and then, in the last six months, we're popping up like daisies all of a sudden."

The "powerhouse" Stang's referring to is Duchess Bake Shop, the renowned bakery co-owned by Jacob Pelletier (Culinary Arts '06). Opened in 2009, it was named one of the world's best bakeries in 2015 by BuzzFeed, and has grown steadily over the years. She credits Duchess with raising the bar in Edmonton by educating consumers about high-quality pastry. "I think a lot of us then looked around and saw there's clearly a demand."

Stang initially focused on baked goods like eclairs, tarts, cakes and Viennoiserie, the bread-like pastries that include croissants, pain au chocolat and brioche. She also makes cruffins, or croissant dough shaped into muffins and featuring sweet or savoury fillings. Since opening the shop, Stang has expanded to offer breads and confectionaries, including caramel, marshmallow, chocolate and nougat.

"I love the creativity and the continued learning and exploration," she says. "This is why I like to bring in new products and change shapes and flavours and garnishes."

Among those products are sauces and syrups Stang makes in the café, which she'd like to bottle for home use. "It's been hard to rein myself in - there's been so many things I want to do."

Like Nachtigall at Sugared and Spiced, Stang is also learning valuable lessons of entrepreneurship. The fine pastries that Edmontonians have come to love require not just exceptional skill but expensive ingredients. Figuring out how to make the most of them is an art in and of itself. Dealing with the excess is less so.

"I make my staff eat scraps. I say, 'that has Valrhona [premium French chocolate] in it - we're not throwing that out!' The margins are so small on a business like this, you have to be really conscientious."



Kai Wong has surprised customers with new takes on the classic croissant.

EXTREME CREATIVITY

Kai Wong (Culinary Arts '07) | Chocorrant, 10328 - 124 St.

Kai Wong believes Edmontonians are not only embracing fine pastries, they're open to experimenting with new and unfamiliar flavours in baking. That's pushing bakers to challenge consumers even further.

At Chocorrant, the bakery Wong opened in April, unexpected flavours have become her trademark, particularly in croissants.

"It's such a versatile dough that can be sweet and savoury at the same time," says Wong, who started her career with a home-based cake business, then worked as a restaurant pastry chef. "I can play around with so many flavours to make it fun."

While she makes croissants with traditional fillings like chocolate and almond, she pushes the envelope with dessert croissant flavours like matcha, strawberry milk, banana-chocolate-

hazelnut, cookies and cream and cinnamon swirl. Wong makes savoury croissants too, filled with bacon jam and white cheddar, apple and brie, and mushroom and herb.

Her unique pastries are a hit with customers so far. "Every time we bring out a new feature flavour, it seems to sell out right away, so I think that's a good sign," she says. "I think people want variety."

Her cakes, too, incorporate unusual flavours, like a seven-layer Earl Grey opera cake with the tea's essence infused in the sponge cake, the buttercream and the dulce de leche filling. She's currently experimenting with a matcha-chestnut-praline cake, and a mango-coconut-caramel-almond cake that's dairy- and gluten-free.

But Wong is most excited about her experiments with an ingredient few would

expect in any food, let alone dessert: edible activated charcoal. She's seen it used in Asia and on a recent trip to Toronto, to make pitch-black desserts. "In Toronto I saw it at a soft-serve ice cream place with a line-up that was two blocks long. I've seen it in a croissant, in a cheesecake - people are raving about it."

She's still playing with flavours that will marry well with the charcoal's hint of smokiness. When she hits on the perfect combination, will such an unusual ingredient appeal to pastry-savvy Edmontonians? These days, Wong may have good reason to be optimistic.

"I think people are always curious about new flavours," she says. "Whenever you bring in an ingredient that hasn't been used before in a dessert, it piques peoples' interest." ■



[RECIPE]

GINGER COOKIES

FROM AMY NACHTIGALL, OWNER OF SUGARED AND SPICED

INGREDIENTS

170 g butter, melted
220 g brown sugar
80 g molasses
1 egg
312 g flour
5 ml (1 tsp) baking soda
10 ml (2 tsp) ground ginger
4 ml (1 tsp) cinnamon
2 ml (1/2 tsp) salt
5 ml (1 tsp) ground cloves
extra sugar for coating

METHOD

Mix butter, sugar, molasses and egg together on low until well combined. In a separate bowl, stir together flour, baking soda and spices. Add flour mixture to butter/sugar mixture and stir just until incorporated. Scrape down the bowl. Place in airtight container and refrigerate overnight.

Preheat oven to 175 C (350 F).

Scoop out balls of dough and roll in sugar and place on parchment lined baking sheet. Flatten balls slightly.

Bake for approximately 15 minutes until edges are golden and centre appears crackled. Let cookies cool on baking sheet for five minutes before transferring to a wire rack to finish cooling.

Makes approximately 12 cookies.



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nait.ca/volunteer2017



5 ENGAGE

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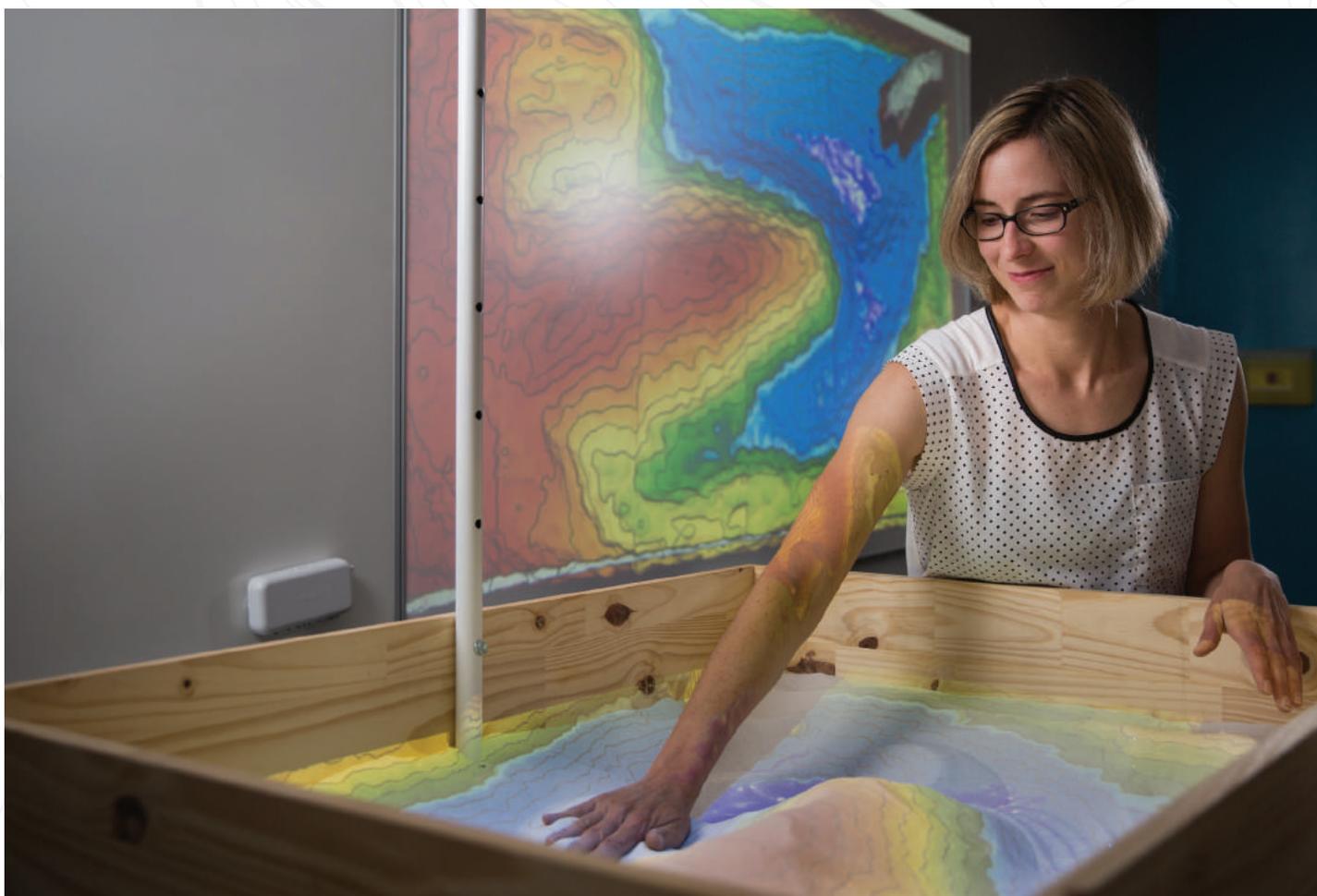
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A hand with a wood-grain tattoo is shown resting on a surface that appears to be a miniature landscape. The landscape is composed of various colors including pink, orange, yellow, green, and blue, with black contour lines that resemble a topographic map. The lighting is dramatic, with strong highlights and shadows, giving the scene a surreal and artistic feel.

SHIFTING SANDS

A miniature landscape is reshaping instruction in one of NAIT's oldest programs



Instructor Jennifer Jones uses the "augmented reality sandbox" to teach grading to Landscape Architectural Technology students.

PLAYING IN THE SANDBOX AS A CHILD TAUGHT US MORE THAN we might think. There, we solved problems and tested ideas without fear of consequences greater than the crumbling of a knee-high castle. We piled and shaped, levelled it all, then piled and shaped again. As child development experts will tell you, the little landscapes we built informed our understanding of the larger one around us.

Jennifer Jones (Landscape Architectural Technology '05) relies on that experimental nature of the sandbox in her classroom, though her approach is hardly child's play.

This fall - following her program's 40th anniversary in April - the Landscape Architectural Technology instructor introduced students to the "augmented reality sandbox." It's a new way to teach one of the discipline's most important skills: grading, or the manipulation of land to manage water movement.

"Grading is the most difficult concept to teach," says Jones. That's because it requires a massive shift in scale and the reproduction of land formations in the classroom. When Jones was a student, she created models in clay or cardboard. The time it took seems almost geological compared to the augmented reality sandbox, which "takes something that's very difficult to explain and translates it into a visual, hands-on tool," she says. "And quickly."

Designed and built by program chair Michael Schwabenbauer (Landscape Architectural Technology '95), that hands-on tool is, at its most basic, a wooden box mounted on a waist-high mobile cart. It measures roughly a metre long, is just wide enough to still pass through a doorway, and contains 114 kilograms (250 pounds) of white play sand. The technology Schwabenbauer added, however, marks a clear departure from the playground. Suspended above the box is a projector that superimposes a dynamic, colour-coded topographic map onto the sand, matching peaks and valleys Jones molds by hand. Shift the sand and an open-source program running in the computer in the bottom of the cart instantly morphs the map to suit. A hand held above it tells the program to unleash a localized deluge, allowing students to see how water moves through the latest landscape.

Students will be able to "play" in the sandbox too, and Jones sees the value of them getting their hands, literally, dirty. "This bridges the gap between hands-on and high-technology," she says. Visual and tactile learning are key ways we retain knowledge, and are instrumental to transferring skills from the classroom to the real world. The sandbox may have changed but its ability to teach hasn't.

— Scott Messenger



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ALBERTA BLOCK

SIGNS OF THE TIMES

Jennifer Konanz' modern take on a historic form of art and advertising

JENNIFER KONANZ (GRAPHIC COMMUNICATION '12) uses her background in graphic design and printmaking to help preserve an art form that dates back centuries: hand-painted signs.

Her work includes restoring and recreating historical signs, and creating new pieces using her favourite technique - gilding, the practice of painting and applying gold leaf on glass. In Edmonton, you can see it downtown on the windows of Bar Clementine and the Alberta Block. In Calgary, where Konanz is based, look for it at Wheat Pizza and the historic Deane House restaurants.

While Konanz learned her skill with design and fonts at NAIT, she has supplemented her formal education through workshops with sign painters in the U.S. and apprenticeships in Calgary. We asked her about the appeal, as well as the challenges, of her work and about gilding in particular.

MY BOYFRIEND'S BROTHER told me about a sign painter he saw in Texas. Then I saw the documentary *Sign Painters* and that got me

thinking about it. I started painting on my own, and then I saw an ad for a sign painter looking for an apprentice. It seemed like a good mixture between the design side and the art side.

MOST OF MY WORK comes from word of mouth and social media. Instagram has been a huge help because you're able to show people what you've done. I'll post a picture of a sign on a brick wall and people will contact me and say, "Oh, I have a brick wall, too."

GILDING APPEALS TO ME because it requires a lot of attention to detail and I really like that. One of the [gilders] in the States who I learned from, he called it putting jewelry on people's windows. It's got this old vibe but it looks totally new.

I'LL PRINT OFF A PEN DRAWING, tape that to the outside of the window and then work from the inside, so you're looking through the glass and following the lines. It's a very meditative way of working and it takes a long time.

WITH DIGITAL TECHNOLOGY, people thought this work would disappear but it hasn't. There's something very authentic about it, especially when you see so much that's so temporary now. This is genuinely good stuff that lasts.

As told to Marta Gold

TRAINING:

Formal training in sign painting is limited. Konanz recommends a graphic design and/or art background, plus an apprenticeship or workshops with experts.

HOURS:

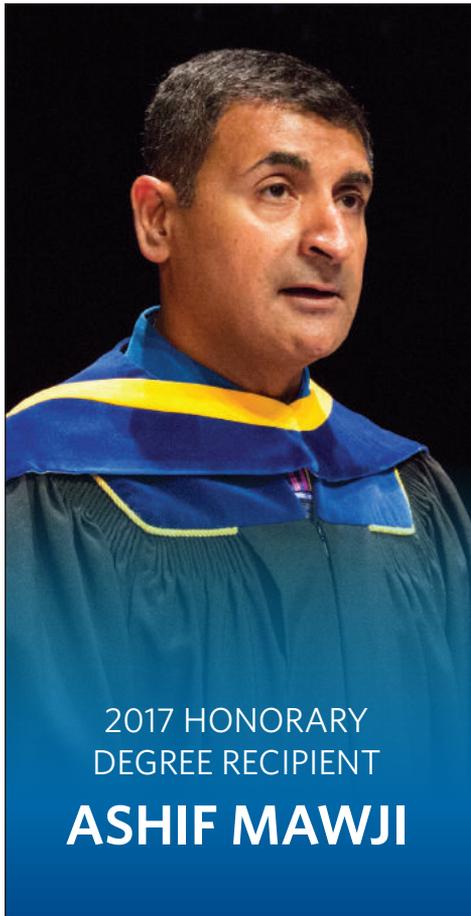
Vary, particularly if self-employed

LOCATION:

For gilding, work is indoors. Exterior wall and brick painting can involve working at heights.

SALARY:

Hourly wage is about \$25, on average



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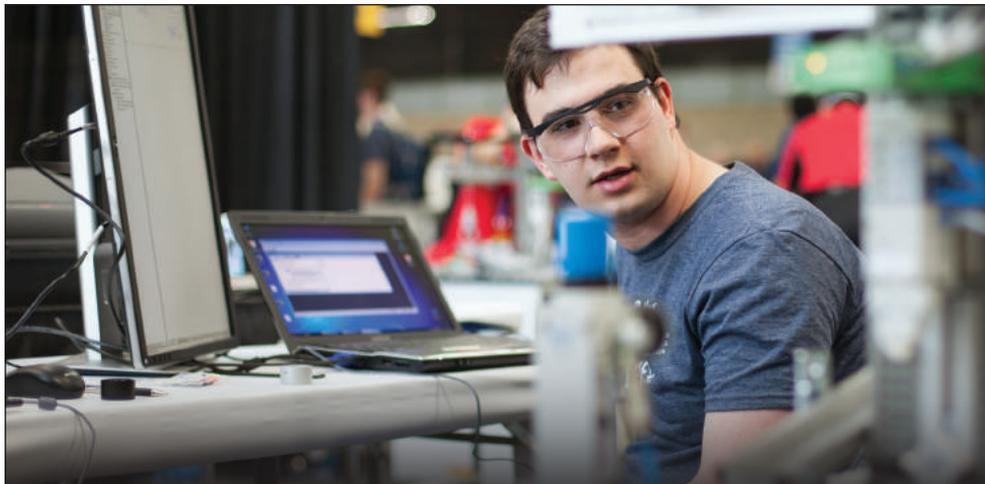
HONORARY DEGREE

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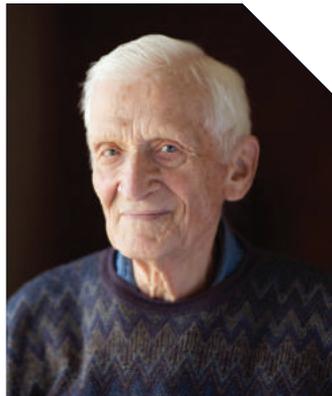
CHAMPION PADDLER

JR Shaw School of Business student **Davina McLeod** spent part of her summer collecting medals at the North American Indigenous Games in Toronto. The talented canoeist - trained mostly by her grandparents and family in Aklavik, N.W.T. - won two silver and two gold medals over multiple races.

Read more at techlifetoday.ca/davina

A TEACHER'S TEACHER

Dr. Clarence Preitz, a professor emeritus at the University of Alberta who taught many NAIT instructors in his 30-year career, is NAIT's 2017 Distinguished Friend of the Institute. Preitz supported NAIT students by establishing the Dr. Clarence Preitz Award for Outstanding Excellence, an annual scholarship of \$500 in the Millwork and Carpentry program. He is also establishing a \$25,000 endowed fund in honour of his friend Paul Roberts, an instructor in the Cabinetmaker program.



NAIT IS GOLDEN

This June, NAIT struck gold. The Centre for Applied Technology, which opened in August 2016 as the largest capital project in NAIT's history, achieved gold status under the Leadership in Energy and Environmental Design program - the international rating system for measuring green building design and construction.

Read more at techlifetoday.ca/cat-gold

BAR NONE

Chocolatier **Rebecca Grant** (Culinary Arts '08, Management '13) made *Avenue* magazine's 2017 Top 40 Under 40 List for achievements that include establishing the successful Violet Chocolate Co. and earning dozens of awards, including a silver medal at the most recent International Chocolate Awards, held annually in London, England.

50 YEARS ON THE JOB

Program assistant **Donna Jackson** celebrated a previously unheard of milestone at the polytechnic: 50 years as a staff member. NAIT officially opened in 1962 - just five years before Jackson was hired.

PERFECT HARMONY

Landscape Architectural Technology (LAT) students topped a recent design contest held by Alberta Parks to make Strathcona Science Provincial Park more accessible and inclusive. Two of the three best designs were submitted by teams comprising now-graduates (LAT '16) **Michaela Case, Dan Chartrand, Daniel Conlin, Alexander Hugh Fraser, Kerri-Lynne Garlinski, Sara Mokhtari, Evan Tanasiuk** (also Management '14) and **Selina Zheng**. Their plans will be incorporated as budget allows.

DARLING CLEMENTINE

EnRoute magazine's annual list of Canada's top 10 restaurants was graced this year by three Edmonton eateries: Cafe Linnea, Alder Room and Bar Clementine. Highlighted for its bistro feel and craft cocktails, Bar Clementine features the culinary creations of chef **Roger Létourneau** (Cook '11).

EMERALD EXCELLENCE

The Alternative Energy Technology program won a 2017 Emerald Award for producing a generation of skilled workers for Alberta's burgeoning renewable energy industry. The program has produced roughly 100 grads since its inception in 2011, with about 11 per cent of them going on to start businesses in the field. "We look forward to seeing our alumni live up to the expectations of the award," says program chair **Dr. Jim Sandercock**. The Alberta Emerald Foundation recognizes and celebrates environmental achievements and stewardship in the province.



WHEN RETRO GOT A RETHINK

Alum Tom Shepansky reflects on ridding NAIT of the "Flying N"



Shepansky – and his 2007 copy of *techlife* – in Rethink's Vancouver office.

THE FIRST THING TOM SHEPANSKY (MARKETING '83) notices when he looks at the 2007 inaugural issue of *techlife*, where he appears on the cover, is that his hair has more salt than pepper in it today. The second thing he notices is how well the NAIT shield, in the top left corner, has aged over a decade. The logo, designed by Shepansky's ad agency Rethink Communications, was introduced at the time as part of a full-scale rebrand – the polytechnic's first in 40 years.

Then-president and CEO Dr. Sam Shaw helped lead the process to bring Shepansky on board to update NAIT's visual identity. "I said to Sam, 'Your logo is so dated, it's almost coming back into style again – but not quite,'" Shepansky says. Indeed, everyone agreed the 1974 "Flying N" logo was as retro as disco.

In 2007, Rethink was charged with, well, rethinking that logo to match NAIT's status as a modern post-secondary institution with a focus on applied learning.

Shepansky's team sketched ideas, settling on a shield as timeless as it is simple: a smart serif font for the name and a globe with interlocking rays symbolizing a connection to the world of technology and knowledge. "Even the font we chose is timeless," he says. "In 20 years, the NAIT shield has the ability to be as relevant as it is today."

Shepansky admits it's not just his hair that's changed since that cover shoot. Rethink now has 130 employees across three offices – in Vancouver, Toronto and Montreal. The ad world, meanwhile, has evolved as digital and social media have transformed how people consume information. But his job is still to cut through the clutter and get his clients' messages to people, even if, as he puts it, "the clutter has changed."

What hasn't changed is Shepansky's pride in the project and what he describes as "his very small role" in the logo's success. He has a soft spot for his alma mater and keeps reminders of his time there close by. There's a NAIT mug at his office and a school pin stuck to his bulletin board – naturally featuring the current logo. The only retro keepsakes? Yearbooks and his NAIT diploma – and, of course, that *techlife* cover with his face on it, which is proudly hung above his desk at home.

— Craille Maguire Gillies



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