



President's Report to Senate

January
2024



Office of the President

Updates on Presidential Initiatives and Activities

Hosting Canada's Chief Public Health Officer and President of the Public Health Agency of Canada

Lakehead University recently had the pleasure of hosting two distinguished guests, Dr. Teresa Tam, Canada's Chief Public Health Officer, and Heather Jeffrey, President of the Public Health Agency of Canada.

A highlight of their visit to our Thunder Bay campus was a roundtable discussion with our students in Senate Chambers. This session provided a rare and valuable chance for students to engage directly with these federal public servants, exploring career opportunities within the Federal Public Service through a lively Q&A.

Additionally, Dr. Tam and President Jeffrey were taken on a tour of our campus, where they met with Dr. Christopher Musquash at the Centre for Rural and Northern Health Research, and with staff at the Centre for Education and Research on Aging and Health. These meetings fostered good discussions and showcased the university's commitment to impactful research and its outcomes in vital areas, particularly in health challenges in northern and Indigenous communities.

Overall, the visit was an engaging and informative experience, strengthening the connection between academic endeavors and the federal public service.



Lakehead Orillia Expansion

In November, the Executive Team reviewed historic and planned enrolment at Lakehead Orillia and in the integrated Lakehead-Georgian Partnership programs, including planned introduction of new programming.

Throughout December and January, the Office of Institutional Planning and Analysis has been working with the Provost and Deans to inform multi-year enrolment planning on the Lakehead Orillia campus. This work is iterative and will continue over the coming weeks. Discussions about increasing enrollment and program offerings with our external partners in Simcoe County are continuing.

Collaborative DVM

In December, members of the joint working groups participated in two workshops to plan and coordinate activities relating to the development of the Collaborative Doctor of Veterinary Medicine Program.

Members of the University of Guelph and Lakehead University met with government to provide updates on the development of the Collaborative Doctor of Veterinary Medicine Program, including planned timelines and issues and risk management, to support ongoing work within government on this file.

Giving Tuesday initiative rallies Lakehead community to new heights

A whopping \$367,900 was donated to Lakehead University on Giving Tuesday on November 28 – the eighth time Lakehead participated in the annual day of giving.

Lakehead's goal was to raise \$147,000, which is why Mark Tilbury, Lakehead's Director of Alumni and Annual Giving, is very excited after raising more than double that amount.

This set a new high-water mark for the amount of single-day donations that Lakehead University has ever received.

A record-breaking number of alumni and friends gave from both Canada and elsewhere, including the United States, Finland, and Mexico.

Since Lakehead began participating in Giving Tuesday in 2016, the fundraiser has soared to increasing heights, raising more than \$1.17 million in support of student financial aid at Lakehead University.

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Governments Strengthening Agriculture and Food Sector in Northern Ontario

The governments of Canada and Ontario are investing up to \$1.65 million over five years to support research programming, knowledge transfer and the operations and management of the Lakehead University Agricultural Research Station (LUARS).

This multi-year funding through the Sustainable Canadian Agricultural Partnership (Sustainable CAP) will help improve the viability and yield of crops in Northern Ontario, develop and diversify the agricultural industry, and position it for continued growth.

The research will focus on areas such as best management practices for Northern agriculture, soil health, environmental sustainability, and climate change, as well as research and knowledge co-developed with Indigenous researchers and communities.

Sustainable CAP is a five-year (2023-2028), \$3.5 billion investment by federal-provincial and territorial governments to strengthen competitiveness, innovation, and resiliency of the agriculture, food, and agri-based products sector. This includes \$1 billion in federal programs and activities and a \$2.5 billion commitment that is cost-shared 60 per cent federally and 40 per cent provincially/territorially for programs designed and delivered by the provinces and territories.

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From left to right, Dr. Tarlok Sahota, LUARS Director; Dr. Andrew P. Dean, Lakehead's Vice-President, Research and Innovation; Dr. Gillian Siddall, Lakehead's President and Vice-Chancellor; and Kevin Holland, MPP for Thunder Bay - Atikokan participated in the announcement on Friday, Nov. 24 in the CASES building at Lakehead University.

Research Infosource ranks Lakehead University third in Canada

Research Infosource has named Lakehead the number three university in Canada in the undergraduate category of its annual Research University of the Year assessment.

Lakehead was ranked in the top spot from 2015 to 2019 — the first time an institution in *Research Infosource's* undergraduate category was ever ranked Research University of the Year five years in a row.

Lakehead President and Vice-Chancellor Dr. Gillian Siddall said she is proud that the university has returned to the podium.

Lakehead's placement with the top of the country's undergraduate universities category is based on the university standing out on a balanced scorecard of research inputs and outputs, according to the annual ranking of Canada's Top 50 Research Universities by *Research Infosource*, Canada's source of research and development intelligence.

Dr. Andrew P. Dean, Lakehead's Vice-President, Research and Innovation, said he was very pleased to rank in the top three universities in Canada in the undergraduate category.

One of the research outputs being measured is Not-for-Profit Research Income. Within this category, Lakehead University is number one in Canada for three years in a row

Research Infosource's calculation of its Research Universities of the Year involves examining several factors, including the total amount of sponsored research funding received by each university, research intensity per faculty (total research income per faculty member), research intensity per graduate student (total research income per graduate student), total number of publications, publication intensity, and publication impact.

Click [here to visit the Research Infosource website](#) for more information.

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Academic Excellence

Congratulations to award-winning faculty and staff

The Contribution to Teaching Award (CTA) is a student-nominated award that recognizes instructors who have demonstrated high levels of teaching performance at Lakehead University. Up to six awards are granted each year.

- **Dr. Apparao Dekka**, Electrical and Computer Engineering
- **Dr. George Hutchinson**, Mathematical Science
- **Dr. Katherine Kortés-Miller**, Social Work
- **Mrs. Ainsley Miller**, Nursing
- **Dr. Jessica Metcalfe**, Anthropology
- **Dr. Gerald Walton**, Education

The Distinguished Instructor Award (DIA) is Lakehead University's most prestigious teaching award and recognizes an outstanding individual who has made a significant contribution to teaching excellence and educational innovation and leadership at the University over a number of years. Only one award per year is bestowed.

- **Dr. Mohammad Uddin**, Electrical and Computer Engineering

The Teaching Support Award recognizes the support provided for teaching by employees of the university. One award will be given annually.

- **Ms. Debra Gold**, Library

The Teaching Innovation Award recognizes the development and/or implementation of innovative pedagogical practices and technologies. The award is given for the development and/or implementation of a specific pedagogical innovation, and may be awarded to an individual or a team. Up to three awards may be given annually. Recipients will also be invited to lead a workshop on their innovation.

- **Dr. John Gotwals**, Kinesiology
- **Mr. Daniel Vasiliu**, Electrical and Computer Engineering
- **Mrs. Wendy St. Laurent-Coutts**, Nursing, and from Seven Generations Education Institute Team: **Taylor Stromness** (SGEI-Fort Frances), **Nicole Robertson** (SGEI-Sioux Lookout), and **Wendy Tseng** (SGEI-Kenora)

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Barrie professor earns top teaching award from Lakehead University



A professor of Computer and Electrical Engineering and coordinator of the Electrical Engineering program offered by the Lakehead-Georgian Partnership has received the most prestigious teaching award bestowed by Lakehead University.

Dr. Mohammad Nasir Uddin, who is at the Georgian College campus in Barrie, is this year's recipient of the Distinguished Instructor Award.

This award recognizes an outstanding individual who has made a significant contribution to teaching excellence, educational innovation, and leadership at the University over a number of years.

Upon conferring the award to Dr. Uddin, Lakehead University's Senate Teaching and Learning Committee noted his impressive and distinguished list of accomplishments, and his reputation among students and colleagues as a gifted and compassionate educator.

The committee also acknowledged Dr. Uddin's outstanding contribution to developing new undergraduate and graduate programs, and establishing the Renewable Energy, Power Systems & Drives Research Lab in Barrie that has cemented his legacy as a remarkable educator and researcher.

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Infusing climate change education into teacher training curricula

Lakehead University researcher **Dr. Ellen Field** has received \$449,000 from Environment Climate Change Canada (ECCC) to lead a project to support and accelerate the integration of climate change education in teacher education programs across Canada. The two-year project, in partnership with Dr. Hilary Inwood from the Ontario Institute for Studies in Education, will deliver five components, including a national e-course in climate change education for both pre-service and in-service teachers, a webinar series focused on teacher education and the other on K-12 formal education, a national roundtable on climate change education, and accelerator seed grants for faculties of education to improve climate change education. For more information on this project visit <https://accelerating-cce.ca/>.

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Professors from Lakehead and Villanova universities are studying fish to create underwater robots

A Lakehead University professor and a professor from Villanova University are studying how fish use navigation and propulsion to help them create underwater robots, thanks to funding from NSERC.

Dr. Muhammad Khalid, Assistant Professor in Mechanical Engineering, received a \$25,000 Alliance International Catalyst Grant from the National Sciences and Engineering Research Council of Canada for his project to build an international research partnership with Dr. Chengyu Li from Villanova University, and jointly investigate fluid-structure-chemical interactions in marine environments.

Over one year, they will study the “mysterious but very effective techniques adopted by fish in natural aquatic conditions,” Dr. Khalid said.

The researchers will study how different fish, for example carangiform (Jack Fish, Tuna, Salmon), and anguilliform (eels), effectively control fluid dynamics through their kinematics to send and receive chemical cues.

They will investigate how natural aquatic swimmers use chemical odours for their navigation and propulsion.

Fish use these elements as important natural sensing and detection methods, but they are still relatively misunderstood by the scientific community.

Using the basics of natural swimming to design fish-like underwater robotic platforms form the main goals of this project. The researchers will develop mathematical models and perform computational simulations to investigate and understand odour-guided propulsion of fish-like bodies.

The success of this project is expected to bring the Canadian scientific community and marine engineering industry at the forefront of environment-friendly underwater engineering technologies for a variety of purposes.

These include securing the borders, subsea explorations for natural resources, rescue and search operations, and several other opportunities.

In 2022/23, Lakehead University received more than \$2 million in assistance from the Research Support Fund to support the indirect costs of research, which includes costs for supporting the management of intellectual property, research and administration, ethics and regulatory compliance, research resources, research facilities, and research security.

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Wetlands can provide potential climate change solutions: Lakehead study

Researchers from Lakehead University have found that freshwater wetlands are important nature-based solutions for the mitigation of greenhouse gas emissions.

In a recent study published in the Journal of Geophysical Research: Biogeosciences, **Dr. Florin Pendea** and co-authors **Dr. Nanda Kanavillil** and **Dr. Sree Kurissery** from Lakehead, and Dr. Gail Chmura of McGill University, found that wetlands within the Lake Simcoe watershed were 50 percent more effective in storing carbon than other wetland ecosystems, second only to salt marshes that form along the shores of temperate seas.



Pendea says that this research comes at an important time as countries around the world are looking at ways to mitigate climate change, including the federal government's commitment to net-zero carbon emissions by 2050.

Pendea's team, which included several undergraduate students from Lakehead, spent three years collecting and examining soil properties and carbon accumulation rates over the last 100 years in swamps and marshes in the Lake Simcoe watershed. These wetland areas – Beaver River Wetlands, Black River-Zephyr Creek Wetlands, and the East Holland River Wetlands – are under increasing pressure from farming and urban development, a trend impacting much of Southern Ontario. For Pendea, it also lends support to the case for wetland restoration through re-wetting as an important nature-based climate solution for mitigation of greenhouse gas emissions in areas where they were already drained for agriculture and other purposes.

While this research already has important policy implications, the work is far from over. This summer, Pendea started a new project in collaboration with Chmura and the Lake Simcoe Region Conservation Authority, which explores the value of constructed wetlands – wetlands purposefully created in areas not suitable for other uses – as a way to increase the Lake Simcoe region's capacity to mitigate future greenhouse gas emissions for generations to come. In addition to evaluating soil carbon storage capacity, this project will directly document the greenhouse gas balance in these novel ecosystems. This research was funded in part by the Lake Simcoe Region Conservation Authority.

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Social Work Framework Gains Province-Wide Adoption

Dr. David Tranter's framework for supporting both student well-being and achievement from kindergarten to Grade 12 has been officially adopted by the Prince Edward Island government to be used in schools province-wide.

While his "Third Path" framework is used by educators all across Canada, PEI is the first province to implement it at a government level. The framework, as outlined in Dr. Tranter's book, "The Third Path: A Relationship-Based Approach to Student Well-Being and Achievement," emphasizes the role that educators play in supporting student mental health, promoting equity, and practicing in a trauma-sensitive manner.

Says Dr. Tranter, "I'm thrilled to be working closely with educators all across PEI and look forward to being an ongoing part of outstanding work already underway". For more information about Dr. Tranter's work, visit www.thirdpath.ca.



From left, Tracy Beaulieu, Acting Director of the Public Schools Branch; with Dr. David Tranter; Jane Hastelow, Manager Professional Learning and Assessment, Department of Education & Early Years Government of Prince Edward Island; and Tammy Hubley-Little, Director of English Education, Programs and Services, Department of Education & Early Years Government of Prince Edward Island.

Big Ideas with Lakehead University Orillia

Lakehead Orillia has partnered with Metroland Media to feature Simcoe County researchers through a regular feature called Big Ideas with Lakehead University Orillia. The first story features **Dr. Leisa Desmoulins**, associate professor in the Faculty of Education's department of Indigenous education.

[Click here to read the press release...](#)



Research Matters: Lac Seul youth get tools to tell their own stories

Research Matters highlights the important work of researchers at Lakehead University

After nearly a decade working with a remote First Nation on different projects, **Martha Dowsley's** most recent effort was something much simpler put video cameras in the hands of young people and give them the freedom to tell stories close to their hearts.

The result is a series of short videos crafted by three budding videographers from Lac Seul First Nation, exploring issues that are meaningful to them, their family and the greater community.

The initiative, part of a national dialogue on Indigenous research capacity and reconciliation, brings traditional storytelling into the 21st century by giving young people the tools to explore their own stories. With \$50,000 from the Social Sciences and Humanities Research Council and the First Nation itself, Dowsley and her team staged workshops on Lac Seul territory during the winter of 2018-19. Along with Dowsley and colleagues Lana Ray and Frederico Oliveira, undergraduate students who had experience in filmmaking offered instruction on operating digital cameras and the use of editing software.

The videos, entitled "When the Snow Blankets the Earth It Is Time to Tell Stories", feature the efforts of Byron Mekanak, D'Arcy Gray and Yzerman Quill. Mekanak's nine-minute segment seeks the origin of a group photo taken in the 1920s; while Quill's theme of Lost Wisdom reflects on the past, personal pain, isolation and the challenges his generation face..

The videos, which belong to Lac Seul and are not yet available to the public, provide a perspective that Dowsley incorporates in her classroom work.

[Click here to read the press release...](#)



High-impact clinical and sustainability research projects awarded with CFI grants

The Canadian Foundation for Innovation (CFI) has awarded a total of \$811,056 for six research projects at Lakehead University through the John R. Evans Leaders Fund (JELF). The infrastructure grants will supply researchers with the equipment and space needed to advance holistic forest management, evaluate climate change, and further develop low-dose digital x-ray technology.

Canadian Foundation for Innovation, John R. Evans Leaders Fund (JELF) Awards 2023 (Total funding: \$811,056):

Dr. Adam Algar, Department of Biology, "Laboratory for Physiological Macroecology", \$119,591

Drs. Nathan Basiliko, Seung-II Lee and Ashley Thomson, Faculty of Natural Resources Management, "Research Infrastructure for Multitrophic Studies of Boreal Forest Landscapes", \$174,996

Dr. Gautam Das, Department of Physics, "Microscope, and Trace Gas Analyzers (Nitrous Oxide and Ammonia) for Photonics and Bio-Photonics Research Facilities", \$166,892

Dr. Apparao Dekka, Department of Electrical Engineering, "Design and Development of Powertrain Technologies for Heavy-duty Electric Transportation Applications", \$100,017

Dr. Ebrahim Rezaei, Department of Chemical Engineering, "Laboratory for Climate Change Mitigation and Air Pollution Control", \$124,986

Dr. Alla Reznik, Department of Physics and Tier 1 Canada Research Chair in Physics of Radiation Medical Imaging, Scientist, Thunder Bay Regional Health Research Institute, "Low-dose Direct Conversion Radiation Medical Imaging Detectors", \$124,574

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Lakehead University's first Master of Nursing graduates look ahead to a bright future

Katelyn O'Connor is grateful for the lasting friendships she formed over the last two years while studying in [Lakehead University's Master of Nursing \(MN\) Program](#).

O'Connor is in the program's inaugural graduating class, along with five other students who completed their MN studies in the Nurse Practitioner specialization in the summer. Graduates participated in a celebration over the weekend in the Faculty Lounge with O'Connor as the valedictorian.

The celebration also included four graduates of the Master of Public Health program's Nurse Practitioner specialization and three graduates of the Nurse Practitioner Certificate Program.

Lakehead's MN program offers two streams - Advanced Nursing (AN) and Nurse Practitioner (NP) specializations. The NP specialization is part of a nine-university-provincial consortium, where all Primary Health Care Nurse Practitioner students learn together.

Lakehead's Master of Nursing program provided O'Connor and her classmates with the foundation, the essential knowledge, and the skills required for nurse practitioners in the workplace.

November 12-18 was [National Nurse Practitioner's Week](#).

[Click here to read the media release...](#)



Katelyn O'Connor, far right, with other graduates.

Engineering student selected for Canadian Council for Public-Private Partnerships talent program

Lakehead University engineering student **Joshua Jansen** has been selected in a highly-competitive contest to be a delegate at the Canadian Council for Public Private Partnerships (CCPPP)'s Annual Conference as part of the 2023 Next Generation Talent Student Program.

Jansen, who is a third-year Civil Engineering student in Lakehead's Faculty of Engineering, is one of just 12 talented post-secondary students from across Canada selected to take part in the CCPPP Annual Conference taking place on November 13 and 14 in Toronto.

Next Generation Talent student delegates participate in a pre-conference orientation session and attend keynote speeches and provocative panel discussions on challenges and opportunities in the field of P3s from notable leaders.

[Click here to read the media release...](#)



Lakehead University PhD student finished third in an oral presentation on lasers

Lakehead University PhD student **Varsha** recently earned third place for her oral presentation at the Canadian Association of Physicists at the University of New Brunswick.

Her research focuses on the development of a mid-infrared laser (2-micron). This type of laser can be used to detect trace gases such as carbon dioxide and in health care for precise cutting into biological tissues.

Varsha, who is in the third year of her PhD in Chemistry and Materials Science, spent roughly six months on this experiment and prepared for the conference over a few weeks this summer, including five to six hours in front of her group members.

Varsha developed a pulsed laser at 1567 nm using a mixture of gold nanorods and polyvinyl alcohol in aqueous solution as a saturable absorber in aqueous form, which makes it different from other lasers. This laser will be used as a pump source to develop another laser at 2 microns.

The laser at two microns will be used to detect any form of gas with an absorption band near two microns.

[Click here to read the media release...](#)



Local and Global Partnerships

Connecting with Partners at the 2023 Conference of the Americas for International Education (CAIE)



Lakehead was well-represented at the 2023 Conference of the Americas for International Education (CAIE), held November 6-8 in Las Vegas, Nevada. The conference, sponsored by Inter-American Organization for Higher Education (OUI-IOHE), is held every two years. The Lakehead delegation included **Dr. Andrew P. Dean**, Vice-President, Research and Innovation; **James Aldridge**, Vice-Provost International; Dr. Batia Stolar, Associate Vice-President, Research and Graduate Studies; **Jill Sherman**, International Research Facilitator/CALAREO Secretariat; and Mr. Pierre Sved, Manager International Relations for Latin America. The Canada and Latin America Research & Exchange Opportunities (CALAREO) consortium, of which Lakehead is the Secretariat, sponsored a booth at the CAIE Expo, where Lakehead and other CALAREO members gathered to promote the consortium. Dr. Dean, Jill, and Carolina Cuartas from Universidad Tecnológico de Pereira in Colombia, led a well-received panel with a series of presentations about the GSO-funded CALAREO IRME program, entitled "CALAREO International Research Mobility Experience (IRME) – Perspectives on increasing student mobility to Latin America." The conference allowed Lakehead to connect with established partners and other stakeholders in the region, as well as engage with potential new partners.

Entrepreneurship and Innovation

19th Annual Research and Innovation Week is Driven by Curiosity

"Driven by Curiosity" serves as a rallying call and a celebration of the profound impact of research on our lives. It signifies the pursuit of knowledge and understanding that propels our society forward. It invites us to delve into the wonders that unfold when curiosity leads the way. Through research, we ignite innovation, catalyze positive change, and envision a brighter future filled with endless possibilities. It's about unraveling new potentials, solving complex challenges, and imagining a world where problems become opportunities.

Research & Innovation Week 2024 embraces the spirit of curiosity as we improve lives, and create a brighter, more promising tomorrow. Fueled by the power of curiosity, join us as we celebrate the dedication and passion that drive our researchers to propel progress and enrich our world, unlocking limitless potential.

Watch for further information [here](#).

SAVE THE DATE

Thunder Bay campus: February 24 - March 1, 2024
Orillia campus: March 5 - 6, 2024

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Watch for further information:
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Lakehead UNIVERSITY

DRIVEN BY CURIOSITY

INGENUITY
ASCEND

Please visit ingenuity.lakeheadu.ca for application and full program requirements.

Email manager.ingenuity@lakeheadu.ca for more information

Deadline to apply December 29th
Start date January 29th

We're looking for:

- Individuals or teams looking to start a new business or are currently operating a business
- Who currently are Lakehead University Students or recent graduates
- And have a willingness to start and grow their business

Selected individuals and teams will receive:

- Up to \$5000 start-up funds
- Business workshops and information sessions
- Experienced mentorship from industry entrepreneurs
- Hands-on support and introductions

Lakehead UNIVERSITY

Ingenuity Receives Grant to Support Ascend Accelerator Program

Ingenuity is excited to announce they have received a generous grant from the John Dobson Foundation's Dobson Entrepreneurship Excellence Project Award (DEEPA) to train our future entrepreneurs through the Ascend Accelerator Program.

The Ingenuity Ascend Accelerator program is a great opportunity for entrepreneurial minded Lakehead University students and alumni looking to transition an idea into a business opportunity or accelerate the growth and development of their early-stage start-up. Through the support of the DEEPA Funding, the Ingenuity Accelerator program will fund 24 business ideas over the next two years starting in January 2024. To date, the Ascend Accelerator program has run three cohorts during the summer months and supported 12 business ideas, 9 of which are still active.