

Annual Highlights Report

Research, innovation and entrepreneurship in 2023–24



Land acknowledgment

We acknowledge the land for sustaining us and providing us with the necessities of life. This territory is covered by the Dish with One Spoon treaty and the Two Row Wampum treaty, which emphasize the importance of joint stewardship, peace and respectful relationships. As we reflect on land acknowledgments, let us remember that we are all stewards of the land and of each other.

Sheridan campuses reside on land which has been and still is the traditional territory of several Indigenous nations, including the Anishinaabe, the Haudenosaunee Confederacy, the Wendat, the Métis and the Mississaugas of the Credit First Nation. Since time immemorial, numerous Indigenous nations and Indigenous Peoples have lived on and passed through this territory.

Sheridan affirms it is our collective responsibility to honour the land, as we honour and respect those who have gone before us, those who are here and those who have yet to come. We are grateful for the opportunity to be learning, working and thriving on this land.

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About Generator at Sheridan

Generator at Sheridan is where purpose and passion unite the extraordinary research, innovation and entrepreneurship undertaken by Sheridan's faculty, staff and students working across disciplines and sectors to drive meaningful impact for an ever-changing world. In addition to our exceptional faculty-led research, Sheridan also boasts five renowned research and entrepreneurship centres that provide innovation supports to community, industry and government partners.



Scan to learn more or visit sheridancollege.ca/generator

Quick facts from 2023–24

\$7,477,309

External research income

146 Externally funded research projects

108

Partnerships for funded research with industry partners

334

Students hired to work on research

112

Faculty and staff involved in funded research

49

Partnerships for funded research with not-for-profit partners

Project funding sources





Leadership message

I am delighted to share Generator at Sheridan's 2023–24 Annual Highlights Report and reflect on our collective achievements in research, innovation and entrepreneurship (RIE) over the past year.

The characteristic creativity and ingenuity of our researchers, innovators and change-makers shine through every page of this report. Through collaborative efforts and interdisciplinary approaches, they have demonstrated how college-led applied research and innovation pushes boundaries and makes a positive impact at a local, regional and national scale.

Engagement and interdisciplinarity are indeed at the heart of RIE at Sheridan. This year, we were thrilled to unveil several new lab and project spaces at the Trafalgar Road Campus. Through these new spaces, our capacity grows for creative collisions among our faculty, staff and students, for hands-on learning experiences and for enabling our external partners to be more productive and competitive in today's landscape.

Our commitment to building capacity for and being responsive to industry, community and government needs remains unwavering. From the development and adoption of cutting-edge technologies, to the creation and assessment of health interventions, to catalyzing social ventures, our collective work has the power to drive meaningful change and address some of the most pressing challenges we all face today. I am immensely proud that in December, Sheridan was named by Research Infosource Inc. as Canada's top research partnership college for the third consecutive year.

In the pages ahead, you'll see the breadth and impact of Generator at Sheridan's contributions and impacts in RIE over the past year — driving meaningful impact, using Al to power research and innovation, building resilient futures and more. I would like to extend my gratitude to our faculty, staff, students and research and entrepreneurship centres. It is through your collective efforts that we continue to drive meaningful impact for an everchanging world.

We hope you will enjoy learning more about Generator's extraordinary work and the people who make it possible.

Andrea England

Vice Provost, Research

Highlights: awards and events



Scan to learn more or visit sheridancollege.ca/research/generator-highlights

April 2023

 Natural Sciences and Engineering Research Council of Canada (NSERC) visits Sheridan to mark Dimensions program Construction-level recognition.

July 2023

 A \$1.75M-investment from NSERC continues the Screen Industries Research and Training (SIRT) Centre's standing as a
 Technology Access Centre.

October 2023

- The Centre for Elder Research (CER) celebrates its 20th anniversary.
- Over 100 faculty and staff gather at the Hazel McCallion Campus for Generator at Sheridan's annual showcase to celebrate the breadth of research, innovation and entrepreneurship activities across Sheridan.

December 2023

- Sheridan is awarded two CCSIF grants to advance community-based research.
- New names are unveiled for the Centre for Intelligent Manufacturing (formerly the Centre for Advanced Manufacturing and Design Technologies) and the Centre for Applied AI (formerly the Centre for Mobile Innovation).
- For the third straight year, Sheridan ranks No. 1 in research partnerships in Canada's Top 50 Research Colleges.

January 2024

- Generator Growth Grant-funded Stories of Home website is nominated for the Canadian Online Publishing Awards.
- SIRT Director lands Oscar nomination.

February 2024

• Unveiling of Generator at Sheridan's new research, innovation and entrepreneurship spaces located at Trafalgar Road Campus.



Activities in review

Generator at Sheridan's faculty, staff, students and research and entrepreneurship centres had another year of exciting research, innovation and entrepreneurship (RIE) activities. Between April 2023 and March 2024, almost 150 funded projects actively tackled problems, fuelling creativity and enriching the student experience.

The activities revealed several themes:

- Developing and implementing social innovation approaches across disciplines and sectors.
- Efforts in the AI realm that presented our partners with innovative solutions.
- RIE that addresses the needs of today and galvanizes communities for the future.

Driving meaningful impact

Together, we spark ideas and advance solutions to the issues that matter. Whether it is a closer look into the psychology behind decision-making, or supporting the business growth of social entrepreneurs, Generator at Sheridan's research, innovation and entrepreneurship is making a lasting impact in our world.

Behavioural insights for social good



Scan to learn more or visit source.sheridancollege.ca/fhass_ community_ideas_factory_cbi/

With limited time, knowledge and resources, our daily decisions often prioritize what's "good enough" for the short term over what is optimal in the long run. While this is practical, mental shortcuts can distort our perception and lead to unreasonable choices, influencing our decisions when we are unaware.

Supported by a three-year grant from the NSERC's College and **Community Social Innovation Fund** (CCSIF), the Community Ideas Factory: Creative Behavioural Insights project looks at how our choices are shaped by our psychology and external environments, and how this understanding can support the development of strategies, programs and interventions, particularly within the charitable sector. This initiative is led by professors Dr. Michael McNamara and Dr. Nathaniel Barr from the Faculty of Humanities and Social Sciences. in collaboration with behavioural sciences consultants BEworks. Other research collaborators include Dr. Joel Lopata (professor in the Faculty of Humanities and Social Sciences), Tony Tarantini and Marco Cibola (professors in the Faculty of Animation, Arts & Design), Martin Turpin and Ethan Meyers (PhD students at the University of Waterloo).

In 2023–24, a study was undertaken by the research team with the Canadian Scholarship Trust Foundation that measured the psychological traits and attitudes of Canadians contributing to the Registered Education Savings Plan (RESP). The results showed that more optimistic individuals placed higher value in postsecondary education and made more financial investments in all forms, suggesting a correlation between a positive view of the future and the tendency to invest in both fiscal and educational opportunities.

This study is detailed in a final report, "Understanding the Mind and Behaviour to Improve our Community: How Behavioural Science Drives Social Innovation," alongside other applied research accomplished under the grant. This includes work that demonstrates how non-profit charitable organizations can apply a behavioural perspective to help engage donors and drive their charitable giving campaigns, essential to keeping their organizations operational. Overall, this research has shown that better understanding psychology and behaviour can help charitable organizations achieve their aims.

Addressing holistic ways of supporting the teaching and learning community at Sheridan



Scan to learn more or visit source.sheridancollege.ca/ cultivating-wellness/3/

With students and educators in the postsecondary sector experiencing symptoms of burnout, compassion fatigue, empathic distress, ethnostress and vicarious trauma, addressing strategies to support individual and collective wellness is more important than ever.

Generator Growth Grant-funded research at Sheridan has explored the development of wellness strategies to support employees and students at the College. "Cultivating Individual and Collective Wellness in Teaching and Learning Spaces: A Holistic Toolkit" is the result of collaborative research between S. Victoria Herrera (SPARK: Sheridan Centre for Academic Excellence), Nicole Johnson (professor in the Faculty of Applied Health and

Community Studies) and Lianne Kendall Perfect (Centre for Equity and Inclusion). By using a communitydriven approach and drawing from the voices of students, employees, faculty and community professionals, this toolkit provides holistic, traumainformed, individual and collective wellness strategies to better support the teaching and learning community at Sheridan and helps to nurture their overall well-being. Recommendations from the toolkit include creating an organizational culture of care, community and belonging, supporting diverse wellness spaces and programming across the organization and creating opportunities for debriefing circles to explore and address the impacts of work and learning.







Top: S. Victoria Herrera, Educational Development Consultant, SPARK: Sheridan Centre for Academic Excellence

Middle: Nicole Johnson, Professor, Faculty of Applied Health and Community Studies

Bottom: Lianne Kendall Perfect, Sexual Violence Response Specialist, Centre for Equity and Inclusion



Celebrating social enterprises. From left to right: Firuzan Mistry, Manager of Marketing and Communications, EDGE; Rohit Mehta, Founder, DoGood Funding; Noreen Javed, Interim Director, EDGE; Nadine Sinno, Manager, Student Engagement, EDGE; Lauren D'Souza, Co-founder of Ace Inc; Renee Devereaux, Director Human Development S-Sense, Sheridan College; Dr. Janet Morrison, President and Vice Chancellor, Sheridan College; Chris-Beth Cowie, Co-founder ACBN and Empowered 4x; Alex Gregory, Business Development – DoGood Funding.

Building a community of social purpose organizations



Scan to learn more or visit edge.sheridancollege.ca

EDGE's involvement in the Government of Canada's Investment Readiness Program (IRP) has helped provide a dynamic regional community of social purpose organizations with the necessary funding to participate in Canada's growing social finance market and bring positive impact to their communities. In 2019, the Government of Canada, in partnership with Community Foundations of Canada, announced the IRP with the goal to help advance social innovation and social finance. An integral part of Generator at Sheridan, EDGE has now supported the disbursement of three rounds of IRP funding through their collaboration with long-time Sheridan community partner, the Oakville Community Foundation.

EDGE joined this initiative as a member of the Brant | Halton | Peel Partnership, and hosted community information sessions on each of Sheridan's three campuses. EDGE also piloted the IRP-EDGE Network to support funding recipients with peer learning and mentorship. Foundational learning opportunities, training, learning materials and events were provided to organizations in the earlier stages of exploring social entrepreneurship and finance to support their capacity to engage in the social finance sector.

When the final round of funding became available in 2023, EDGE joined the Golden Horseshoe Partnership, together with eight community foundations across the region.

During this multi-year program, EDGE collaborated to disburse nearly \$2.6 million in funding to 60 social purpose organizations that consisted of non-profits, charities, co-ops and for-profit social enterprises, including the Afro Caribbean Business Network Creative Works, Accelerate Her Future, Ecosystems Informatics and Social Venture Circuit. As these social purpose organizations play an important role in tackling socio-economic and environmental challenges, this support helps them continue to create positive change in their communities and beyond.

Inclusive community building at Sheridan: a wayfinding journey



Scan to learn more or visit

<u>source.sheridancollege.ca/</u> nonfaculty_cei_publications/10/



Recognizing that accessible spaces are an important part of a healthy aging environment, a project at Sheridan explored accessibility experiences for individuals 55 years of age and older and how they interact, access and navigate Sheridan's Trafalgar Road Campus in Oakville.

Supported by a Generator Growth Grant, the research team consisting of Patsy Marshall (professor in the Faculty of Humanities and Social Sciences), Kathryn Warren-Norton (formerly with the Centre for Elder Research) and Angela larocci (professor in the Faculty of Animation, Arts & Design) gathered findings from a comprehensive wayfinding tour at Trafalgar Road Campus with older adult participants. During the tour, observational, qualitative and quantitative data were collected (e.g. suggestions, emotional state, time spent looking at signage), in addition to photos and videos taken of the participants as they navigated the campus.

Participants found the campus to be welcoming with a variety of signage, but identified areas of improvement on campus, which included confusion with naming conventions, the consistency and quantity of signage and the lack of ramps or elevators. These findings have helped inform the development of a final report — "Inclusive Community Building at Sheridan: A Wayfinding Journey" and video.

In addition, insights from the project will help inform and contribute to campus planning at Sheridan and the improvement and expansion of existing wayfinding systems at the Trafalgar Road Campus.

Supporting early childhood education workers

The need to increase capacity in the early childhood educator sector is well-documented, with long-standing challenges in retaining the workforce. In collaboration with the regional municipalities of Halton and Peel, researchers at Sheridan have focused on understanding the specific factors influencing the retention of early childhood educators. Dr. Sina Bahramirad and Dr. Yousuf Haque from the Pilon School of Business first examined existing data before surveying early childhood educators in Halton and Peel regions and hosting follow-up focus groups. Using these data and insights, the researchers made recommendations and identified best practices for the regions to better assist them in the recruitment and retention of early childhood educators.



Dr. Sina Bahramirad, Professor, Pilon School of Business (left) and Dr. Yousuf Haque, Professor, Pilon School of Business (right)

Nurturing young change-makers



Scan to learn more or visit edge.sheridancollege.ca/catalyst



Social Impact Catalyst participants celebrate their achievements at the Youth Changemaker Summit.

Social Impact Catalyst powered by RBC Future Launch is a primarily virtual learning program at EDGE that guides social impact venture ideas and projects from startup into the validation stage, harnessing the power of entrepreneurship to help shape more equitable and sustainable communities. Over the last three years of the program, 522 participants from the Greater Toronto Area (including Sheridan students) engaged in the program's events and learning opportunities, and 62 founders received funding to explore solutions to various social and environmental impact topics.

In the program's final year, Social Impact Catalyst powered by RBC Future Launch caught the attention of a team of educators in New Brunswick, marking a national expansion of the program with eight youth from various communities in New Brunswick joining the last cohort. Committed to the success of young entrepreneurs, EDGE also piloted an extension of the Social Impact Catalyst to bridge the gap from knowledge to achieving a minimum viable product. The Momentum program was launched to support youth entrepreneurs with coaching tailored to their venture's stage of development.

Artificial intelligence (AI) in research and innovation

AI offers tremendous promise for research and innovation, and for accelerating its impacts. Each of our five research and entrepreneurship centres is actively engaged in AI-related work in their specialized areas, and expertise in AI technologies is evident across Sheridan.

Predictive insights into osteoporotic fractures



Scan to learn more or visit sheridancollege.ca/applied-ai

Osteoporosis continues to be a major cause of fractures, especially in postmenopausal women and older men. Existing screening tools for osteoporosis evaluate fracture risk within a 10-year window, which might not be suitable for evaluating shorterterm risk.

Supported by a Natural Sciences and Engineering Research Council of Canada - Innovation Enhancement grant, the Centre for Applied AI used machine learning and algorithms to create an automatic prescreening tool for osteoporosis-related fracture risk. Led by Dr. Volodymyr Voytenko, professor in the Faculty of Applied Science and Technology, in collaboration with Narvant and Osteoporosis Canada, the project's aim was to build a system that assists in identifying those at risk of osteoporosis and secondary fractures to improve quality of life. The next phase of this project has received further funding to explore the development of an assessment tool to identify imminent fracture risk.



Dr. Volodymyr Voytenko, Professor, Faculty of Applied Science and Technology

AI and robotic imaging help improve defect detection in manufacturing



Scan to learn more or visit sheridancollege.ca/ intelligent-manufacturing



Left to right: Richard Harrison, Advanced Quality Engineer, A. Berger Precision; Dr. Ameera Al-Karkhi, Professor, Faculty of Applied Science and Technology; Joan Berger, Senior Vice President Marketing, A. Berger Precision; Yash Rathod and Naomi Wang, Centre for Intelligent Manufacturing (CIM); Dr. Carolyn Moorlag, Director of CIM; Dr. Ethan Shen, Research Manager, CIM; Anand Chakkummood, Advanced Engineering, A. Berger Precision; Ahsanullah Fatehmulla, Quality Engineering, A. Berger Precision; Cristian Bobeica, Engineering Manager, A. Berger Precision.

Quality control in manufacturing often relies on visual inspection, but manual inspection of machined parts can be prone to errors and costly delays. Could the use of Al for inspection be the answer to a more efficient and accurate detection system?

Dr. Ameera Al-Kharki, professor in the Faculty of Applied Science and Technology, and Dr. Ethan Shen, Research Manager at the Centre for Intelligent Manufacturing, worked with A. Berger Precision to develop an automated and highly accurate Alpowered inspection system for their component parts. With the support of a FedDev Ontario - Southern Ontario Network for Advanced Manufacturing Innovation grant, the researchers developed a proof-of-concept robotic imaging detection system to capture and analyze high-resolution images and paired this with an Al algorithm that effectively detected defects on inspected parts. This approach has the potential to improve both the speed and accuracy of quality control inspections in the manufacturing industry.

A personalized intervention for persons living with dementia



Scan to learn more or visit sheridancollege.ca/elder-research

The Centre for Elder Research (CER) and industry partner LUCID have collaborated on research that looks at how music experiences can help improve the health and well-being of individuals living with dementia.

The research supported the development, refinement and implementation of LUCID's Affective Music Recommendation System (AMRS, a proprietary, patent-pending reinforcement learning system) with data collection and algorithm refinement, and by piloting a homebased trial of the platform with individuals living with dementia and members of their care teams.

LUCID worked with CER to generate and capture the data required to assess their system's effectiveness and usability in real-world scenarios. LUCID also had the opportunity to engage with participants in several ways and gather valuable feedback to support LUCID's commercialization efforts. Participants and care partners' health and well-being benefited from personalized and curated music playlists, and they also learned about new tools and technologies for support. This research has been funded through a Natural Sciences and Engineering Research Council of Canada Applied Research and Technology Partnerships grant.



LUCID researchers test their platform and set-up with older adult participants at the Centre for Elder Research.

Enhancing self-driving vehicles with 5G



Scan to learn more or visit sheridancollege.ca/applied-ai

As technology continues to reinvent itself at a rapid pace, it's important to have a better understanding of how all layers of communication systems can work together efficiently. A unique project between Rogers Communications and the Centre for Applied AI explored this idea by using machine learning techniques to co-develop insights into how Rogers can deliver innovative services to drivers and prepare a roadmap for autonomous vehicles operating on its 5G networks. The project assessed how multi-user networks like 5G can provide better quality and enhance new services in future driverless systems for public transportation, taxis and delivery systems, and assisted driving for seniors and individuals with disabilities.

Supported by a Natural Sciences and Engineering Research Council of Canada - Innovation Enhancement grant, Dr. Khaled Mahmud, professor in the Faculty of Applied Science and Technology, and a team of nine student researchers developed a prototype app that simulated the navigation experience provided by an autonomous vehicle, and processed vehicle diagnostic data to provide status monitoring, routing and notifications to the users for energy efficient operation. Findings from the research will help inform 5G businesses like Rogers on further enhancing their services to clients.

Jerikka Sotelo, a fourth-year student in the Honours Bachelor of Computer Science (Mobile Computing) program, was involved at the tail-end of the project and reflected on this experiential learning opportunity.

"I learned to appreciate the process of problem-solving from scratch and understand the importance of gathering necessary data and information before proceeding to the next steps. It was enlightening to observe how similar problems are approached in other industries, and how challenges discovered by researchers can overlap when working on solutions," said Sotelo.



Resilient futures

The Sheridan community has embraced trailblazing as a foundational principle that drives our work. As a national leader in applied research, innovation and entrepreneurship, Generator at Sheridan works across sectors to unlock our communities' full potential to become more productive, competitive and resilient into the future.

Exploring cooperative methodologies in the modern 2D animation workflow



Working in commercial animation involves creating within a strict pipeline-driven structure to produce films and shows with a singular aesthetic. Although efficient in the context of large productions, personal creativity is unable to thrive as artists are required to mimic the message and creative vision of their employers.

Tabitha Fisher, professor in the Faculty of Animation, Arts & Design, has explored the development and testing of a short filmmaking methodology that reintroduces co-creation and collaboration (commonly used in the early "story room" days of animation) back into the 2D animation workflow. This methodology aims to remove the modern constraints of an animation studio's hierarchical process, allowing a culture of innovation to thrive among animators to push the boundaries of what is possible in animation.



Tabitha Fisher, Professor in the Faculty of Animation, Arts & Design

Supported by a Generator Growth Grant, Fisher and three student researchers conducted a scan and needs analysis of creative challenges in commercial and auteur processes and developed a 2D animated film as a case study for the innovation that results from introducing a collaborative environment of cocreation. Results from the research are currently being compiled for the submission of a research paper.

Providing a more accessible virtual reality experience for youth



Scan to learn more or visit sirtcentre.com

Augmented reality (AR) and virtual reality (VR) applications in healthcare are expanding to enhance patient care, research and training horizons for better patient outcomes. A recent collaboration between the Screen Industries Research and Training (SIRT) Centre and Unlimited Therapeutics reflects how SIRT's unique expertise in immersive technologies, including AR and VR, can be applied across many sectors beyond film, television and gaming. Supported by the National Research Council of Canada Industrial Research Assistance Program, SIRT applied its expertise in performance capture and testing to help Unlimited Therapeutics enhance its virtual reality training system and provide a more convenient, accessible and realistic therapeutic experience for young users dealing with forms of anxiety. Led by Spencer Idenouye, SIRT's Virtual Production Lead, with SIRT collaborators Kevin Santos, James Rowan, Emerson Chan, Mohammad Moussa and Jason Hunter, the project explored performance capture data and technologies including body animation, facial animation, hand animation and voice capture to effectively capture an actor's performance for virtual reality applications. The captured content was integrated and tested, with a workflow prototype developed to help sequence the performance capture content onto virtual human characters in a 3D environment.



Enhancing the rehab experience for patients and their clinicians



Scan to learn more or visit sheridancollege.ca/intelligent-manufacturing





Tracking the recovery and progress of a patient's physical rehabilitation in real time and in person can be challenging for their clinician. LEVEL Motion has created a wearable sensor system that measures joint range of motion and speed. LEVEL approached the Centre for Intelligent Manufacturing (CIM) to explore the refinement of their core sensors and chargers to help improve that experience.

The research team, consisting of Dr. Victor Bravo (professor in the Faculty of Applied Science and Technology), Dr. Ethan Shen (Research Manager in CIM) and Theodor Nguyen (student researcher in the Mechanical Engineering Technology program), worked closely with LEVEL Motion in the development of a sensor prototype for inspection. After identifying weaknesses in the enclosure design, modifications were made to the sensor and charging station to improve impact alignment, strength, surface quality and ease of manufacturing.

The research findings show that CIM's enhancements to the prototype may help support a more optimized wearable experience that provides progress-related information for the patient and their clinician in a faster and more comprehensive way. This is important as clinicians can identify any potential issues that may arise during the rehabilitation process and adjust treatment plans promptly for optimal outcomes. This project was supported by a FedDev Ontario - Southern Ontario Network for Advanced Manufacturing Innovation grant.

A Canadian first: building knowledge of pain-relieving medications among elite athletes

In the athletic world, knowledge is power, especially when it comes to health and the use and misuse of medications.

New research at Sheridan aims to better inform healthcare practitioners about the awareness and use of pain-relieving medications and opioids among elite athletes, and to educate athletes about proper medication use. Led by professors Jacqueline Vandertuin and Dr. Dalya Abdulla from the Faculty of Applied Health and Community Studies, this Generator Growth Grant-funded research is the first in Canada to study pain-relieving medication use, knowledge and attitudes among elite athletes.

Surveys were completed by athletes at Sheridan and within the Ontario Colleges Athletic Association, and results showed that athletes were self-medicating and relying on schools, therapists and coaches to provide them with information on pain-relieving medications as they indicated little knowledge related to pain-relieving medications. The findings from the research will be used in the development of educational modules and resources that are meant to better support healthcare providers and athletes in making informed decisions about their medication use.



Jacqueline Vandertuin and Dr. Dalya Abdulla, Professors in the Faculty of Applied Health and Community Studies.



Mike Darmitz, Software Engineering Lead at SIRT, and Wladyslaw Bronowicki, Software Researcher at SIRT, collaborate on the development of software tools at SIRT's Pinewood Toronto Studios location.

Enhancing virtual reality surgical simulation and training



Scan to learn more or visit sirtcentre.com

The innovation support that the Screen Industries Research and Training (SIRT) Centre provides to small- and medium-sized businesses spans several areas of expertise, including immersive technology. Recently, the Centre's knowledge in augmented reality (AR) and virtual reality (VR) was applied during a research project with Marion Surgical, who approached SIRT seeking to enhance their existing VR surgical simulation and training system designed to improve accuracy and reduce complications in all types of surgeries.

Supported by a Natural Sciences and Engineering Research Council of Canada - Applied Research and Technology Partnership grant, SIRT prototyped and integrated a voice-cloning text-to-speech system within the training simulation that also supports automatic translation to deliver the content in another language. This has not only reduced the amount of time Marion Surgical would dedicate to recording dialogue, but the text-to-speech system also provided an opportunity for Marion Surgical to enhance the training of surgeons in realistic and safe environments.

From caregiver to care partner: a view of the other side



Scan to learn more or visit sheridancollege.ca/elder-research

Caregiver burden is a prevalent issue, with many who care for older adults facing challenges navigating a complex landscape of supports and programs. The introduction and use of an online platform to collaboratively connect, communicate and coordinate caregiving responsibilities may assist in reducing that burden.

Tyze Networks is a company that provides a web-based application that enables caregivers to create a digital support system of family members and friends to manage the care for an older adult or an

individual with a disability. During the planning stages for its next digital application, Tyze approached the Centre for Elder Research to help broaden their understanding of how unpaid caregivers and supportive healthcare and social support organizations perceive and manage their care interactions with family and other caregivers. This included exploring the value caregivers bring to healthcare partners, the challenges of integrating caregivers into existing systems and identifying meaningful ways for caregivers and healthcare partners to collaborate.

Supported through a Social Sciences and Humanities Research Council - Partnership Engage grant, this project's findings suggest that there is an opportunity for healthcare organizations to involve the unpaid caregiver in their processes and policies, which provides a more collaborative and person-centred approach to care. Exploring these topics and opportunities both in the classroom and in the Centre's ongoing research can help future healthcare workers and community leaders better develop programs and policies that support older adults and their networks of care partners.

Generator Growth Grants

Generator Growth Grants are internal awards at Sheridan granted on a competitive basis for projects involving research and creative activities. The grants provide more opportunities for faculty members to pursue their research passions. We are thrilled to announce our 2024 Generator Growth grant recipients, with congratulations to all.

- "Further Validation of S-Sense Think, Relate, Innovate, and Evolve Practices"
 - + **Michelle Szabo** (Faculty of Humanities and Social Sciences)
 - + Cherie Werhun and Anne Coulter (Human Development and Potential)
- "BIPOC Photo Mentorship Research Project"
 - + Heather Morton (Faculty of Animation, Arts & Design)
- "Helen en plein air: The Art of Helen McNicoll"
 - + Kathleen Cummins, John Kneller, Nikolas Clarke (Faculty of Animation, Arts & Design)

Generator Student Awards

Generator Student Awards recognize student involvement in a thesis, capstone or course-based research project, or as part of a funded or unfunded research project. Recipients are provided with both monetary awards and certificates for their achievement. Congratulations to all who were nominated and awarded this year.

Creative activities

Inderpreet Singh Ayman Hashim Anthony Wong (Faculty of Applied Science and Technology)

"Kitty-Cruiser"

Excellence in curricularembedded research

Heung (Elaine) Ting Kwee Cheyenne McDonald

(Faculty of Applied Health and Community Studies)

"Factors Motivating Social Entrepreneurs to Learn About Change-making, Social Innovation, and Entrepreneurship"

Innovation in research

Parth Jigneshkumar Patel Kunal Bajaj

(Faculty of Applied Science and Technology)

"Generative AI for Library Frequently Asked Questions"

Pushing interdisciplinary boundaries

Theodor Nguyen (Faculty of Applied Science and Technology)

"Robotic Gait Simulator – Data Collection and Analysis" and "Design and Manufacturability Study of Sensor Enclosures for Rehab Tracking"

Student leadership in research

Mohamed Kasim

(Faculty of Applied Science and Technology)

"Process Development for Insertion of Heat Resistant Insulation Strips or Sheets into Windows/Doors Profiles"

"Automated filter tuning solution"

"Robotic Gait Simulator – Data collection and analysis"

"Design and Manufacturability Study of Sensor Enclosures for Rehab Tracking"

Team collaboration in research

Shamas Berantuo

Alexandra Hansen (Faculty of Applied Health and Community Studies)

Michella Mark

(Faculty of Animation, Arts & Design)

"Hearts + Minds - Black and Indigenous Participatory Action Research Project"

Thank you

We would like to extend our gratitude to the many businesses and community organizations who provide funding and in-kind support as part of their collaborative research initiatives with Generator at Sheridan. We would also like to thank the funding agencies and donors whose financial support has helped us build and shape a culture of research, innovation and entrepreneurship across Sheridan.

Generator at Sheridan works with external partners to assess potential research projects and identify suitable funding opportunities, including external grants or sponsored research contracts.

A list of ongoing funding opportunities available to external partners can be found at <u>sheridancollege.ca/generator</u>

Our research and entrepreneurship centres

Centre for Intelligent Manufacturing

Director: **Dr. Carolyn Moorlag** sheridancollege.ca/intelligentmanufacturing

Centre for Elder Research

Director: **Dr. Lia Tsotsos** sheridancollege.ca/elder-research

Centre for Applied AI

Interim Director: **Dr. Carolyn Moorlag** sheridancollege.ca/applied-ai

EDGE

Entrepreneurship Hub Interim Director: Noreen Javed edge.sheridancollege.ca

Screen Industries Research and Training Centre Director: David Oppenheim sirtcentre.com

Let's innovate together



SheridanRIE



in Generator at Sheridan



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