



# **REPORT ON SCHOLARSHIP**

## 2025



## Treaty 6 Territory Land Acknowledgment

MacEwan University is located on Treaty Six Territory, the traditional gathering place for many Indigenous people. We honour and respect the history, languages, ceremonies and culture of the First Nations, Métis and Inuit who call this territory home. The First People's connection to the land teaches us about our inherent responsibility to protect and respect Mother Earth. With this acknowledgement, we honour the ancestors and children who have been buried here, missing and murdered Indigenous women and men, and the process of ongoing collective healing for all human beings. We are reminded that we are all treaty people and of the responsibility we have to one another.

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Message from the Associate Vice-President, Research

## Dr. Craig Kuziemy



At MacEwan University, we are making outstanding progress in expanding our scholarly ecosystem. Our *2025 Report on Scholarship* highlights the past year's efforts.

MacEwan's Teaching Greatness Strategic Vision 2030 sets the stage for developing and integrating scholarship, and the Office of Research Services (ORS) takes that inspiration to help our faculty members develop and amplify their research programs in response to local and global challenges. I am always amazed at the extent to which our scholarship cuts across and integrates disciplines from across the institution to leverage the collective strength of interdisciplinary perspectives on societal problems.

We continue to make progress on our three thematic areas of research excellence: Health and Wellness in Communities, Persuasive and Immersive Technologies, and Energy and the Environment, while also breaking new ground in other key research areas. During the past year, we launched our first three research groups, a great example of the evolution of

our scholarly ecosystem to ensure we remain relevant and well-positioned to support the needs of industry, government, and local, national and global community partners. We continue to increase our student research opportunities, providing valuable experience that complements students' coursework and helps them develop core skills that will benefit them after graduation.

Our *2025 Report on Scholarship* presents some of the extraordinary stories of MacEwan scholarship from the past year. These stories not only demonstrate the creative and innovative mindset that our faculty bring to their scholarship, but they also give powerful examples of the substantial impact our scholarship has on communities near and far. I invite you to give the report a read and learn all about the breadth of scholarship at MacEwan.



# School of Business

## *Decoding the Modern Supply Chain Management Professional: The Industry's Voice*

Dr. Rickard Enstroem explores how digital transformation, particularly AI and algorithmic systems, affects managerial roles, organizational design and professional competencies. His most recent project examines how the supply chain management (SCM) field has evolved and what competencies define its modern professional profile. SCM provides a valuable lens for this work because of its fluid boundaries, evolving terminology and cross-functional reach.

Funded by a SSHRC Institutional Grant, Dr. Enstroem leads a cross-institutional research team with Dr. Parminder Singh Kang (MacEwan University), Dr. Bhawna Bhawna (University of Delhi) and student researcher Owen Bennett. The team conducted a detailed review of SCM literature to understand its evolution and the key competencies that have historically defined the field. Building on this foundation, they analyzed nearly 5,000 SCM job advertisements from a leading employment platform, applying text analysis and unsupervised machine learning to uncover emerging competency requirements.

The findings reveal a clear shift toward strategic, technology-oriented SCM roles that require digital fluency, data literacy and cross-functional adaptability. Employers frequently cite tools such as Oracle, SQL and Python, reflecting the growing demand for advanced analytical capabilities alongside traditional competencies such as communication and project management. These insights highlight a transformation in which supply chains evolve from transactional systems into complex, dynamic ecosystems that often outpace traditional training models.

Dr. Enstroem explains that the most rewarding aspect of this work is its combination of methodological innovation and practical relevance. Although methodologically advanced, the research generates actionable insights for competency frameworks, professional designations and HR practice. It also demonstrates how much meaningful information can be drawn from seemingly routine job advertisement text.

Dr. Enstroem is currently developing a conceptual model to examine how algorithmic authority may displace human discretion in organizations. The goal is to identify design principles that preserve reflective judgment and character, understood as a situated moral capacity, in technologically mediated work environments.



**Dr. Rickard Enstroem**  
Associate Professor, Decision Sciences

## *Learning to Listen: Studying the Listening-related Experiences and Training Needs Among Palliative Care Volunteers*

Dr. Tiffany Kriz is currently conducting research focused on the experiences of listeners in an emotionally demanding context, namely, in palliative and grief care settings. Her work forms part of a broader scholarly program that examines how people manage change, uncertainty and communication in challenging environments. This includes understanding how interpersonal listening affects cognition, emotion and performance, and how supportive mindsets and training can help individuals navigate volatility and reduce defensiveness when encountering failure or distress.

A recent project explores how volunteers are affected by listening to challenging content. Supported by a Partnership Engage Grant and Institutional Grant from SSHRC, the project is a collaboration between Dr. Kriz, Dr. Shelley Raffin Bouchal (University of Calgary) and Bow Valley Palliative, and is supported by undergraduate and graduate student research assistants. The research integrates pre- and post-training surveys, focus groups and event-contingent experience sampling to capture volunteers' experiences immediately following interactions with clients.

This work addresses a key paradox in organizational listening: while listening is beneficial for those speaking, it can be emotionally taxing for the listener. Findings from Dr. Kriz's research is providing insights into how volunteers can remain engaged without experiencing harmful effects, helping to shape training and support strategies for emotionally demanding roles. Preliminary results suggest that training reduces volunteer anxieties about listening and positively influences how they view their role. Focus groups further reveal that volunteers intentionally develop listening-related practices that support their ability to meaningfully connect in both their volunteer work and their personal relationships.

The research responds to an increasing societal need for palliative care, as more individuals choose to die at home or in dedicated hospice settings. When navigating such transitions, people often benefit from opportunities to share their stories, hopes and fears. However, medical professionals and family members may not always have the time, training or emotional resources to support these conversations. Trained volunteers help to fill this gap, and Dr. Kriz's work contributes evidence-based insights to guide how these volunteers can be best supported. Currently, listening remains an underemphasized component in standard volunteer training. The research aims to address this by informing local programming and, eventually, contributing to national volunteer training curricula.

Looking ahead, Dr. Kriz and her partners plan to examine downstream effects on clients and continue developing training approaches that support both volunteers and those they serve. She finds it rewarding to research listening in this area because she sees the potential for helping to address deeply human needs at critical points in the life journey, while also shedding light on how to ease the burden on listeners. This, she believes, can offer insights into how to effectively and sustainably provide support through listening in other contexts as well (e.g., manager-employee interactions).



**Dr. Tiffany Kriz**  
Associate Professor, Management  
and Organizations

# Faculty of Fine Art and Communications



**Leigh Rivenbark**

Head of Acting/Assistant Professor,  
Music Theatre Performance

## *Safe Spaces*

Leigh Rivenbark integrates creative practice and performance research. His research focuses on three interconnected areas: directing plays, musicals and films; exploring the application of acting techniques in theatre and film; and developing strategies to build resilience within theatre training programs. Grounded in his passion for both artistry and pedagogy, Rivenbark's work bridges the practical and theoretical dimensions of the performing arts.

A recent project that exemplifies this integration is *Safe Spaces*, a full-length screenplay Rivenbark is currently developing. The story explores how contemporary society grapples with the complexities of cancel culture. Rivenbark plans to write and direct the feature film in collaboration with colleagues in MacEwan University's Departments of Theatre and Music, offering students experiential learning opportunities in both performance and technical production roles. Rivenbark aims to present a balanced view of this polarizing subject, examining both its power as a tool for social change, and its potential to shut down meaningful dialogue. He hopes the film will spark nuanced conversations about accountability, empathy and the challenge of balancing justice with forgiveness in a divided world.

Building on the success of his short film, *Breathing Through a Straw*, which screened at festivals worldwide and won international awards, Rivenbark sees *Safe Spaces* as the next step in expanding his creative research practice. He aims for the film to contribute to important public discourse while providing students and collaborators with valuable hands-on experience in professional filmmaking.

Rivenbark's creative research continues to highlight the role of storytelling in examining contemporary social issues while advancing artistic innovation within the performing arts.



**Kerri-Lynn Reeves**  
Associate Professor, Studio Arts

## *Knowing Oneself; Engaging in Interdisciplinary Creative-research*

Kerri-Lynn Reeves is an artist-scholar whose research focuses on research-creation at the intersection of artistic practice, critical theory and scholarly inquiry. Emphasizing process over product, she explores relational and material practices through socially engaged art, craft, sculpture and installation. Drawing on feminist autotheory, she uses her lived experience to examine how material culture reflects and shapes social environments.

Supported by the MacEwan University Professional Development Fund and the Office of Research Services Dissemination Grant, Reeves's recent scholarship of teaching and learning project investigates how interdisciplinary arts education nurtures self-awareness and self-directed creative expression. Her teaching helps students understand their identities and positionalities, empowering them to develop authentic artistic voices across media. Her approach includes developing self-awareness, and exploring social identity, privilege and positionality alongside ethical creative expression.

Reeves is also conducting research supported by the Edmonton Arts Council on artist-parent experiences through quilt-making in collaboration with her daughter. This research aims to explore intersections of care, creativity and embodied knowledge.

Through her research and advocacy, she has strengthened support for artist-parents and caregivers by engaging with various committees and collectives. As part of an artist-parent collective, she has participated in residencies and helped organize discussions on improving support for caregivers in the arts. This work led to her invitation to join the advisory committee for a national program that supports women, parents and caregivers across the arts in Canada, through funding from Canada's Ministry of Women and Gender Equality.

Looking ahead, Reeves is creating partnerships with the support of the university's Community Engaged Scholarship Development Fund to adapt artist-family residency models for institutions, including MacEwan. She also plans to develop symposia to foster ongoing dialogue and support for caregivers in the arts.



# Faculty of Nursing

## *A Gendered Analysis of the Implementation and Impacts of Prescribed Safer Supply in B.C.: A Qualitative Exploration during Dual Public Health Emergencies*

Dr. Ginger Sullivan's scholarly interests focus on improving health-care services for women and gender-diverse individuals affected by mental health and substance use. Sullivan's interest in this work grew from her clinical experience as a nurse in mental health and addictions, where she witnessed the challenges these populations face in accessing appropriate and effective care. For her, this work is both personal and professional, reflecting the broader societal inequities in women's health, which have historically been overlooked in science and practice.

Funded by the Canadian Institutes of Health Research (CIHR) Doctoral Award and the Risk Mitigation Guidance Evaluation, Dr. Sullivan's research provides timely insights into health-care interventions with practical applications.

Her recent doctoral project examined the experiences of women and gender-diverse individuals accessing prescribed safer supply (PSS) during the overdose crisis and the COVID-19 pandemic. During this dual crisis, provincial policies enabled prescribers to provide pharmaceutical-grade alternatives to illicit substances. Dr. Sullivan worked with a research team at the Canadian Institute for Substance Use Research (CISUR), University of Victoria, including Dr. Bernie Pauly, Dr. Karen Urbanoski and Dr. Lenora Marcellus, as well as peer research associates with lived experience, whose contributions were essential in shaping a study responsive to community needs.

Findings revealed significant gaps in service accessibility and effectiveness for women and gender-diverse individuals, highlighting the importance of designing interventions that address their unique needs. The real-time nature of this evaluation allowed the results to directly inform practice, bridging the theory-practice gap that often delays improvements in care.

Building on this work, Dr. Sullivan continues collaborating with CISUR to conduct a gender-based analysis of PSS using provincial data, and is preparing a new project examining the impacts of involuntary substance use services on women and gender-diverse individuals in Alberta. Her work bridges clinical expertise with applied research to improve health-care access, equity and outcomes for structurally marginalized populations.



**Dr. Ginger Sullivan**  
Assistant Professor, Mental Health  
Nursing and Community Wellness

## *Mentally Healthy Living After Social Distancing: A Study of Older Canadians*

Dr. Gail Low investigates how people maintain mental health and resilience in later life, particularly in response to major life stressors, such as the COVID-19 pandemic. Inspired by her grandmother's fortitude, her own observations of older adults' tenacity and a participant named Paul who emphasized that quality of life is in the eye of the beholder, Dr. Low's research explores how older Canadians navigate anxiety and build mentally healthy routines. During the COVID-19 pandemic, older Canadians were among those most at risk of requiring emergent or intensive care and of dying if infected. Their return to post-COVID life was expected to be especially distressing.

In response to a call from *Lancet Psychiatry* for evidence on how people build mentally healthy living structures, Dr. Low and her team conducted *Mentally Healthy Living After Social Distancing: A Study of Older Canadians*. Census-based and safe survey methods helped shed light on everyday strategies that 1,327 older people were using to manage pandemic-related anxiety as social spaces reopened.

Co-investigators included D. M. Wilson (University of Alberta), Gail Gutman (Professor Emerita, Simon Fraser University), Z. Gao (Memorial University), Sofia von Humboldt (ISPA, Instituto Universitário, Lisbon), Alex França (Federal University of São Carlos) and Luciano M. Vitorino (Federal University of Itajubá). Trainees include Hunaina Allana (MacEwan University), Anila Naz (University of Alberta) and Juceli Morero (University of São Paulo). The project was supported by the RTOERO Foundation, as funder and partner, and by the University of Alberta and MacEwan University.

Older Canadians reported a wide range of anxiety levels, from none to severe, and tried up to 16 coping strategies with varying effectiveness. Many acted as informal educators, sharing their knowledge about staying mentally afloat and reducing isolation. This inspired a public-facing knowledge mobilization initiative, *KUDOS to Older Canadian Mental Health Educators*, which presented the research in a "cookbook magazine" format designed to make mental health guidance more accessible and engaging for everyday readers. Thanks to content designers Alison LaMantia (Freelance Communications Consultant) and Maynard Kolskog (Research Chef, NAIT), and to Freelance Health Writer Wendy Haaf for helping spread the word.

This international collaboration provides valuable insight into the everyday strategies and structures for mentally healthy living, now and for future pandemics, and for ongoing research and policy on midlife and later-life mental health internationally. Dr. Low is now working with researchers and policy analysts from the United States, Ukraine, the United Kingdom, Malaysia, Portugal and Brazil aiming to explore time-laden mentally healthy living structures. For Dr. Low, the most rewarding aspect of this research has been learning directly from older adults while working alongside an exceptional international team, whose collective efforts continue to advance understanding of mental well-being in later life.



**Dr. Gail Low**  
Associate Professor, Nursing Foundations  
and Science, Chair of International Health



**Geneve Champoux**  
Educational Developer, Centre  
for Teaching and Learning

## *Uncharted Terrain: How Instructors Use and Perceive an AI Reading Coach for Teaching and Learning in Undergraduate Courses*

Geneve Champoux investigates how students engage with course readings in an era shaped by digitization and artificial intelligence. With a background in writing centre pedagogy, scholarly communication and librarianship, her work focuses on the “hidden curriculum” of higher education, the unspoken skills and expectations students are assumed to learn when completing course readings or research assignments. She is particularly interested in how reading functions differently across disciplines and levels of instruction, and how emerging technologies, including AI reading coaches, are reshaping both student engagement and faculty expectations. Her scholarship aims to help instructors articulate and clarify the purposes of reading in their courses, thereby supporting more intentional approaches to student learning.

In collaboration with Dr. Galicia Blackman (educational developer, Centre for Teaching and Learning), Champoux conducted a study on faculty perceptions of critical reading skills and their use of an AI-assisted reading coach in undergraduate courses. Using a phenomenographic approach, they interviewed faculty about definitions of critical reading, types of course readings, pedagogical goals and experiences with the AI tool. The research revealed that conceptions of critical reading vary widely across disciplines, student levels and types of content. Implementing the AI tool also gave faculty an opportunity to clarify assumptions and expectations about course readings, highlighting how technology can prompt deeper reflection on teaching practices. The initial study involved a small pilot group, and Champoux plans to expand the research to include faculty who are not using AI reading tools to better map the diversity of perspectives on reading and critical engagement.

The insights from this project inform how AI tools can support critical reading while maintaining attention to the foundational skills embedded in the hidden curriculum, such as analytical thinking, interpretation and disciplinary ways of knowing. By clarifying how faculty define and approach critical reading, the research helps guide the development and use of AI-assisted tools in ways that complement rather than replace meaningful engagement with texts. This ensures that students not only complete readings but also develop the intellectual habits and critical thinking skills essential for success across disciplines.

For Champoux, the most rewarding aspect of this work lies in supporting faculty as they uncover and articulate dimensions of teaching and learning that often remain hidden, helping them better guide their students in developing the intellectual habits essential to higher education. She continues to advance her scholarship through collaboration with faculty colleagues and educational developers, contributing to both the evaluation of emerging technologies and the design of teaching practices that enhance students’ critical reading, writing and thinking skills.



**Shahram Fardadvand**  
Senior Educational Technologist,  
Centre for Teaching and Learning

## *Enhancing Teaching and Learning through Accessible and Open Digital Tools*

Shahram Fardadvand focuses on advancing digital teaching and learning through inclusive and accessible educational technologies. His work bridges pedagogy, technology and faculty development, supporting instructors in creating compelling, engaging and equitable learning experiences across face-to-face, hybrid and online formats.

As a member of MacEwan University's General Faculty Council and the Academic Technology Subcommittee, Fardadvand contributes to shaping institutional strategies for technology-enhanced teaching and learning. His leadership has guided initiatives that strengthen the university's digital learning ecosystem and align with its commitment to accessibility and innovation.

Recently, he led the integration of implemented two primary accessibility tools within MacEwan University's digital learning environment, *mêskanâs*: the Accessibility+Toolkit and Alternate Format Tool. These tools identify course accessibility issues and generate alternative content formats such as audio, tagged PDFs, Braille and ePub files. Since their launch, students have downloaded more than 15,000 alternative materials, highlighting the demand for accessible digital learning options and the value of inclusive course design.

Fardadvand also leads faculty development programs that integrate universal design for learning (UDL) principles into course design, helping instructors create more inclusive and flexible learning environments. His 2025 presentation at the Society for Teaching and Learning in Higher Education (STLHE) Conference explored how open educational resources (OER) and MacEwan Open Books can empower instructors to build customizable, interactive and pedagogically rich materials.

Fardadvand collaborates on interdisciplinary projects exploring immersive technologies in education. His ongoing work continues to advance digital innovation, accessibility and scholarly teaching at MacEwan. Looking ahead, he aims to expand support for open pedagogy; promote digital literacy, immersive learning, AI in education; and further strengthen the university's inclusive digital learning infrastructure.



# Faculty of Health and Community Studies

## *Leveraging the Power of Social Enterprise to Empower Diverse Communities in Canada*

Dr. Aaron Turpin focuses on community-based economic empowerment through innovative market-based strategies grounded in equity and social entrepreneurship principles. His research examines the organizational dynamics of social purpose initiatives, including management competencies and funding models that support inclusive economies and address systemic inequities.

Supported by SSHRC and MacEwan University, Dr. Turpin is currently investigating how social enterprises balance social and financial goals to create opportunities for social good in communities. He is currently leading several projects, including a collaboration with Dr. Leanne Hedberg (MacEwan University) that examines Indigenous-led renewable energy projects in Canada as a form of cultural entrepreneurship. Recently, Dr. Turpin developed a national sample frame of social enterprises and collected data on organizational capacity and mission, vision, and values statements. Results illustrate how social enterprises manage competing organizational logics of profit versus social impact by prioritizing and imbedding community-based outcomes within organizational goals. Quantitative analyses further this narrative by identifying differences in financial, operational and human resource capacity across organizational legal status (i.e. nonprofit and for-profit incorporation). This important work would not have been possible without the support of community partners, including Flourish Alberta, the Social Innovation Institute at MacEwan University and the Association for Nonprofit and Social Economy Research.

Looking ahead, Dr. Turpin's research explores how social finance strategies can empower equity-seeking communities and strengthen social purpose organizations. He is particularly interested in building regional and national ecosystems that support collaboration, innovation and knowledge sharing across Canada's social economy. His work aims to contribute to a broader rethinking of how social purpose initiatives can advance justice, resilience and community wellness.

Dr. Turpin is inspired by leaders who bring together social justice and entrepreneurial thinking to create meaningful change. He is deeply committed to teaching and mentorship, and values the opportunity to guide and support students passionate about social impact and systems-level transformation. Dr. Turpin sees this work as part of a broader effort to reshape how we think about charity, economic development and justice. He remains committed to partnering with equity-focused organizations and building national networks that foster collaboration and innovation within Canada's evolving social economy.



**Dr. Aaron Turpin**  
Assistant Professor, Health  
and Human Services

## *Co-creating a Simulation with Students as Active Partners: A Social Work Experience*

Professor Kealey Dube focuses her scholarly program on creating inclusive, meaningful and accessible models of experiential learning. She is particularly interested in sustainable, transformational field education opportunities that benefit students, faculty and community partners alike. Sparked by her passion for community collaboration and a commitment to accessibility, her research explores how experiential education can advance social justice while addressing the practical challenges faced by nonprofits.

One of her recent projects was co-created with collaborators Dr. Fernanda dos Santos Nogueira de Goes (MacEwan University), Dr. Natalia Rohatyn-Martin (MacEwan University) and Dr. Deanna Fidelak (Athabasca University) along with student collaborators Dennis Huseinovic and Eli Yaschuk (participants). The project applied a Students-as-Partners (SaP) framework to address barriers in field education for a student with disability-related challenges. With support from a performing arts student, Dube helped develop simulation-based scenarios that provided a supportive environment for the participants to practice, reflect and problem-solve.

The project had wide-ranging impact. Results showed that participants were able to build confidence and successfully complete both their practicum and a subsequent placement, with other participants noticing their applied skills being further enhanced by the project. This also allowed local organizations to provide opportunities for MacEwan students to participate in practicum placements. More broadly, the project underscored the power of SaP approaches for accessibility in experiential learning, demonstrating how flexibility and creativity can open doors for students who face systemic barriers.

Building on this work, Dube is collaborating with Dr. Melissa Hills (MacEwan University) in the Inclusive Experiential Education Research Group to further explore how simulation, accessibility and SaP models can reshape field education. For her, the most rewarding aspect of this research lies in seeing students succeed while also challenging structural barriers through creativity, collaboration and a commitment to equity in education.



**Kealey Dube**  
Assistant Professor, Social Work

# Faculty of Arts and Science



**Dr. Chris Ramsey**  
Interim Chair and Associate Professor,  
Mathematics and Statistics

## *Shining a (Theoretical) Light on the Prime Numbers*

Funded by an NSERC Discovery Grant, Dr. Chris Ramsey conducts research in pure mathematics, focusing on functional analysis with particular interests in operator algebras and aperiodic order. His work explores infinite-dimensional operators and non-periodic patterns, aiming to uncover the deep and elegant structures underlying complex mathematical systems.

A recent collaborative project, *Diffraction of the Primes and Other Sets of Zero Density*, was conducted with Dr. Nicolae Strungaru (MacEwan University) and Dr. Adam Humeniuk (Mount Royal University, and former postdoctoral researcher, MacEwan University). This research models the diffraction of waves passing through sets of numbers, such as the prime numbers, showing what would happen if an infinite sheet with tiny openings placed exactly at the prime numbers interacted with waves. The mathematical model demonstrates that the resulting diffraction pattern would appear uniform, without any bright spots or variations in intensity. These findings challenge earlier experiments suggesting that prime numbers might generate a “crystal-like” diffraction pattern, a highly regular and repeating pattern, and instead reveal that primes do not exhibit such regularity.

Beyond resolving this longstanding conjecture, the research introduces new mathematical methods to study the diffraction of sparse infinite sets, which are sets with points spread irregularly but extending infinitely. These techniques have the potential to deepen our understanding of number theory and aperiodic order, which focuses on non-repeating patterns.

Dr. Ramsey places great importance on involving students and postdoctoral researchers in this work, providing them with valuable opportunities to engage with forefront mathematical research. Currently, he collaborates with Dr. Strungaru, postdoctoral researchers and students on projects involving tilings of the infinite plane, continuing to explore infinite patterns and structures. He finds it especially rewarding to contribute new insights into prime numbers, which have fascinated mathematicians for over 3,500 years.



**Dr. Mahdi Daghmehchi Firoozjaei**  
Assistant Professor, Computer Science

## *Power Profiling of Smart Grid Users Using Dynamic Time Warping*

Dr. Mahdi Daghmehchi Firoozjaei advances the security and trustworthiness of digital systems through applied machine learning, user modelling and forensic intelligence. His research addresses cybersecurity challenges in critical infrastructures, embedded systems and public safety technologies, with a strong emphasis on real-world deployment and interdisciplinary collaboration. Motivated by the dual potential of emerging technologies to enhance and endanger public safety, his work seeks to balance innovation with ethical responsibility.

One of his recent projects examined how time-series load data from smart meters can be used to model user behaviour in smart grid environments. Key collaborators included Dr. Mohammad El-Hajj (MacEwan University), Minchang Kim (ETRI) and Dr. Hyoungshick Kim (Sungkyunkwan University). Dr. Daghmehchi Firoozjaei and team developed a behaviour profiling model using time-series load data and applied the dynamic time warping (DTW) clustering algorithm to group users based on their energy usage patterns, identifying distinct load types and daily consumption trends. Results showed the model achieved an accuracy of 77.17 per cent, demonstrating its potential for demand forecasting and anomaly detection. It also revealed significant privacy risks, showing how consumption data can unintentionally expose daily routines and sensitive lifestyle details.

The findings show that smart grid user behaviour is not only observable but also predictable, enabling better demand forecasting and load balancing, while also raising awareness of surveillance risks.

Building on these results, Dr. Daghmehchi Firoozjaei is expanding his research to incorporate more granular temporal distinctions, higher sampling rates and broader datasets, with future applications in domains such as transportation and health care. For him, the most rewarding aspect of this research lies in uncovering the dual edge of data-driven insights: how subtle patterns can both improve technological efficiency and raise critical questions about privacy and ethical AI use.





**Dr. Lisa Martin**

Assistant Professor, Creative Writing

## *Creative Writing in Post-Secondary Education: Integrating Practice, Pedagogy and Research*

Dr. Lisa Martin (Assistant Professor, Creative Writing) through both artistic and scholarly practice, explores how autobiographical experience shapes personal and collective understanding, with particular attention to grief, trauma and human resilience. She integrates creative practice, pedagogy and research-led inquiry, engaging students in creative work that deepens both their writing skills and their understanding of how literature is crafted.

Dr. Martin's most recent creative work, *A Story Can Be Told About Pain* (NeWest Press), a novel, examines how individuals construct the stories of their lives in the face of loss and adversity. The novel follows fourteen-year-old Shiloh after her father's death in a plane crash, as she navigates grief, rebellion and the derelict grounds of a fictional psychiatric hospital. Through multiple narrative perspectives, the work explores themes of ruin and reclamation, dereliction and care.

Her scholarly monograph, *Creative Writing in Post-Secondary Education: Practice, Pedagogy, and Research* (Bloomsbury Academic), investigates the distinctive contributions of creative writing within the post-secondary humanities. Drawing from a large archive of material about creative writing in higher education, the book articulates what sets the discipline apart, emphasizing practice-led pedagogy and research. It also addresses key debates about workshops, teaching methods and the role of creative and critical thinking in contemporary education.

Supported by The Writers' Trust of Canada, the Alberta Foundation for the Arts, the Edmonton Arts Council, and the Social Sciences and Humanities Research Council of Canada (SSHRC), Dr. Martin's research advances understanding of creative writing as a discipline and practice that fosters learner-centered, inclusive and reflective learning. Both the novel and the scholarly book offer new approaches for engaging with narrative, creative practice and pedagogy, and have already contributed to graduate research and discussion in the field.

Dr. Martin plans to continue developing new creative projects and exploring ways her teaching and mentorship can further support students' artistic growth. She finds the most fulfilling aspect of her work to be drawing on her own creative practice and research to support students to discern the shape of their own thinking, find their own material and develop the skill to craft their own, original literary work.



**Dr. Katie Biittner**  
Associate Professor, Anthropology

## *LAVA: Large-Scale Archaeological Videogame Analysis*

Funded by a five-year SSHRC Insight Grant, Dr. Katie Biittner's research advances the emerging field of archaeogaming, the study of archaeology in and of video games. Video games hold cultural, economic and technological significance and represent a global medium that is part of everyday life for many Canadians. Her work treats early video games as digital artifacts, applying archaeological theory and methods to explore the technological choices and cultural contexts behind their development. By reverse-engineering games from platforms such as the Atari 2600 and Apple II, the research extracts and analyzes source code, reframing it as material culture. This approach helps preserve and interpret a dimension of cultural heritage that is increasingly at risk, due to both the obsolescence of early technologies and limited documentation surrounding their production. Existing studies show these games were developed under significant constraints that demanded creativity and innovation, highlighting the importance of treating surviving titles as meaningful artifacts.

Her current project, conducted in collaboration with Dr. John Aycock (University of Calgary), Dr. Carl Therrien (Université de Montréal) and Dr. Allie Querengesser (University of Calgary), develops software tools designed to systematically study early video games at scale. This tool reverse-engineers games by extracting source code and capturing gameplay data across a large corpus of Atari 2600 titles and other platforms from the 1970s and 1980s. Initial testing showed the tool produced results consistent with human gameplay observations. The project is expanding to include a broader range of titles from this period, with particular attention to games developed by lesser-known contributors to early video game history.

Archival research and interviews with early developers have added important cultural and contextual dimensions to the study of early video games, helping to highlight the human experiences behind the technology. This qualitative aspect complements the technical analysis and reflects Dr. Biittner's commitment to approaching digital artifacts through both material and narrative lenses. Mentorship also plays a central role in this work, with students actively participating in research and contributing to the broader scholarly conversation on archaeogaming.

For Dr. Biittner, the most rewarding elements of this work lie in its interdisciplinarity, its potential to expand the boundaries of archaeology and the opportunity to study video games as artifacts that reflect the intersection of technology, creativity and culture.

# Office of Research Services

## Student Research Day

On April 17, 2025, MacEwan University held its annual Student Research Day event featuring undergraduate researchers from across all faculties and schools. Over 290 presentations and more than 350 student participants made it the university's largest-ever Student Research Day.

Students presented on diverse topics, including: "Predictors of Dance Skill: The Role of Motivational Climate, Adaptive Perfectionism and Grit"; "Evaluating fence permeability and seasonal mammalian movement in Elk Island National Park"; "Typographic Expression of 'The Wind' by Ray Bradbury"; and "Equity, Diversity and Inclusion within the Rural Development Network."

Dr. Annette Trimbee, the university's president and vice-chancellor, opened the event, Dr. Craig Kuziemy, associate vice-president, Research, provided a welcome, and Knowledge Keeper Tom Snow shared an opening Indigenous prayer and testimonial on the importance of research.



### Student Testimonials

*"Everything went smoothly!"*

*"It was fantastic to see so many students presenting their work. I was very happy with the whole event."*

*"The scheduling was excellent."*



## Distinguished Research Award

Each year, MacEwan University recognizes one faculty member who conducts exceptional scholarly work that has significantly contributed to society and the scholarly community – locally, nationally or internationally. The 2025 Distinguished Research Award recipient is Dr. Aidan Forth.

Dr. Forth's teaching and research explore European empires as venues of violence and warfare, humanitarian intervention and the rich cross-fertilization of cultures, identities and ideas that have shaped the modern world.

He regularly incorporates his research into the classroom and mentors students interested in global history and archival work. His first book, *Barbed-Wire Imperialism: Britain's Empire of Camps, 1876–1903*, examines a global network of British refugee and concentration camps in the 19th century. His more recent publication, *Camps: A Global History*, draws on a decade of teaching and explores the camp as a global institution.

Dr. Forth's current project, *Empire in Motion: Transport, Technology, and Global Connectivity, 1815–1914*, investigates how transportation shaped imperial expansion. During his upcoming sabbatical, he will continue this work as a fellow at Goodenough College in London. His research has received national and international recognition, including a Social Sciences and Humanities Research Council Institutional Grant (SSHRC-SIG) grant, and fellowships from the Newberry Library in Chicago and the Huntington Library in Los Angeles.

"We're proud to recognize Dr. Forth with this research award for his deep contributions to global historical scholarship," says Dr. Craig Monk, provost and vice-president, Academic.

"He not only brings his research into the classroom, but also inspires students to think broadly and critically about the world around them. His commitment to sharing his work through teaching, publishing and public engagement is exactly the kind of scholarly leadership we value at MacEwan."



**Dr. Aidan Forth**  
Associate Professor, History



## Chancellor's Research Chairs

MacEwan University's research chair program, established in 2018, appoints select faculty members each year for their exceptional commitment to their own research, and for assisting fellow faculty with groundbreaking research and creative work. MacEwan's 2025 Chancellor's Research Chairs are Dr. Sarah Copland and Dr. Brian Franczak.

"It is my privilege and pleasure to recognize Dr. Copland and Dr. Franczak," said Dr. Anthony Fields, MacEwan's outgoing chancellor. "Their widely varied fields of expertise demonstrate the depth and breadth of the research activity at MacEwan, and I congratulate them on behalf of the entire university community."

### Dr. Sarah Copland

Dr. Copland is actively engaged in the scholarship of teaching and learning (SoTL), with a focus on fostering student engagement and building meaningful connections between the classroom and the broader community. Since joining MacEwan in 2012, she has developed a range of initiatives to support student involvement in academic and co-curricular experiences. Her research interests include modernism, narrative theory, narrative ethics, the novel and the short story. She is particularly interested in how storytelling functions within ethical frameworks and contemporary literary forms. In 2023, Dr. Copland was recognized with a Distinguished Teaching Award for her innovative approaches to teaching and her ongoing commitment to inclusive, student-centered learning environments.

### Dr. Brian Franczak

Dr. Franczak leads an active research program in statistical methodology, working closely with undergraduate students on projects in cluster analysis. His research focuses on the development of mixtures of multivariate distributions for classifying data with asymmetric features, with applications across a range of disciplines. Since joining MacEwan in 2016, he has maintained several national research collaborations and holds a Discovery Grant from the Natural Sciences and Engineering Research Council of Canada (NSERC). Dr. Franczak is also committed to advancing student learning in mathematics and statistics, integrating research experiences into the undergraduate curriculum and supporting hands-on learning through collaborative projects.



**Dr. Sarah Copland**  
Associate Professor, English



**Dr. Brian Franczak**  
Associate Professor, Mathematics  
and Statistics

## Canada Research Chairs (CRC)

Established by the Government of Canada, the Canada Research Chair (CRC) program is designed to attract and retain world-class researchers and reinforce academic research and training excellence in the country's post-secondary institutions. Since 2019, MacEwan University has welcomed four CRC chairs: Dr. Farzan Baradaran Rahimi, Dr. Leanne Hedberg, Dr. Marielle Papin and former CRC Dr. Kristopher Wells (associate professor, Child and Youth Care).

### Dr. Farzan Baradaran Rahimi

Dr. Farzan Baradaran Rahimi was awarded a Tier II CRC in Immersive Learning for his interdisciplinary research into the use of immersive technologies to enhance education in both formal and informal settings. His work explores how virtual reality, augmented reality and artificial intelligence can be used to create engaging, interactive and accessible learning experiences.

As part of his CRC appointment, Dr. Rahimi established the Immersive Learning Institute at MacEwan. The institute serves as a hub for innovation and collaboration, where students and researchers explore how immersive technologies can be used to support deeper learning, strengthen engagement and reimagine educational spaces.

Dr. Rahimi's research examines how different immersive strategies – such as game-based design, narrative techniques and place-based learning – can improve knowledge retention and user engagement. He is also exploring the role of hybrid physical and virtual spaces in shaping how people interact with content, environments and each other.

One area of focus is the rapid digitization of cultural heritage spaces, using reality capture and extended reality technologies to create interactive, remote-access learning environments. These digital “twins” allow users to explore architectural and historical spaces virtually, offering new ways to learn about cultural context, memory and design.

Through the support of the CRC, Dr. Rahimi is expanding his research capacity, hiring student research assistants and working toward the development of a future academic program in immersive learning. His work is contributing to a growing community of educators and researchers exploring how immersive technologies can transform the way we learn, connect and engage with the world around us.

### Dr. Leanne Hedberg

Dr. Leanne Hedberg was awarded a Tier 2 CRC in Inclusive Entrepreneurship (Disadvantaged and Marginalized Communities) for her research into expanding traditional definitions of entrepreneurship and building more equitable entrepreneurial ecosystems. Her research program uses community-engaged scholarship to bring together academia, non-profit organizations and government in ways that support policy changes focused on social innovation and social entrepreneurship.

With support from the CRC program, Dr. Hedberg is convening cross-sector roundtables aimed at addressing barriers faced by “missing entrepreneurs,” a term used by the Organisation for Economic Co-operation and Development (OECD) to describe underrepresented groups, such as women, racialized individuals and Indigenous peoples, who currently make up a small percentage of Canadian business owners. Her work challenges the dominant Silicon Valley model of high-growth,



**Dr. Farzan Baradaran Rahimi**  
Director, Immersive Learning Institute



**Dr. Leanne Hedberg**  
Director, Social Innovation Institute

tech-driven entrepreneurship. Instead, she highlights the importance of small- and medium-sized enterprises, which make up over 99 per cent of Canadian businesses and employ the majority of the country's labour force.

Through her collaborative approach, Dr. Hedberg is developing a framework for inclusive entrepreneurial ecosystems that can be adapted and implemented by municipalities across the globe. While the scope of her work is international, it is also deeply rooted in Edmonton, where she continues to build trust and facilitate partnerships that address complex social and economic challenges through entrepreneurship.

For Dr. Hedberg, entrepreneurship is more than business. It is a pathway to equity, inclusion and systemic change.

### **Dr. Marielle Papin**

Dr. Marielle Papin was awarded a Tier 2 CRC in Urban Wellness (Urban Policy and Governance) for her research into the role of cities and other transnational actors in governance collaboration.

As part of her CRC award, Dr. Papin has also received John R. Evans Leaders Funding from the Canadian Foundation for Innovation (CFI), MacEwan's first CFI award. Dr. Papin is the director of the Research Institute for Urban Wellness.

With support from CRC and CFI, Dr. Papin will be able to expand her research, hire student research assistants and create a database of her findings to facilitate global connections and contribute to an international community of innovators and problem solvers in the field. Though the scope of the database will feature cities across North America, Latin America and the Caribbean, Dr. Papin is also researching right here in Edmonton. She's looking at the issue of urban wellness as encompassing health, environment, housing and systemic racism, as well as the urban policy and governance intervention that is being put in place to tackle those issues and ensure residents are able to live well in the city.



**Dr. Marielle Papin**  
Director, Research Institute  
for Urban Wellness



# Community engagement

## C2UExpo 2025

From May 12 to 15, 2025, MacEwan University hosted the Community-College-University Exposition (C2UExpo), Canada's largest community-based research conference. Held for the first time in Alberta, the event welcomed 680 participants from 11 countries.

C2UExpo 2025 was a milestone event that advanced MacEwan University's Tactical Plan for Scholarship. Through strengthened partnerships, student engagement, interdisciplinary collaboration and enhanced institutional capacity, the conference positioned the university as a leader in community-engaged scholarship.

MacEwan faculty members from across disciplines played a key role in organizing and presenting at C2UExpo. Their collaboration strengthened interdisciplinary ties and enriched the conference experience. This was further reflected in eight site visits across Edmonton, which showcased faculty-led tours and performances. The conference was developed in partnership with over 40 external organizations, highlighting the depth of MacEwan's community engagement.

Supported by faculty mentors, MacEwan students showcased their research through Photovoice, a qualitative research method that uses photography and narrative to present community-based projects. The initiative highlighted student perspectives, built research and communication skills and fostered engagement with community partners. This achievement reflects the collective effort of the MacEwan community and its partners. The success of C2UExpo 2025 underscores the university's commitment to meaningful collaboration and stands as a shared accomplishment for all who contributed.

## Higher impact

MacEwan's visibility in national research networks grew through increased faculty engagement with Community-Based Research Canada (CBRCanada) and Research Impact Canada. Public awareness of MacEwan's commitment to community engagement was amplified through media coverage on Global News Morning and CBC Radio. New partnerships continue to emerge, including memoranda of understanding (MOUs) and research and work-integrated learning (WIL) collaborations.





## Knowledge mobilization

Scholarship at MacEwan University goes beyond academic excellence to create real-world impact. Through engaged research and creative activity, faculty translate knowledge into accessible formats that inform policy, improve programming and drive social innovation. By building meaningful relationships with communities, organizations and governments, MacEwan researchers ensure their work reaches broader audiences and fosters lasting positive change. Initiatives such as our research podcast, workshops and contributions to publications like The Conversation Canada support these efforts in knowledge mobilization.

### Research Recast(ed)

MacEwan's research podcast focused on breaking down research and making it accessible. Featuring MacEwan students as our hosts, episodes explore the scholarly and creative activities happening at the university, focusing on how faculty influence and/or incorporate students, teaching and the larger community into their projects. Each episode, student hosts are joined by a faculty members who dive into their scholarly projects – covering theatre, community-based research, advocacy, mental health, neuroscience and everything in between – and bring them to life. In 2025, Research Recast(ed) entered its fourth season, featuring faculty and students from across the institution in 22 episodes. For season four, the podcast introduced a new video format, which helped garner the most listens of the podcast to date.

### Research workshops and events

Hosting research events and workshops provides faculty and students with opportunities to share their work, develop new skills, foster interdisciplinary collaboration and engage meaningfully with the broader community. During 2025, ORS held over 15 events on grant writing, student research, navigating partnered research and the Office of Research Connection (ORX) Series, which fosters collaboration with community partners in MacEwan's areas of scholarly excellence: Health and Wellness in Communities, Persuasive and Immersive Technologies, and Energy and the Environment.

These events bring together researchers, students and community members, promoting engagement and collaboration across the institution.

### The Conversation Canada

MacEwan faculty contributed 17 unique articles to The Conversation Canada, an online research-based news and analysis publication that shares academic expertise with the public through accessible, evidence-based journalism. From sharing insight into the 2024 Olympics mascot and the importance of multiculturalism, to the political environment of North America, these pieces help share research beyond the university and support informed public discourse. They also reached large audiences – a combined total readership of over 250,000 views.



# 2024/25 Fiscal Year Funding Information

April 1, 2024 -  
March 31, 2025

## External Funding

	Total
Alberta Innovates	\$53,950
Allen Discovery Centers	\$44,870
Canada Foundation for Innovation (CFI) - JELF Partnerships	\$74,976
Canada Research Chair (CRC)	\$1,250,000
Canadian Gay & Lesbian Chamber of Commerce	\$40,198
CEWIL Canada	\$55,440
City of Edmonton	\$20,295
Government of Alberta - Public Safety	\$42,946
Mitacs Business Strategy Internship	\$190,000
National Geographic Society	\$207,178
Natural Sciences and Engineering Research Council (NSERC) Funding	\$766,500
NSERC Discovery	\$712,500
NSERC USRA	\$54,000
Social Sciences and Humanities Research Council (SSHRC) Funding	\$575,967
SSHRC Insight	\$246,074
SSHRC Insight Development	\$28,043
SSHRC Partnership	\$276,321
SSHRC Connection	\$24,695
SSHRC General Research Fund	\$834
Sturgeon County	\$2,000
The Retired Teachers of Ontario (RTOERO)	\$4,117
University of Alberta	\$3,843

Total Tri-Agency	\$1,342,467
Total non Tri-Agency	\$1,989,813
<b>Total External</b>	<b>\$3,332,280</b>

# 2024/25 Fiscal Year Funding Information

April 1, 2024 -  
March 31, 2025

## Internal Funding

	Awarded	Total
Community Engaged Scholarship (CES) Grant	3	\$13,001
Dissemination Grant	36	\$69,024
MacEwan Research Chair	3	\$15,000
MacEwan RA Support Fund	38	\$73,228
Project Grant	11	\$74,716
Scholarship Support Grant (SIG)	3	\$14,750
SSHRC SIG	6	\$41,743
Thematic Area Grant	8	\$75,327
USRI Dissemination Grant	29	\$40,578
USRI Project Grant	26	\$73,784
Total 2024/25 Fiscal Year Internal Funding		\$491,151

### **Office of Research Services**

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[MacEwan.ca/Research](https://macewan.ca/Research)

**For more information about scholarship happening at MacEwan University,  
please contact the Office of Research Services at [research@MacEwan.ca](mailto:research@MacEwan.ca)**

Please visit our website at [MacEwan.ca/Research](https://macewan.ca/Research) and connect with us on  
X, LinkedIn and Instagram.

Tune into our Research Recast(ed) Podcast, a MacEwan University podcast  
focused on breaking down research and reshaping the conversation.

Listen at: [research-recasted.pinecast.co](https://research-recasted.pinecast.co)

Watch at: [youtube.com/@macewanuniversity](https://youtube.com/@macewanuniversity)

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