

IMPACT REPORT





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TERRITORIAL ACKNOWLEDGEMENT

The University of Waterloo, of which we are part, is situated on the Haldimand Tract – which includes ten kilometers on either side of the Grand River. We acknowledge that this land is the traditional territory of the Attawandaron, Anishinaabeg, and Haudenosaunee peoples. It's important for us at the Games Institute to recognize that the land on which we work and from which we benefit has been taken without consent.

We have a responsibility, as such beneficiaries, to acknowledge and understand both the history and the current experiences of First Nations, Inuit, and Métis peoples, and for this understanding to inform the work that we do, so that we can stop perpetuating the damages of colonization, and to begin to repair them. Land acknowledgements like this are just one very small, first step in doing this work.

The Games Institute recognizes, and draws upon, the enduring presence and deep traditional knowledge, laws, and philosophies of the Indigenous Peoples with whom we share the land that we live on and work today. We are working to continually make space for Indigenous scholars, designers, commentators, and creators and to uplift all voices that are marginalized in both the academic and gaming communities.

As curators of an interdisciplinary institution on campus, that brings together scholars from all departments, faculties, and fields at the University of Waterloo, the Games Institute regularly reviews its policies and community building norms from the lens of anti-racism, decolonization, equity, diversity, and inclusion and considers:

- How we can build long-term relationships with Indigenous Peoples rooted in respect and reciprocity, especially as we, and our researchers, seek Indigenous research, community, and industry partners?
- How do we include Indigenous Peoples in the knowledge building and research creation processes in ways that honour their history and knowledge in mutually beneficial relationships?
- How do we continue to maintain long-term relationships with the Indigenous communities we work and engage with during the research process? How do we ensure that this respect is maintained after projects and papers are completed?
- How can we contribute to the never-ending process of decolonization and reconciliation when it comes to research conducted at the Games Institute, how the facility is maintained, and how equipment is used?
- How do we train our HQP students to better understand their active roles as settlers and beneficiaries of the land and train them to become stewards of the lands who not only seek, but actively curate, respect and reciprocate the knowledge and relationships created with Indigenous Peoples?
- And finally, how can we honour the enduring presence and deep traditional knowledge, languages, laws and philosophies of the Indigenous Peoples with whom we share this land today.

This is not an encompassing plan, but rather, the bare minimum that the Games Institute has the responsibility of adhering to as we continue to support research activities of our membership and the larger UW and Waterloo communities.

LETTER FROM THE EXECUTIVE DIRECTOR

As interactive technologies and immersive experiences expand into every facet of our lives, the University of Waterloo Games Institute (GI) provides a critical lens for understanding their impact, promise, and potential. Connecting researchers, students, and partners across the diverse fields of interactive, immersive technologies and experiences, the GI's global, interdisciplinary ecosystem mobilizes world-leading research, education, and outreach. Together, we're promoting a better world as we imagine new possibilities for an immersive future.



We never had many requirements for membership; there were no fees or tests to get in. Instead of going out of our way to recruit members, we largely let them find us. Although, of course, when we met people

on campus who were weird and wonderful in that GI way, we invited them as well.

My theory is that if you get a few weird and wonderful people together, they will attract other like-minded people who want to do weird and wonderful things. As this expands it causes a sort of snowball effect and eventually, all those people form this amorphous thing that we call a "community."

We have learned over the years that interdisciplinarity doesn't come from putting someone from humanities and social sciences and someone from STEM in a box and asking them to dance. But I can tell you for certain, from our experiences, that interdisciplinary collaboration does often seem to arise from a shared lunch, a conversation between cubicles, a running joke, or a friendly game of Mario Kart. For these "meetings of the mind" to happen, first and foremost, people need to feel comfortable and safe.

- They need to feel like their thoughts and ideas have value and will be valued by their peers.
- They need to know that they will be treated as equals no matter their academic discipline, race, gender, or sexuality. That despite how they might have felt elsewhere, they belong.
- They need to know that they are allowed, and encouraged, to think outside the box.
- They need to know that not only is it okay to fail, but also that it's a crucial part of the pathway to success.

When that is all in place, the community, the culture, and the belonging, that's when you start to see people of different backgrounds come together and get to work. This year we saw the results of Seed funding with our members working on cross-sectoral collaborations with the local Waterloo community, and even Indigenous communities from across Canada with the majority of funds going into funding graduate students. We spotlighted the voices of individuals from equity-deserving groups to share their knowledge, experiences, and perspectives towards advancing ADE principles in games research. We even ran an International Conference on Games and Narrative, engaging 34 institutions from 14 countries around the world.

linvite you to read about these stories of impact, and more, in this year's report.

—Dr. Neil Randall, Executive Director of the Games Institute

EXECUTIVE SUMMARY

At the GI, 2023 will go down in history as the year of events. The GI hosted over 40 backto-back panels, guest lectures, workshops, holiday socials, networking sessions (and more!), including 15 events in the Anti-Racism, Decolonization, Equity, Diversity and Inclusion for Games Communities Workshop and Speaker Series and five straight days of the International Conference on Games and Narrative (ICGaN).

In addition to all these events held at the GI. the Stratford School of Interaction Design and Business hosted the 2023 CHI PLAY conference. 20 GI members attended the conference, 9 of whom were on the planning committee, including 2 GI faculty members at the helm as co-chairs.

2023 was the year that people came back together. After years of lockdowns and cancellations, we fully dove back into our work and communities and even jumpstarted member research through our first seed grant competition, awarding \$110,0000 to 8 project teams led by faculty, postdocs, and graduate student principal investigators! Our members also secured seed funding from UW's Provost to launch an interdisciplinary network for esports on campus and build a dedicated esports facility in the Physical Activities Complex.

But for the GI, plunging back in—safely and accessibly—entailed mastering the art of hosting hybrid events. While effective hybridity requires substantially more labour from those planning the events, it is well worth the effort when it is done correctly. Pulling it off requires thoughtful planning and testing that ensures that you are using the correct hardware (in our case, seven large interactive CISCO displays and two 360-degree OWL cameras), and the correct software for the level of interaction you want to achieve.

For ICGaN, virtual rooms were created using Gather.Town, which was modelled after the real GI, and every conference participant could make an avatar to explore the virtual space and walk up to other avatars to network organically. It was essential to the organizing committee that in-person and virtual participants could see, hear, and, most importantly, interact with one another. They also wanted to ensure that those interested in attending had options no matter their location, ability, or financial situation.

2023 was a year of tremendous international growth for the GI. We added 66 members and hosted 15 visiting international students from 11 countries. Our partnership with the University of Warwick was formalized, and two of our members even made the trip across the pond to see what UW could learn from how Warwick is building facilities and communities around games and esports.

This report contains stories of impact from 2023 and our members' accomplishments in the appendix. We hope you enjoy and are inspired by our tales of interdisciplinary impact.

THE GAMES INSTITUTE AND UW'S **GLOBAL FUTURES**

The work being done by the GI community, has transformative impact both locally and globally. The GI connects and supports researchers from all six Faculties in collaboration with an international network of academic, non-profit, community, and industry partners.

The unprecedented growth of and reliance on the interactive technologies raises complex research questions that span all disciplines. As an interdisciplinary research community, the GI welcomes all researchers engaged in this work, and that community has spanned almost 15 years, with dozens of academic, non-profit, community, industry partners, and hundreds of students. Today, there are GI "alumni" worldwide in various industries and academic institutions including but not limited to: health and wellness, community first responders, Indigenous relations, game research and development, technological advancement, policy making and ethical considerations in tech research, and user experience & interaction.

Nurturing the next generation of talent

As the only hub for graduate student training of its kind in Canada, the GI supports and promotes the development of future-ready researchers and practitioners looking at technology in the human context. The GI's interdisciplinary training and mentorship include methodologies, values, and applications drawn from disciplines across campus embedded in unique, hands-on learning experiences. Students at the GI build connections across disciplines and between academia and industry as they engage in collaborative, real-world research projects with non-profit, community, and industry partners. Whether they are scholars, innovators, artists, designers or creators, students graduate with the skills, expertise, and knowledge they need to advance the research and development of interactive experiences in the hightech sector and beyond.

Leading social change in research and industry

Equity, diversity, inclusion and anti-racism (EDI-R) are at the core of the GI research and community

building. We strive to make our community as accessible, as possible to people of all genders, races, religions, orientations, and abilities. We're continually working to improve the understanding of EDI issues across the GI and the broader community. In doing so, we center traditionally marginalized voices and perspectives in the field of immersive, interactive technologies.

From community partnerships with Indigenous first responders to research that puts agency back in the hands of everyday people by helping them understand how their privacy may be violated, interdisciplinary research ecosystems like the GI add indispensable value to the University of Waterloo. More than anything, the GI is developing a diverse community of talented technologists who are sure to make an incredible social and technological impact that will shape the future of our world. We need complex teams to solve complex problems, and therefore, researchers need places and communities like the GI where interdisciplinarity is a valued and supported everyday occurrence.



Health Futures: The GI has researchers from all disciplines researching how technology can be leveraged to improve our health and wellbeing. This includes creating technological tools for training healthcare practitioners and creating exergames for people of all different ages and abilities.



Technological Futures: encompasses all the work we do at the GI, where our highest priority is ensuring that technologies are made with human needs in mind. This includes work on safe and sustainable Al, social media, virtual reality, and more that will help humanity thrive in a complex digital future.



Societal Futures: It is important that all research supports the thriving of every member of our society. This includes not only human-centred design and development but also ensuring that research considers its impact on society and is open, accessible, and communicated to the public.

IMPACT HIGHLIGHTS 2023

January

- January 5-6 | Feminist Think Tank and the Coalition of Muslim Women Host Counter Speech Workshop
- January 16 | UW and GI open first round of eSports scholarships valued at \$2,500 - \$5,000 to support high-achieving graduate and undergraduate students who demonstrate financial need and are pursuing careers in the gaming and eSports industries

- February 9 | Structures of Care and Accessibility Workshop with D. Squinkifier and Dr. Jess Marcotted from game studio Soft Chaos begin the SSHRC Connections grant entitled "ADE for Game Communities: Enculturing Anti-Racism, Decolonization, Equity, Diversity, and Inclusion (ADE) in Games Research and Creation"
- FebFebruary 13-17 | Conclusion of the Ukraine War Photo Exhibit with VR demo (started in 2022)

March

• March 7 | Delegation from Saxion University of Applied Science, Netherlands visits the GI

April

- April 6 | Terrorarium by Stitch Media nominated for best VR/AR game at the Canadian Game Awards
- April 13 | Dr. Brianna Wiens and Dr. Shana MacDonald launch their edited collection *Stories* of Feminist Protest and Resistance: Digital Performative Assemblies

• May 15-19 | The GI hosts the second International Conference on Games and Narrative (ICGaN) 2023: Isolation and Return–The Making of Narrative Worlds

June

- June 9 | PhD Candidate Samira Mehrabi receives the Canadian Institute of Health Research Award
- June 29 | Research Speed-dating co-hosted between the GI and the Centre for Biotechnology and Bioengineering (CBB)

July

• July 14 | Launch of the ADE Speaker Series web page for knowledge translation and mobilization.

August

• August 30 | Dr. Lai-Tze Fan announced as Canadian Research Chair in Technology and Social Change

September

- September 11 | Second round of eSports scholarships open to students
- September 20 | GI Members at the Urgency of Social Justice Event

October

- October 10 13 | The Annual Symposium on Computer-Human Interaction in Play (CHI PLAY) is held at the UW Stratford School of Interaction Design and Business
- October 11 | University of Warwick, England, visit GI to discuss eSports partnerships

November November

- November 15 | GI showcase at Royal Society of Canada Celebration of Excellence and Engagement
- November 22 | GI receives bronze certification for the Green Office Initiative at the UW Eco-Summit

December

- **December 7** | Final event of the ADE Speaker Series takes place with a workshop from Dallas Squire on Indigenous games
- The GI concludes the year with a final count of hosting 40 events!

VISION, MISSION, AND GOALS

Student Experience

We strive to provide students the best experience on campus in terms of social activities, networking opportunities, and HQP training to ensure their success both in academia and industry. In a time when it is difficult to get people to come to campus, the GI is always a lively place full of students participating in work and play.

Student: "The Games Institute contributed to my experiences as a student by providing a space to interact with other students researching similar topics(...) Working there is great to discuss concepts and theories with other students(...) Being involved with the GI has benefitted my employment opportunities within the University of Waterloo and will provide me with the skills and training to succeed in future careers. As a GI member, (...) I've developed course content, created gaming modules, and encouraged other students to pursue their interests as games researchers. As the producer and co-host of the Games Institute Podcast, I've helped other researchers share their work, helped further the GI community's goals, and created an outlet for listeners outside of Waterloo to familiarize themselves with the GI."

 Toben Racicot, PhD Candidate, Department of English Language and Literature

Faculty: "As a professor jointly appointed in two departments (...), it has been essential for my career to (...) build a highly interdisciplinary research group right in the heart of the Games Institute (...) My students love working in the GI and I love working there with all of my excellent collaborators from other disciplines in the University. (...) this seems to be the only place at the University that lives and breathes interdisciplinary collaboration."

Dr. Lennart Nacke, Associate Director,
 Stratford School of Interaction Design and
 Business

Alumni: "Being a part of the GI community and a part of the HCI Games Group meant I was learning how to be a good mentor to other students. My time here (...) helped me focus on the managerial side of research (...) And I credit this experience with giving me the management skills and tools that I didn't have the chance to learn during my PhD. That's one of the strengths of the GI space and community; that there's access to tons of people who have done all these things before (...) and could help students avoid the same pitfalls."

– Dr. Stuart Hallifax, Postdoctoral Fellow, Stratford School of Interaction Design and Business

Knowledge mobilization

We ensure that the knowledge produced by our members is made accessible to the public by promoting their work through digital research communications, social media, middle-state publications, the GI Podcast, and our large-format knowledge translation posters, which can be viewed in the GI hallways in East Campus 1.

Student: "The GI was instrumental in funding (...) an inter-university and interdisciplinary research team I was a part of as a graduate student. For this project, I designed a card game built to convey research on transboundary water governance in the St. Lawrence River Basin to non-academic audiences: policy makers and civil

service, in particular (...) Without the GI as a hub of games research at UW, this would not have been possible."

 Alex Fleck, PhD Candidate, Department of English Language and Literature **Faculty:** "The Games Institute has been critical to my research agenda. As a community space, it has enabled me to collaborate with researchers in other Arts departments and with colleagues in public health, engineering, and computer science. It has also helped me connect with graduate and undergraduate students who have worked as RAs on a number of different projects. Materially, the GI provided in-kind funding in the form of staff support and lab and office space usage to support my unsuccessful (4A Status) Insight Development Grant, as well as a Partnership Development Grant on which I was a co-applicant (192K), a Connection Grant (48K), and a Knowledge Synthesis Grant (25K). The GI staff have contributed to onboarding and training RAs for several projects and, by supplying office space, provided my RAs with a professional environment and community (the alternative would have been the RAs working from home, with the potential for isolation and distraction that comes with it). In all, the GI has 'housed' 3 graduate RAs and 4 undergraduate RAs supporting my research. The GI support was also vital to the logistics and execution of the 15 lectures and workshops following from my Connection Grant and the accompanying

knowledge mobilization efforts, with staff handling all of the back-end labour of creating and hosting a website to extend the project's reach to new audiences. "

- Dr. Gerald Voorhees, Associate Professor, Department of Communication Arts

Alumni: "Without the GI, I wouldn't have a PhD, this is no exaggeration; my dissertation ended up being over 300 pages, with three case studies based on multimedia projects I worked on at the GI. This included ethics-approved ethnographic work and interviews with many other GI members and collaborators on these projects. After I finished my PhD, I went on to do two postdoctoral fellowships (one at York University and one at the University of British Columbia) and teach in games programs at multiple institutions. While I valued my experiences outside of Waterloo, I found nothing that compared to the community, culture and productivity of the GI anywhere else. It made me realize that there is something magical about the GI"

- Dr. Emma Vossen, PhD Alumni, Department of English Language and Literature

Diversity and Equity

We embed principles of diversity and equity within the values of all the research work that takes place in our facility by incorporating Indigenous Methodologies into how our facility is styled and valuing the diverse backgrounds of our members to ensure their voices are represented in our work. There is nothing more important to us than ensuring the GI is a place where people of all identities enjoy being and feel safe and supported.

Student: "The community at the GI is incredibly welcoming and full of people with fascinating research topics. The GI staff do an amazing job at organizing social events for GI members, which helps people intermingle and get to know each other. The GI is one of the most welcoming and comfortable spaces I have been in and feels accepting of all identities, cultures, and expressions of self. The GI is honestly the best academic and professional work environment I've ever been in, that makes me happy to be my authentic self and it's made my time at Waterloo substantially better."

- Arden Song, Master's student, Department of Management Science and Engineering

Faculty: "I think of the Games Institute as a 'star light' community. It is a luminous group of people from diverse fields who question, create, tinker, and game - serious fun! - and investigate the sciences & strategies of human play. Twinkling conversations are often afoot here; I relish the laughter and surprising encounters, which are the name of the game. As a historian and new faculty member, I am constantly learning at the GI workshops and dialogues just like any fellow engineer or artist or critic or designer or writer or student. How grand! The GI is lit by a shared spirit of adventure."

– Dr. Daria Ho, Lecturer, Department of History

Alumni: "What I loved about GI was having such a big network of people you can always ask for advice or help with your research. (...) It's a nice community. I connected with other people from Mexico and together we built an altar for Día de los Muertos, and it was really nice to be embraced

for our culture. Now that it keeps happening every year and that people have continued the tradition at the GI, each year it just gets better."

Ana Lucia de Leon Derby, Master's Graduate,
 Management Science and Engineering

Interdisciplinary Research

We commit ourselves to the ongoing challenges of interdisciplinary research. Almost every conversation at the GI is interdisciplinary in some way; those conversations build bridges between disciplines. At the GI, we are curating both a common space and common language to understand each other and learn how all of our work intersects and could benefit from collaboration.

Student: "When working on the GI Seed funded project "Dementia Friendly Edu-action for Indigenous First Responders", much of my experience was learning how to work with different communities. From Indigenous first responders to non-Indigenous first responders, academics, and Indigenous Elders, there was a lot of collaboration in a highly interdisciplinary environment. Many times, I would have to ask myself things like how can we acknowledge the time of our participants? (...) Many of the people I worked with were volunteers and most of them were from the Indigenous communities. (...) I worked closely with GI administrative staff (...) to try and come up with a solution."

– Dr. Hector Perez, Postdoctoral Fellow, School of Public Health Sciences

Faculty: "The Games Institute was instrumental in assisting to develop the scope of my project Digital Oral Histories for Reconciliation: The Nova Scotia Home for Colored Children History Education Initiative (DOHR) - a community-driven project with former residents, scholars, and stakeholders to co-design a grade 11 Canadian History curriculum that includes an oral history-based virtual reality experience. This project makes

significant scholarly contributions for: a restorative approach to research; historical thinking for reconciliation; virtual reality education, traumainformed oral history, and (...) conduct[ing] empirical research about [the curriculum's] educational value. (...) The GI has provided critical pathways to partnerships to support this work, such as Dr. Oliver Schneider, whose work (...) [allowed us to explore] how haptics affects storytelling in museums."

– Dr. Kristina Llewellyn, Professor, Social Development Studies

Alumni: "The interdisciplinary environment at GI positively influenced my research by allowing me to collaborate with experts from different backgrounds. Coming from a psychology background, it was beneficial to engage with expertise in other fields. Compared to universities in my country, the GI has more professionals working in the human-computer interaction (HC) field, providing a great opportunity to discover new tools and broaden my research approach.

- Federica Gini, Visiting PhD Candidate, University of Trento, Italy

STORIES OF IMPACT



ADE Speaker Series Project Report

The GI Anti-racism, Decolonization, Equity, Diversity, and Inclusion (ADE) Committee was established in late 2020 in response to a challenge from the GI student membership issued to GI faculty members and administration to consider how academics can better support, make visible, and incorporate the knowledge and voices of equity-deserving groups into their research. At the GI specifically, this meant research with immersive and interactive technologies—areas that are historically, and continue to be, hostile to these groups. Although GI members have always considered how equity, diversity, and inclusion can be imbued into research, the role of the Committee was to establish—in a more formal manner—policies, practices, and education for GI members, associates, partners, and colleagues.

The inaugural Chair of the ADE Committee, Dr. Gerald Voorhees (Communication Arts), alongside other committee members, used surveys, conversations, and checkin meetings to diagnose what would best serve the GI community, and what areas of research, training, and mentorship would benefit from restructuring interventions. Upon consultation, the ADE Committee members strategized that education and training could be areas of impact with immediate engagement and positive effect for the community. As such, Dr. Voorhees and fellow Committee member Dr. Daniel Harley (Stratford School of Interaction Design and Business) put together the ADE for Games Communities Workshop and Speaker Series—a knowledge mobilization

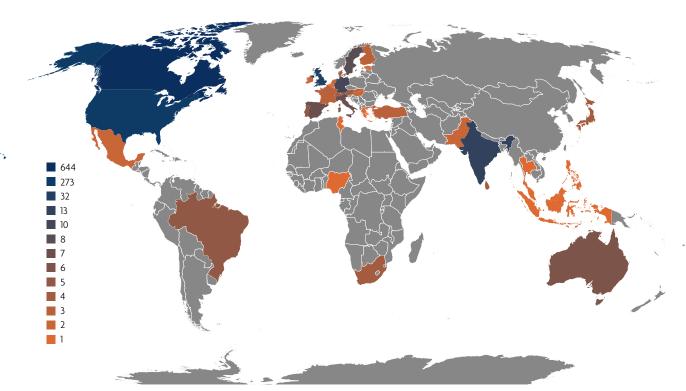




Drs. Gerald Voorhees and Daniel Harley

project funded by the Social Sciences and Humanities Research Council (SSHRC), entitled "ADE for Game Communities: Enculturing Anti-Racism, Decolonization, Equity, Diversity, and Inclusion (ADE) in Games Research and Creation".

The main project objective was to host a series of lecture, panels, and workshops at the GI, with satellite co-hosts: Concordia University, Montréal, QC; University of Alberta, Edmonton, AB; and University of Wisconsin-Milwaukee, Milwaukee, WI. The series featured 15 events over the course of 2023 spotlighting the voices of individuals from equity-deserving groups (including, but not limited to, Black and Indigenous individuals, people of colour, women-identified individuals, LGBTA2S+ individuals, persons with disabilities, and people from other under-represented communities) who shared their knowledge, experiences, and perspectives towards advancing ADE principles in games research. The ADE Speaker Series was successfully held in a hybrid format and was widely attended by both the GI community and



A graphic of the world map showcasing the distribution of all 644 attendees, from 38 countries, and 5 continents.

audience members from across the globe. The series was attended by at least 644 attendees (students, faculty, and industry professionals) from 38 countries (5 continents) and featured 29 scholars from equity-deserving groups.

Presenters shared their unique sets of perspectives and knowledge on the overarching questions:

- 1. How do we make anti-racism, decolonization, and equity vital elements of the research and development of games and playable media?
- 2. What can we do to ensure that the methods and approaches we practice in our scholarship are respectful and responsive to the needs of the marginalized communities?
- 3. What can we do to ensure that the methods and approaches we practice in our scholarship and creative work are respectful and responsive to the needs of the marginalized communities?

After the series concluded, the goal was to curate and mobilize a body of knowledge for both academic and non-academic audiences with the fundamental understanding, critical questions, and practical skills to address current challenges across the games industry. The materials collected immediately by the project are publicly available on the GI website, and Drs. Voorhees and Harley are working on an academic volume inspired by the discussions during the events.

As part of GI's core mission of fostering an inclusive ecosystem of research, education, knowledge dissemination, outreach and collaboration on interactive immersive technologies and experiences, GI staff worked closely with Drs. Voorhees and Harley to not only manage the organization and logistics for all events but, more importantly, identify how novel hybrid technologies could best support the project. A special consideration was given to how to engage both in-person and virtual audiences,

so that these different audiences felt equally immersed and involved with the material and knowledge presented. With the help of Executive Director, Dr. Neil Randall's CFI funded "Storyboard Lab"—a modular lab consisting of multiple CISCO boards (interactive all-in-one collaboration screens) providing a connection between in-person and remote participants—the events were facilitated in a creative and an inclusive way to support the speakers' research, industry knowledge, and community practices.

As part of the grant, the GI committed in-kind contributions in the support of promotional materials, aiding in the physical and virtual set-ups, and providing expertise on hosting the materials on the GI website.

For example, to honour the Indigenous tradition of "talking circles" during the "A Discussion on Indigenous Research and Epistemology" panel, GI staff organized the hybrid event spaces in a circular shape—including the CISCO boards—so that the virtual audience was both incorporated, and able to view all presenters and attendees

equally. This specific space configuration required careful consideration, consultation with Indigenous individuals, and complex technical rehearsals to ensure audio and visual quality was not compromised. This event featured some of the highest number of attendees, and the most globally diverse audience (12 countries from 3 continents).

By highlighting historically marginalized voices, the GI assisted with addressing some of the current issues in gaming communities. The knowledge produced during these sessions was transformed and made accessible to the public via the GI website. These web pages offer recordings of the full sessions, shortened video highlights, and a written summation of the lectures with key terms and takeaways. Dr. Voorhees was also featured on the GI Podcast in the episode "Equity in Games Research and Design with Dr. Gerald Voorhees" where he shared his thoughts on the project overall, the knowledge it produced, and the next steps for future knowledge mobilization.



Event attendees participating in the opening drum circle at the event "A Discussion on Indigenous Research and Epistemology"



Curating a Community for Novices and Experts: Lessons Learned from the International Conference on Games and

International Conference on **Games and Narrative**

From May 15-19, 2023, the GI hosted the second iteration of the International Conference on Games and Narrative (ICGaN). 120 attendees from 34 universities, 14 countries, and 4 continents joined to explore the conference theme of *Isolation* and Return: The Making of Narrative Worlds. The conference organizers urged games and interactive media scholars to explore how societally, the COVID-19 pandemic forced a reconsideration and reorientation of our personal and communal lives. This resulted in 17 sessions, 47 unique presentations, 5 keynotes from academia and industry, 3 workshops, 4 academic game streams, and a game jam. The conference also had strong community support, with over 40 GI members and volunteers in attendance with 11 holding positions in the conference Organizing Committee.

ICGaN began within a small reading group led by Drs. Ken Hirschkop and GI Executive Director, Neil Randall (both faculty from English Language and Literature) called the "Games and Narrative Reading Group" (GNRG). The GNRG started in early 2020 as a way for humanities graduate students specializing in games studies to discuss narrative theories, emerging literature on multimedia, and apply them to the medium of games. Dr. Hirschkop, an expert on film and literary narrative theories but new to the world of games, encouraged the group to consider how game mechanics interact and impact linear storytelling motifs, and the different ways in which stories can be built in non-linear fashions for open-world games. Dr. Randall, as a games and narrative scholar, added a counterpoint to Dr. Hirschkop's





Drs. Ken Hirschkop and Neil Randall

more traditional perspective. These discussions created the basis for ICGaN. The vision for the conference was to engage all narrative scholars—including those in other disciplines such as social sciences, engineering, and design.

The Challenging Necessity of **Hybridity**

When the possibility of a 2023 conference came into question, Drs. Hirschkop and Randall returned as conference co-Chairs, and put together a committee made up of graduate students and GI staff. The first order of operation for the 2023 Organizing Committee was to investigate the possibility of hosting the conference in a hybrid format. Hybridity increases the scale of any operation and in context of a conference, the labour is doubled—what exists for those in virtual spaces, must also exist for those in physical. Both worlds must also have opportunities to interact with one another.

The inaugural ICGaN was hosted in a fully virtual format on account of the active lockdowns. With universities gradually opening their doors again, hybridity became an important question alongside consideration of which conference format

would be most inclusive. As the conference was mostly geared toward graduate students, the Organizing Committee held discussions with GI student members about which format they preferred.

The results varied. Many students felt that the pandemic inhibited both emerging and established researchers to share their work with wider audiences and took away the valuable opportunity to network. Even when held virtually, a majority found that vital conferencing aspects were untranslatable in virtual formats. For instance, **Lindsay** Meaning, PhD student in English Language and Literature, and member of both the 2021 and the 2023 ICGaN Organizing Committee, noted that "online spaces are really great for the academic part of the conference, but it's hard to know when to say something," and found it difficult to socialize.



Lindsay Meaning

Alternatively, virtual conferences—or at the very least, virtual components increase accessibility in numerous ways from being more welcoming to those with mobility restrictions or chronic illnesses, to creating an opportunity for

those who do not have the funds necessary to travel. For scholars conscious of their environmental footprint, virtual conferences are also more eco-friendly.

The Organizing Committee concluded that a hybrid conference was essential in a post-pandemic world and to maximize accessibility. For the virtual portions, the same format used for the 2021 ICGaN would be replicated, which relied on a mixture of the platforms Discord and Gather. While Discord allowed for high quality video sharing, chat rooms, image hosting, and a high degree of customization, the importance of Gather was its use of avatars

and proximity chat integrated with webconferencing tools. Gather encourages users to design custom spaces where users, with their avatars, can walk around rooms, overhear conversations when close to others, and project their voices so all occupants in the virtual room can hear. This encourages virtual participants to engage more actively and organically, as the software replicants small side conversations, intimate table discussions, and large lecture halls. It even has integration for virtual games to provide a more social aspect. While Lindsay Meaning helped create rooms that mimicking the GI, GI member Joseph Tu (Systems Design Engineering) was actively working with the developers of Gather on another project and was able to provide exclusive assets to further increase customization and curation of the virtual spaces.

The in-person and hybrid elements were supported by Dr. Randall's CFI-funded Storyboard Lab. The Storyboard Lab challenges what it means to do work and research in hybrid formats, and investigates best practices for curating engagement utilizing large, interactive touch screen displays. For the conference, seven of these large displays were used along-side two 360-degree Owl cameras to run concurrent sessions, workshops, academic game analysis streams, and socials. Conference attendees praised this blend of software as it provided those core conference experiences that are often lost in virtual formats. Meaning noted that this specific blend of software to create this unique hybrid set-up "made the in-person interactions feel more spontaneous, organic, and off the cuff."

Interdisciplinarity, Narratives, and Cross-sectoral Keynotes

An important component of curating an interdisciplinary conference is catering to different disciplines and divergent conference norms. Alex Fleck, PhD



Dr. Mark Wolf (left) and Dr. Neil Randall (right) setting up a board game

Candidate in English Language and Literature and member of the Organizing Committee, found that:

Another illuminating point [about organizing] the conference is how other disciplines approach conference proceedings and presentations as viable research outputs. Conference proceedings are highly valued in human-computer interaction (HCI) disciplines and bring a lot of credibility to researchers. The humanities disciplines don't rely so heavily on conference proceedings, and it was very interesting to see people approach ICGaN in different disciplinary manners.



Alex Fleck

This also meant finding keynotes from various disciplinary backgrounds, in both academia and industry, to not only encompass the breadth of narrative work but also to appeal to a larger audience. The conference featured 5 keynotes:

Dr. Jakub Szamałek (Narrative Director at Rebel Wolves), Dr. Jesper Juul (Royal Danish Academy of Fine Arts), **Dr. Kishonna Gray** (University of Kentucky), Dr. Mark JP Wolf (Concordia University, Wisconsin), and Dr. Mia Consalvo (Concordia University, Montréal). Many of these scholars are the forefront of games studies and some—such as Dr. Juul—are considered living, founding figures of the discipline itself. In the case of Dr. Szamałek, he is an industry professional who, in his previous life as a Principal Writer at CD

Projekt Red, worked on video game titles such as *The Witcher 3* (2015), *Cyberpunk* 2077 (2020), *Thronebreaker* (2018), and more. Dr. Wolf even decided to attend the conference in person to better network with young scholars and like-minded academics in different disciplines.

Providing Mentorship Opportunities for Graduate Students

The conference was opened to GI members to sit in on session, and in particular, the Organizing Committee encouraged faculty and graduate students from non-humanities disciplines to sit in on keynotes and sessions that sparked their interest. Many did take the opportunity, such as Dr. Michael Barnett-Cowan, Associate Professor in Kinesiology and Health Sciences who specializes in virtual reality (VR) and brain imaging. Dr. Barnett-Cowan, who is now looking an embodiment, immersion, and narratives in VR along with his graduate students, sat in on a few sessions exploring narrative to see how it correlates to their own research. They were also joined by

PhD student Ellie Sanoubari (Systems Design Engineering) who's research blends robotics and storytelling. She was also interested in learning about the complexity of video game narrative construction. Both said that the panels they attended helped re-orient their perspectives on how to approach narratives, and potential contacts for future interdisciplinary projects.

GI staff also guided and mentored graduate students that were part of the Organizing Committee with their expertise on planning large events and logistics, administrative duties, communications, and management. Fleck and Meaning worked closely with GI staff to learn the ins and outs of planning a large hybrid conference as members of the logistics portion of the organizing committee, who oversaw what the other committee members were doing. "It's

a different experience than research," Fleck noted. "If it's there, try it, and you may find you're really enjoying it," and encouraged other graduate students to take on these non-research opportunities to gain skills that they otherwise wouldn't have the opportunity to learn in the regular PhD ecosystem. "I learned more about communication, professional communication, especially with people you don't know," Meaning said. "People management, task delegation, guiding a team...it really teaches you to try and not do everything yourself...[and] knowing when not to write that extra email."

Along with GI members who attended the conference, 26 GI members showed their support by volunteering as technical supports, logistical supports, submission reviewers, and even session chairs. Many of the GI's interdisciplinary researchers who are rooted in STEM research, such as Mohamed Fouda (Community Member working for Dr. Oliver Schneider), **Dr. Stuart** Hallifax (alumni, currently User Experience Researcher at Ubisoft), Dr. Hector Perez (Postdoctoral fellow, School of Public Health) and Dr. Will Zhao (Stratford School of Interaction Design and Business) were all interested in supporting the conference and learning about how humanities research can apply to their own work. As such, the sessions they chaired were matched with their active research interests, so they could both provide commentary on the subject from an alternative perspective, while also learning from experts versed in humanity-based methodology and research. For example, Dr. Perez had the chance to chair the Session "Serious Game Projects: The Health Care Sector" which featured Dr. Sjors Groeneveld (Saxion University) who presented "Gamifying Community Health Nursing Competencies: A Hybrid Learning EnvironmentDesign using Serious Gaming"; and Dr. Katherine Shaeffer (Shadow Health) and PhD Candidate Najwa Al-Tabba (University of Florida) who presented

"Diversifying the 'Verse: Social Determinants of Health Meet Character Creation".

Dr. Groeneveld is a scientist, Dr. Shaeffer is an industry professional, and Al-Tabba, is working on an interdisciplinary PhD at the faculty of Liberal Arts and Sciences.

Both presentations focused on how game design, and gamification, help create training simulations. The presenters, who all identify as developers, emphasized the

importance of narratives making games feel immersive, and the positive correlation this has to improving knowledge retention for their target audience: busy healthcare professionals. This research also directly aligns with Dr. Perez's own, and was able to give him further insight on how important narration is for immersive training in the health sector.



SEED Grant Financial and Impact Report

In 2022, the GI ran its first-ever Seed Grant competition in which both faculty and students, who are active members of the GI, could apply for up to \$15,000.00 to invest in a new collaboration or project with fellow members of the Institute. The awarded research groups had until the end of 2023 to finalize projects.

The program was specifically put in place to promote interdisciplinary collaborations between researchers—encouraging members to reach out to colleagues outside their home disciplines who they had not worked with previously. GI staff specialize in supporting interdisciplinary collaborations, liaising between departments and faculties on campus to ease the administrative burden that often throws a wrench, and at times can derail, these collaborations from fully coming to fruition. The GI also offers project management services to track budget spending, hire researchers from a variety of departments, and ensure that current equipment in the core facility is still being used.

Budget and Awardee Details

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Initially, the GI announced that \$100,000.00 was the amount of funds allocated for the

GI to award as Seed funding. A committee of GI faculty members who had not applied for the funding, was created to help in the deliberation of which projects would be awarded and for how much. The GI staff ensured that there was equal representation from all Faculties on campus on the committee, to ensure diverse perspectives from various disciplinary backgrounds who would have a better understanding of how funding works for specific disciplines and even between students. For example, the Faculty of Engineering has very strict rules for student funding, and Graduate Research Payments (GRS) are calculated meticulously to the final decimal. Conversely, the Faculty of Arts typically offers partial GRS (\$4,500.00) and full GRS (\$9,000.00) to its student. This does not include the varying rules, calculations, and differentiations between individual departments and how they function within greater faculty structures. These decisions are often made based on the different ways graduate students are funded in different faculties.

Dr. Gerald Voorhees (Communication Arts), who at the time was Chair of the GI's Anti-Racism, Decolonization, Equity, Diversity, and Inclusion (ADE) Committee, was also a part of the deliberation committee, to ensure

that all projects funded would adhere to the GI's mandate for ADE considerations and representation in immersive and interactive technology research.

The committee ended up awarding an excess of \$110,000.00 to eight projects ranging from \$10,000.00 to \$15,000.00 in Seed funds distributed per project. The full breakdown of how much was awarded was highlighted in our 2022 Impact Report.

Principal investigators (PIs) included faculty, postdoctoral fellows, and graduate students. Both postdoctoral fellows and graduate students were required to have a faculty advisor who would help mentor them in grant budget tracking and where to best allocate funds.

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The PIs were from the following departments and faculties:

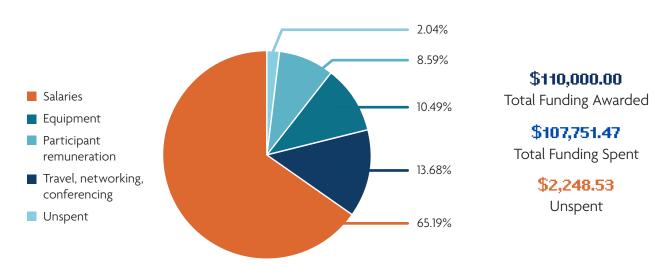
Principal Investigator	Position	Department	Faculty
Dr. Eugene Kukshinov	Post-doctoral fellow	Stratford School for Interaction Design and Business	Arts
Hilda Hadan	PhD Student	Stratford School for Interaction Design and Business	Arts
Dr. Randy Harris	Faculty	English Language and Literature	Arts
Dr. Hector Perez	Post-doctoral fellow	School of Public Health Sciences	Health
Dr. Mark Hancock	Faculty	Management Science and Engineering	Engineering
Emily Shiu	PhD Candidate	Psychology	Arts
Dr. Brianna Wiens	Faculty	English Language and Literature	Arts
Dr. Cayley MacArthur	Faculty	Stratford School for Interaction Design and Business	Arts

Their specific research interests could be summarized as:

Principal Investigator	Research Interest		
Dr. Eugene Kukshinov	Social VR		
Hilda Hadan	Privacy and cybersecurity in VR		
Dr. Randy Harris	AI Language processing and learning		
Dr. Hector Perez	VR training for Indigenous first responders		
Dr. Mark Hancock	VR and XR for health care		
Emily Shiu	Speech therapy and VR		
Dr. Brianna Wiens	Digital feminism and social activism		
Dr. Cayley MacArthur	Digital feminism and community cohesion		

Project Expenses and Activities

A summarized breakdown of spending is as follows:



Seed funds naturally fell into four major categories of spending: salaries and bursaries for students; participant remuneration for studies; travel assistance for networking opportunities with partners or at conferences; and additional equipment. The vast majority of funding (65.19%) went toward paying graduate students for their work on the Seed projects as a form of HQP training.

The next largest expense after student payments, was travel expenses (13.68%). These travel expenses covered professional development for PIs (presenting research at conferences and receiving feedback from colleagues) or travelling to meet directly with community members who were part of Seed projects. For example, Dr. Hector Perez (School of Public Health Sciences) partnered with two Indigenous Nations: Kahnawà:ke Search and Rescue and Peacekeepers in Québec; and Fire and Fisher River Ambulance from Peguis First Nation in Manitoba. Travel funds were used for Dr. Perez to meet with Indigenous community leaders directly in-person, to better explain project goals and outcomes,

as well as showing them how to use the technology they produced.

The third largest expense produced by Seed project teams was equipment purchases (10.49%). Before any purchases were made, Pls would first consult with GI staff to ensure that this equipment was not already available in the core facility and was absolutely crucial for the research to move forward. New equipment purchased with Seed funds included state of the art microphones and recording equipment for field work, as well as the latest generation of tablets to help facilitate workshops exploring social media campaigns and activism through their designated apps. Finally, the smallest amount of funding was related to participant remuneration for any studies run with the Seed funding (8.59%).

Discussion and Impact

As per the funding breakdown and discussion above, the largest category of expenses was related to graduate student payments. This aligns well with one of the GI's core goals of supporting and promoting innovative, cross-disciplinary graduate

training and mentorship in all aspects of games and interactive and immersive technologies. Moreso, the ability to give graduate students and post-doctoral fellows the opportunity to be novice Pls of a project is an invaluable form of mentorship that is not often presented, let alone offered, to graduate students who plan to continue their careers in academia.

The GI staff were also pleasantly surprised to see that very little funds were allocated toward new equipment purchases. As a core facility, the GI works very hard to

share collated resources and ensure that all equipment is being used effectively before anything new is purchased. This is important given the lifespan of technology is quite short, and equipment like laptops, tablets, and VR/AR headsets quickly becomes obsolete—which also aligns with the GI's commitment to the Green Office Initiative, alongside increasing encouragement from CFI and other federal funding agencies to lower large amounts of duplicated equipment at universities.



Aspects of Play in Academia: The History of CHI PLAY and how to Nurture Interdisciplinary Scholarship

If you were to ask any Games Institute (GI) member to generally state what their area of expertise is, almost a third would identify themselves as an "HCI researcher". Human-computer interaction (HCI) is a multidisciplinary and intersectoral field where researchers investigate information technology design in various, intersectional ways. From improving the usability of interactive devices, understanding user behaviour, to broadly, and ubiquitously, understanding human experiences with technology, the field is constantly evolving and expanding the spectrum of what is considered "HCI research".

As such, large conferences like the Association for Computing Machinery's Special Interest Group on Computer-Human Interaction (otherwise known as ACM SIGCHI, and colloquial abbreviated to "CHI"), and its specialized edition CHI PLAY. CHI PLAY arose from increased interest in games and play related research, a frustration with the siloed and elitist nature of traditional academic conferences, and a desire to continue supporting mixed

research in the realm of games and interaction design. It's structured differently from other academic conferences, supporting various research methodologies and conference norms, and has been associated as a safe space for publishing and experimenting with ideas that larger conferences, such as CHI, lack. It gives young scholars a venue to receive feedback from globally recognized researchers and supports the exploration of unconventional research crossovers, from humanities students studying how game mechanics enhance narrative storytelling, to engineers employing ethnographic research methods examining technology designed for small spaces. What started as a space to support novel, multidisciplinary approaches have slowly grown into an increasingly interdisciplinary ecosystem, welcoming scholarship at all levels and from different approaches.

CHI PLAY is heavily attended by GI members and is integral to the interdisciplinary nature of their work. In 2023, 20 GI members attended CHI PLAY hosted at UW's Stratford

Visiting graduate student Sukran Karaosmanoglu (left) at CHI PLAY 2023: Photo by Sukran



School of Interaction Design and Business. 9 were part of the conference committee, and the entire conference was co-chaired by 2 GI faculty members. This edition of CHI PLAY became the largest presentation of GI members.

"I was always interdisciplinary." - The Genesis of CHI PLAY



Dr. Lennart Nacke

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The GI is referred to as an "Island of Misfits" for interdisciplinary researchers who don't quite fit into prescribed faculty structures or disciplinary silos. One of the best examples of interdisciplinary research is **Dr.**

Lennart Nacke (Stratford School of Interaction Design and Business), a trained computer scientist approaching HCI from the perspective of a psychologist. A pioneer of gamification research, Nacke now teaches HCI, user experience (UX), and user interaction (UI) design at the Stratford

School of Interaction Design and Business.

During the early 2000s, games related research was either rooted in the humanities, with the study of narratives, and game mechanics or within computer science and programming. There was very little to do with merging those perspectives or design considerations. Nacke had tried to publish through CHI, the Digital Games Research Association (DiGRA), and even the Foundations of Digital Games (FDG) and had some success with papers but also realized very clear struggles. Different academic communities are accustomed to different norms for conference publishing, or what type of material should be accepted in the first place. For instance, in humanities research, it's not uncommon to only submit an abstract and workshop your idea at a conference, while more technical approaches such as computer science, fully publish papers via conference proceedings. Nacke had troubles with conference paper reviewers not understanding what physiological measures were, even if there were psychologists publishing in these spaces. Nacke had a vision to converge all these various conference foci into one inclusive, interdisciplinary conference.

"I wanted a better venue for my research, because back then, in the early 2000s, intense games user research was just getting started as a field. Gamification wasn't even a thing yet, and in the back of our heads, we were thinking of bringing games to the mainstream. Games were still pretty niche, to be honest. A lot of the research was in the humanities, and I wanted to find a more technical venue for games research."

Nacke started off by talking to all these games related conferences, including FDG, DiGRA, Future Play, and even Fun and Games. During this time, CHI created a Games and Play subcommittee proving that there was a growing need for a more HCI focused conference. He wanted the conference to be enormous, uniting all communities at once but realized the practicalities of an academic utopian vision were far too grand when starting off a conference. So, he focused on a smaller community—his own and became the driving force behind the inaugural CHI PLAY. Linking with colleagues Regan Mandryk, T.C. Nicholas Graham, Floyd Mueller, and Peta Wyeth in a restaurant in Paris during the CHI 2013 conference, the group discussed the logistics and goals of establishing a reputable conference in digital gaming. After rounds of discussions, Nacke—alongside his now fellow co-founders—settled on

the name "CHI PLAY" as to focus on both the "designer perspective (...) and the user researcher." The group planned the initial offering of CHI PLAY in 2014, hoping to locate it in Toronto, and submitted a proposal to SIGCHI to establish the specialized conference.

With the support of SIGCHI, the first CHI PLAY was hosted in 2014 at the Radisson Admiral Hotel in Toronto with roaring success. While budgeting for less than 100 participants, over 120 researchers attended. Nacke has since served as conference chair in 2014, and later in 2019, and has also chaired its steering committee from 2014-2018 and although the conference remains on the smaller, intimate end with an average of 150 participants attending yearly, Nacke continues working hard to keep its intimate size and make everyone, regardless of status, feel welcome. He and the other co-founders to this day remain easily accessible during the annual conference and make sure to chat and connect with newcomers. In fact, many of the students Nacke hires as interns to work at the GI, he met during CHI PLAY.

As more GI members became part of the UW HCI community, it became more common for watercooler and cubicle conversations about what GI members were submitting, which venues are appropriate for their work and how they can support each other with



GI members attending a panel at CHI PLAY 2023

their research endeavours. Over the years CHI PLAY has introduced different research and conference tracks to accommodate game scholars of various disciplines via journal publishing and full papers, works-inprogress, workshops, panel discussions, and even student game design competitions. Nacke recalls when a humanities student was chatting with one of his computer science students, which then resulted in the humanities student submitting a game design paper to the conference; a very unusual activity for most humanities researchers.

Nacke explained that "when I was younger, I really felt intimidated and had a hard time making connections because I always felt like an outsider to the games studies community, and I never wanted anyone to feel like an outsider when it came to CHI PLAY."

"Can you draw me a fish?" – Making Research Accessible with the Networkers

Many CHI PLAY attendees were faced with this question during the conference's opening gala. PhD student **Joseph Tu** (Systems Design Engineering), walked between attendees with an iPad, inviting them to draw a fish. While conference attendees were busy drawing, Tu would ask them about themselves and their research. Over the course of the night, Tu received 85 drawings from student, faculty, and

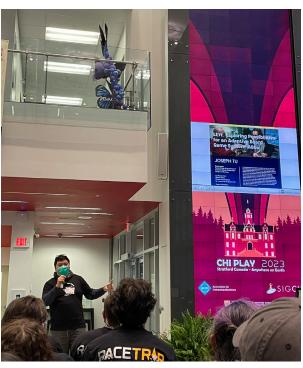


Joseph Tu

industry participants ranging from goldfish crackers to a robot octopus.

Tu has been attending the CHI PLAY conference for some time—first, as a Master's student. Now, his work oscillates between

physiological measures, boardgames, and adaptive user interfaces. Tu views conferences as the perfect place to network and learn about potential job opportunities for after graduation, while also receiving expert feedback about his own studies, research projects, and dissertation work.



Joseph Tu presenting at CHI Play 2023, photo by Waterloo HCI

As someone who describes themselves as having the "attention span of a goldfish" Tu is always looking for research that has a "cool factor." When it came to networking and meeting new people at this year's CHI PLAY, Tu came up with the icebreaker idea of drawing fish—and is now planning to turn the data collected into a research project about how to better approach in-person conference engagement.

While Tu's approach was very casual and informal and related to his research, Alê Luz Lam (Management Science and Engineering) was one of the two Engagement co-Chairs who curated and formalized meaningful engagement at this year's conference. Luz Lam's PhD research, in the Cheriton School



of Computer Science, looks at positive implementation of mobile games for improvement of children's eye health.

As the co-Chair looking to increase engagement and interaction for in-person and remote attendees in hybrid meeting models, Luz Lam believes it is "paramount that attendees get the opportunity of meeting other people, both for expanding their network and for getting to know the different academics who are part of the community." She and her co-chair, Anke Reinschluessel, worked hard to make community engagement feel like in-person and remote attendees could mingle with each other and be part of the crowds. They jointly designed asynchronous sessions



Alê Luz Lam

highest success rates for participation) and an interaction token system (in which people would receive a token for interacting). Participants could later cash in the tokens and receive stickers in exchange.

(which had the

"Having serious research chats, collecting badges as the conference passes by, and playing games during coffee breaks are just a few of the experiences that made me go home inspired to contribute to this corner of academia as much as I can!"

"Why do people treat me differently?" – Intergenerational Engagement with the Mentor and the Newcomer



Dr. Cayley MacArthur

Dr. Cayley
MacArthur is an
Assistant Professor
in the Stratford
School of Interaction
Design and Business
focusing on inclusive
technology who,
like Nacke, classifies
herself as an
HCI researcher.
MacArthur has been
attending CHI PLAY

since she was a graduate student at the Gl. Her first CHI PLAY was in Australia in 2018 which was "pretty hard to top" while this year's conference was the first time she attended as a faculty member.

As a student attendee, MacArthur appreciated the chance to interact with professors to make connections with people outside of her academic discipline and Waterloo network; something she now encourages her own students to do. However, since graduating, MacArthur

noticed a change in how students approached and spoke to her—they were nervous. MacArthur sought to rectify this by participating in as many socials and engagement opportunities as possible to make herself approachable. She also took the opportunity of this year's conference system of interaction tokens receiving numerous stickers trying to meet as many students as possible in her effort to make herself accessible and approachable.

MacArthur is also keen on encouraging her students and younger colleagues to attend panels that don't necessarily align with their research. As an interdisciplinary scholar, who's scholarly background transverses environmental studies, English language and literature, and engineering, MacArthur understands the value of cross-disciplinary collaboration, learning from others, and exposure to new ideas.



Dr. Leah Zhang-Kennedy

While attending CHI PLAY has become a routine for MacArthur, she's also been encouraging other faculty members, like **Dr. Leah Zhang-Kennedy** to also begin attending. Zhang-Kennedy is an HCI researcher, and MacArthur's

colleague from the Stratford School of Interaction Design and Business, focused on individual privacy during interactions with digital technologies. This was her first time attending CHI PLAY and she was surprised to find her research trajectory explored at the conference. She decided not only to attend, but also volunteer as a student mentor.

Her duties included meeting with graduate students, assisting in judging of the game design competition, offering encouragement to students in developing their own research and design skills. She was encouraging

them to engage with different conference activities to network, find new colleagues, and understand the dynamics of the HCl community at large. Even though the growing interdisciplinary and intersectoral nature of the field might feel daunting for young scholars. "Everyone speaks a similar language through HCI."

Intersectoral Collaboration with the Chair and the Professional



Dr. Jennifer Whitson

Dr. Jennifer Whitson (Sociology and Legal Studies) co-chaired this year's CHI PLAY alongside fellow GI faculty member, Dr. Jim Wallace (Public Health Sciences). While Wallace considers himself an HCI researcher and is an active member of

the GI's HCI community, Whitson, does not. Whitson had crossed paths before with HCI research, having attended the computer science-focused Future Play conference as a graduate student in social sciences. Whitson noticed during that time how the topics that games scholars in the humanities and social sciences engaged with were quite similar to what games researchers in computer science were examining using different methodologies: games affect, representation in games, and matters of privacy. Now, more than a decade later, Whitson's research looks at the games industry itself, including how companies function, what the barriers to entry are, and how education in games often fails.

Over the years, CHI PLAY has curated a strong sense of community, culture, and traditions. Attendees give standing ovations after every presentation and there is always at least one night of karaoke. For Whiston, it's these small moments that make the

community a wonderful place to be part of, and as co-Chair, it was important for her to assist in maintaining that sense of community.



Dr. Hallifax (pictured) asking a question at a CHI PLAY 2023 panel

During CHI PLAY, Whitson enjoyed the blend of academic and industry panels and presentation, viewing this as a valuable opportunity for academia and industry to learn from one another. It's one of the reasons why Gl alumni who enter the industry, such as Dr. Stuart Hallifax (A), continue to attend these conferences. Hallifax, a former summer intern for Nacke and – later – one of his post-doctoral fellows, working on gamification, education, and

player preferences during his time at the Gl. His first CHI PLAY was in 2020, where he attended as a virtual participant, and having attended every year since, he still feels a part of the community, despite having exited academia altogether. Hallifax now works at Ubisoft Montréal as a User Researcher specializing in player engagement and motivation. He sees excellent value in attending conferences like CHI PLAY, given that industry professionals, and those outside of academic institutions, are often the ones who put into practice the theories and methods developed by academics.



Dr. Stuart Hallifax

This year, Hallifax was invited to participate in the "Inside Industry: Games Makers Panel" which brought together designers, producers, and researchers from the industry to discuss how to mobilize the research produced by games scholars.

As someone with experience in both worlds, Hallifax is of the mind that the games industry and academia can help each other in very dynamic ways. For instance, at Ubisoft, "if we do research or develop



CHI PLAY 2023 at Stratford School of Interaction Design and Business, photo by Dr. Lennart Nacke

frameworks, we're not going to publish papers on it," instead that work would be used for internal purposes, despite the fact that this research may have the potential to innovate active research in academia and avoid replicability. Meanwhile, if published academic frameworks were used by game developers in the industry, there should be a way to credit these academic researchers in video game credits.

Assembling the Party and the Future of Inclusive, Interdisciplinary Research

Nacke's vision of CHI PLAY being an open, welcoming, fun space has been fulfilled. In the future, the organizers plan to continue opening it up to more newcomers, hopefully getting more humanities and social science scholars involved. Above all else, Nacke says the most important thing is to avoid gatekeeping so that they are continually "making room for new voices" and nurturing the community. Nacke for instance, encourages all his students to be involved and volunteer not just for the experience, but so that they can share their diverse perspectives. "I want my postdocs and grad students to do that work," he stressed, "I don't need to take up that space."

Nacke is mindful that to encourage scholars beyond HCl proper into the fold, senior researchers need to be invited into the community to encourage their students to attend. Whitson is a great example of that. "For academic game work," Whitson noted, "regardless of your discipline, CHI PLAY is—right now—the hub (...) of the largest collection of games related research."

From its visionary inception to its current success, CHI PLAY's impact on interdisciplinary research, GI members, and the larger HCI community is impossible to overstate. It's symbiotic relationship with the GI ecosystem allows for our own community to continue growing and thriving. It's not

uncommon to find GI students working very closely together as they run studies, write papers, and co-edit submissions while preparing for these conferences. Faculty often join them in solidarity, running writing sessions, encouraging students to practice their presentations in front of the group to receive feedback.

The yearly submission deadlines for CHI and CHI PLAY have even reconfigured how GI administrative staff structure their support during these periods of higher activity. The conferences' impact is so great, that even the physical space of the Institute changes with the ebb and flow of conference seasons—morphing from a bright, vibrant, and boisterous space during submissions into eerie, quiet and calm when so members submit and rest. The importance of CHI and CHI PLAY has bled into GI structures and became an important aspect of the GI "lore."

CHI PLAY provides junior interdisciplinary scholars an excellent experience of conference organizing, community creation, mentorship, networking as well as expanding their research trajectories and sharing their work. It's a safe space to explore research creation, mixing methodologies, and sharing new ideas. At its core, it is not the research that made CHI PLAY what it is today, but the dedication to a safe, inclusive, and welcoming interdisciplinary community, dedicated to fostering new connections, that lead to its great success.



A conference attendee using the Excercube to play an exergame, photo by Dr. Lennart Nacke



The Unlikely Collaboration that led to the Creation of the University of Waterloo Interdisciplinary Network for Esports



Greg Mittler

Esports is a burgeoning field working to establish itself as a legitimate sport, industry, and academic discipline, that is worthy of investment and investigation. Games Institute researchers have often found academia's slow pace at odds with the roaring highway of the rapidly advancing tech industry. Often, when researchers finally get their hands on a new piece of technology to tinker with, the next best thing has already been released. Esports is both rebellious and nebulous—on the surface it heavily relies on the latest gaming, streaming, and online training technology, while also contending with the booming "sports" side of the industry requiring logistics, operations, and staff support. More importantly, it's revved up a new research agenda of academics from all diverse disciplinary backgrounds.

The esports fever hit the University of Waterloo just before the COVID-19 pandemic closures in 2019 and early 2020—students running Super Smash Bros. tournaments and the establishment of varsity and competitive teams through Waterloo's Athletics and Recreation. Riding on the momentum, the undergraduate UW Esports Broadcasting



Dr. Luke Potwarka

Club was formed shortly after, the students streaming their coverage of various oncampus events via Twitch from the GI facility. It was once the Pandemic had finally caused a jam in "normal" day-to-day activities and replaced it with social distancing and online interactions, that long-time friends, colleagues, and GI members Greg Mittler (Athletics and Recreation) and Dr. Luke Potwarka (Recreation and Leisure Studies) began chatting about the potential for esports systems and supports on campus.

As they were exploring possibilities, in 2021, growing interest into this new and revolutionary world drew attention from the Government of Canada for its potential business possibilities, and the University of Waterloo started to take a serious look at how esports could be supported on an institutional level. UW began developing a partnership agreement with the University of Warwick, UK. Warwick was—and still is treating esports seriously and had already made substantial progress, developing an esports centre and building a shiny new facility called "Fusion" to support it. During these establishing discussions formalizing research streams between the

two institutions, the words "gaming" and "esports" were thrown around, resulting in GI Executive Director, **Dr. Neil Randall**, and Associate Director, **Agata Antkiewicz**, being drawn into the fold. With this blossoming relationship in the works, the Associate Vice-President of Research International, Dr. Ian Rowlands, began reaching out to interested researchers on campus—including Mittler, Potwarka, and Randall, who he knew would be interested in Warwick's esports successes.

As esports gained speed in the industry, in 2022 the Province of Ontario announced a funding opportunity for students pursuing careers in the gaming and esports industries. The Games Institute, in collaboration with the Faculties of Arts, Engineering, Health, Math, and Science <u>successfully secured</u> \$50,000 of scholarship funding. The first round of funding released January 16, 2023, provided seven student scholarships valued at \$2,500 to \$5,000 while the second round, announced September 11, 2023, funded nine. Funds were awarded to highachieving, equity-deserving graduate and undergraduate students. The successful students, pursuing careers in games and esports industries, came from a diverse range of programs on campus including

Computing and Financial Management, Environmental Studies: Planning, Global Business and Digital Arts, Materials and Nanoscience, and Mechanical Engineering.

Dr. Neil Randall, Executive Director of the Games Institute, has been working towards supporting esports at UW for over a decade and was delighted to see the Ontario government "supporting students who want to be part of this emerging profession."

The Road Converges and UWIN

Interdisciplinary research often challenges the status quo, creates novel approaches to existing problems, and often requires an unconventional approach to research itself. It takes a lot of work to bring like-minded individuals together, appreciating each other's different disciplinary backgrounds, while also trying to find a common research language so that everyone's expertise is respected. Interdisciplinary research within

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Members of the UWaterloo esports teams

Students playing in an esports competition



academia is almost always understood as collaboration between faculty researchers. An initiative co-directed by a university staff member and a professor is almost unheard of, and yet, that is exactly what Mittler and Potwarka have done.

For Mittler, who works in student program development in athletics, the entry point into the world of esports came during the COVID-19 pandemic. "I supported competitive clubs like Quidditch," Mittler said. "Who compete in off-campus leagues, so I felt comfortable supporting new esports teams in off campus leagues." Using UW's model for competitive clubs, he began to coordinate the intercollegiate esports leagues.

Potwarka is Director of the Spectator Experience and Technology Laboratory (SEAT), where he examines the emotions of spectators as they engage with sports content, how it inspires them to participate in sports, and how they view their identities as spectators. Examining esports spectatorship was a natural expansion of his research agenda. Potwarka is especially interested in the high uptake of participation in esports; as he explains it, in traditional sports, few people spectating are actually

participating in that sport themselves, in contrast "for something like *League of Legends*, its 80-90%."

Having discovered mutual interest in esports, Mittler and Potwarka started exploring how other Universities develop their esports networking, training, teaching, and research initiatives. And so, Mittler—who had now secured a position as UW's "Coordinator, Esports and Gaming", the first of its kind at a Canadian university—visited Warwick along with seven students during the 2022 Commonwealth Games where esports were played alongside traditional sports for the first time. Here, the students had a chance to work with Warwick who had an exhibition during the Commonwealth Games, and this introduced many of them into what esports could be with the right support.

During this visit, Mittler realized Warwick's approach to research and teaching is remarkably similar to their own, and even referred to Warwick as a sort of "bizzarro Waterloo" because of these similarities. It was an inspiring visit for him which showed him that – although Warwick was ahead of Waterloo when it came to mobilizing esports on campus – he and Potwarka had the same challenge to tackle: interdisciplinary

collaboration and how to bring together people from different disciplines.

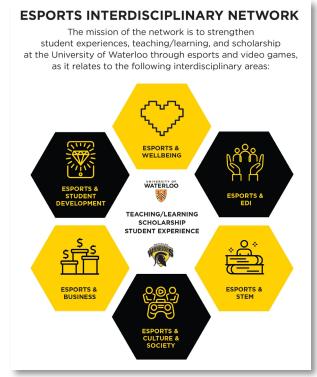
Inspired by their Warwick visit, Mittler and Potwarka began working with the Games Institute, Dr. Lili Liu (UW Dean of Health), Dr. Sheila Ager (UW Dean of Arts), and UW Athletics to secure seed funding from UW's Provost to launch an interdisciplinary network for esports on campus, a dedicated esports facility in the Physical Activities Complex (PAC), and other activities focused on esports and gaming.

Mittler began working with the University to build a space in PAC where students can participate in esports programming and a "living lab" for researchers to conduct studies and observe esports play: a core facility that would be inhabited, or used, at all times by different user groups from various disciplines. For instance, students interested in esports can use the technology to train and play, while also being participants that academics can readily access and observe for esports research.

Meanwhile, Potwarka focused on mobilizing research finding over 100 researchers at UW, from every Faculty, who had already published in the field of esports. This became the beginning of a community of practice that would bring staff, researchers, industry professionals, and students together to discuss their work in esports. Of the current 28 members, 10 are also GI members.

The University of Waterloo Interdisciplinary Network for Esports—known as UWIN Esports—with the mission to advance teaching, research, and student experience through esports was launched in August 2023. The network now employs thirty students in dynamic staff support roles such as communicators, storytellers, shout casters, broadcasters, event planners, graphic designers, typographers, marketers, operators, and coordinators—all positions integral to the esports industry. In fact, many of the students who received the Ontario-

funded UW esports scholarship in 2023 became involved with the networking and varsity team.



A graphic displaying the core values of the network

UWIN is also developing an interdisciplinary cross-Faculty teaching course, which will position esports as a field of study with a tangible professional pipeline into the industry. The goal for the courses is to examine esports from a variety of pedagogical and theoretical lenses including critical disability studies, gender studies, among others.

Driving UWIN Forward and Mobilizing a "Living Lab"

Mittler and Potwarka are working hard to ensure the success of the network. Mittler is now managing multiple UW Varsity Esports Teams and is looking beyond campus for further expansion. As a current board member of Esports Canada and the newly established Waterloo Region Esports Commission, Mittler is working with the Region on how to develop esports programs

on a Tri-City scale. The long-term goal is to ensure the sustainability of the network and create a core facility with equipment and space for everyone interested in esports to find community in the work that they do. The secured Provost seed funding will certainly help with the development of this space in PAC, but more importantly, Mittler and Potwarka want this space to go beyond the bounds of the University to holistically serve the Region.

In Canada, most students, athletes, and young professionals interested in esports move to big cities like Montréal, Toronto, and Vancouver to launch their careers. In the true nature of Waterloo's start-up culture, Mittler and Potwarka want to work with the Region to create an infrastructure for esports locally, bringing the benefits to Waterloo. They've already begun working with those organizing esports infrastructure at Conestoga College as well as local elementary and secondary schools.

This decision was very intentional, as the reality for all sports is the initial cost of entry for both varsity and professional training is high—and for some, insurmountable. Training can be rigorous, and sometimes one parent will sacrifice parts, if not their entire career, to keep up with the laborious monotony of training schedules, matches, and transportation while the other works to invest money into equipment, coaching fees, and travel. Although esports may appear to be more affordable, as there is a misconception of all events being virtual, but the pricing for super-powered gaming computers are in the thousands of dollars. Mittler and Potwarka hope that this physical space on campus will be open to the public, but they also want to make sure the lab and its equipment has a mobile component to engage with elementary and secondary schools, which often lack resources to give children these opportunities. The conceptual framework for this is what

Mittler and Potwarka call a "living lab."

Two students playing an esports game



The word "lab" is understood and used variously by different disciplines. For some, it means a physical space where research is conducted, while for others, it is a group of like-minded researchers who periodically come together to collaborate, network, and support each other's work. For Mittler and Potwarka, a living lab combines those two frameworks—it is not just the physical space, but the movable equipment, people who are using the equipment, and people who are doing the research. It provides student experience, while also advancing research and providing the tools necessary to speed it up.

While the Provost funding has helped purchase some equipment, Mittler and Potwarka have also secured funding from the Regional Tourism Organization 4 Inc (RTO4). This support has enabled them to purchase additional equipment for the living lab structure.

Paving New Roads for Esports

A particularly vital component of kickstarting any interdisciplinary project and engaging people from so many disciplines and professional backgrounds is ensuring that the network's goals and values are in alignment. Mittler and Potwarka understand the power of engaging students, academics, staff, and industry professionals together to enable a holistic study of esports. More so, they both believe that the crucial component here is ensuring that the network is an accessible and safe space. There are many problematic parts of the gaming world. Games themselves, and the climate of the industry often act as a barrier to entry for equity-deserving groups. Racism, harassment, and other systemic issues in the industry are all issues that need to be addressed through future education and training programs.

The UWIN network is working to address these issues, so they do not fester in the next generation of students coming into the esports and games industry—regardless of whether they are an athlete, industry professional, or support staff. They also want to create guidelines for building equitable communities—uplifting research that offers both positive and negative findings about the impact of esports and to incorporate those findings into the network's structures and programs.

Mittler describes these challenges as "myth busting" saying he has had to repeatedly explain that "our top-tier players don't just sit in their mom's basement with Cheeto dust fingers slamming Red Bull." The goal is to bring the multiple UW esports teams together as they currently don't have a space to collaborate.

Another aspect that is also currently overlooked when it comes to esports is that, like all other athletes, esports players must practice and train just like those in any other sport, and Mittler and Potwarka are reconceptualizing what training for esports athletes looks like. As they argue, a marathon runner would never run 24 hours a day, and therefore esports athletes should not be gaming all day either. Many criticisms of esports also call out its individualistic nature, the large amount of exposure to violent

games, unhealthy lifestyle habits, and the behaviour of some players. Working with the UW competitive esports teams, Mittler and Potwarka monitor and ensure students take breaks from training, prioritize a good diet and exercise regiment, so that they can increase their performance in a more holistic manner. To tackle loneliness and physical isolation, the UW esports athletes train in the same space to promote bonding and positive psychological support once the living lab is online.

Advancing Unconventional approaches to Research

Esports presents opportunities for those interested in games, play, sport, and spectatorship, as well as interdisciplinary and intersectoral collaboration. The radical and boundary-pushing approach to esports by Mittler and Potwarka has already made waves at UW and within the Region. Their deep-rooted focus on making UWIN truly interdisciplinary has paid off in successfully engaging students, young and seasoned professionals, supportive staff, and researchers who respect each other's perspectives and see the enormous value in learning from one another.

If you are interested in becoming involved with UWIN, check out their webpage where they list how to become part of their community of practice and engage in collaboration with other members of the network. The community of practice is open to anyone, and members can expect presentations like that of Jack Fenton's "Esports, Older Adults, Mental Health, and Social Isolation" and Dr. Shinyong (Shawn) Jung's "The Role of In-Person Events in Promoting Diversity, Equity, and Inclusion in Esports."

MEMBERSHIP

BREAKDOWN

2D game development
3D modelling and printing
3D virtual environments
Accessible game design
Action recognition
Administrative support
Agriculture studies
Alternative reality
App development
Archaeology
Archiving

Artificial intelligence Audience studies Audio technologies

Augmented reality Behavioural change

Biology

Boardgame design Classical studies Communication

Computational models of emotion

Constructive visualization

Co-operative games
Critical theory

Cultural studies

Cybersecurity
Data privacy

Data visualization

Databases

Deceptive design in games

Decolonization

Dementia

Digital activism

Digital humanities

Disability studies
Discourse analysis

189 total members 66 new members 10 research groups 6 faculties 18 departments 163 areas of expertise

DIY games and culture

Economics

Emergent narratives

Environment

Esports

Ethical design Ethnography

Exercise therapy

Exergames

Explainable artificial intelligence

Extended reality
Fake news detection
Fan communities

Fan studies

Farm studies

Feminism and technology

Flight simulation

Gambling

Games for change Games for health

Gamification

Game design

Game jams and social gaming

Game mechanics

Game studies

Games and learning
Games user experience

Games user research

Gender partner violence

Gender equity and technology Gerontology

Haptics Health e

Health equity
Health informatics

Health sciences

History

Human-computer interaction

Hybrid collaboration

Inclusive design

Indigenous epistemologies

Indigenous media
Indigenous research

methodologies

Indigenous worldmaking

Industry studies
Information studies

Information visualization

Interaction science

Interactive digital narratives

Interactive immersive

technologies

Interface design and research Intersectional feminism

Intimate partner violence

Kinesiology

Labour studies

Legal studies

Linguistics

Locative media
Machine learning

Management sciences

Meaning-making

Media studies

Misinformation and disinformation

Multimodality Multisensory

Music studies

Natural sciences

Narrative studies

Natural language processing

Online communication

Oral history

Peace and conflict studies

Pedagogy

Persuasive games
Performance studies

Phenomenology

Physical interaction

Physics

Physiological measurement

Physiological sensors

Physiotherapy education

Platforms Play studies

Podcasting

Pop culture studies

Psychology

Public health communication

Public memory

Quantum technology Queer studies

Questionnaire development

Representation

Research creation

Rhetorical analysis Rhetorical figures

Roleplaying game design

Search and rescue

Settler colonialism

Sexuality and technology

Simulations

Sketch-based design

Social equity

Social media
Social movements

Social practices

Social relations

Software engineering

Sound studies
Statistical analysis

Storytelling Studio studies

Surveillance studies

Sustainability

Technological development

Textual analysis

Traumatic brain injury trajectories

Touch-interactive displays

Usability

Urban planning

Usable privacy and security User experience

User experience design Violence prevention

Virtual reality

Voice assistants VR learning environments

VR presence

Wearable computing

APPENDIX

Testimonials

"The Games Institute contributed to my experiences as a student by providing a space to interact with other students researching similar topics, but all with similar interests. Working there is great to discuss concepts and theories with other students. The faculty GI members are knowledgeable and very encouraging towards students working there. Additionally, the resources available in terms of gaming consoles, board games, PCs, and other tech, makes undertaking a project more realistic because much of the expensive or unobtainable elements are already on site. Being involved with the GI has benefitted my employment opportunities within the University of Waterloo and will provide me with the skills and training to succeed in future careers. As a GI member I've collaborated with Professor Randall in his courses as a TA and guest lecturer; I've developed course content, created gaming modules, and encouraged other students to pursue their interests as games researchers. As the producer and co-host of the Games Institute Podcast, I've helped other researchers share their work, helped further the GI community's goals, and created an outlet for listeners outside of Waterloo to familiarize themselves with the GI."

– Toben Racicot, PhD Candidate, Department of English Language and Literature

"As a professor jointly appointed in two departments that currently have no own research-based graduate program, it has been essential for my career to seek cross-appointments through the University and build a highly interdisciplinary research group right in the heart of the Games Institute, who has supported me generously with space and academic infrastructure. My students love working in the GI and I love working there with all of my excellent collaborators from other disciplines in the University. Next to my home department, the Stratford School of Interaction Design and Business, this seems to be the only place at the University that lives and breathes interdisciplinary collaboration. I find this atmosphere extremely enriching for my work."

- Dr. Lennart Nacke, Associate Director, Stratford School of Interaction Design and Business

"Being a part of the GI community and a part of the HCI Games Group meant I was learning how to be a good mentor to other students. My time here and as part of a lab helped me focus on the managerial side of research such as guiding students in their work. And I credit this experience with giving me the management skills and tools that I didn't have the chance to learn during my PhD. That's one of the strengths of the GI space and community; that there's access to tons of people who have done all these things before and failed and could help students avoid the same pitfalls."

– Dr. Stuart Hallifax, Postdoctoral Fellow, Stratford School of Interaction Design and Business

"The GI was instrumental in funding and helping to project manage an inter-university and interdisciplinary research team I was a part of as a graduate student. For this project, I designed a card game (Hustle and Flow) built to convey research on transboundary water governance in the St. Lawrence River Basin to non-academic audiences: policy makers and civil services, in particular at the Institute of Public Administration of Canada (IPAC) conference in Toronto. A year later, I was presented with another opportunity to the GI to attend the European Conference on Games Based Leaning in Paisley, Scotland to further present my ideas and game designs and further enhance the scope and reach of this project. By 2018, I returned the Hustle and Flow project to the GI so that its materials

could be archived and that I could iterate upon the design, drawing from the community support there for continuous games testing. Without the GI as a hub of games research at UW this would not have been possible."

- Alex Fleck, PhD Candidate, Department of English Language and Literature

"The Games Institute was instrumental in assisting to develop the scope of my project Digital Oral Histories for Reconciliation: The Nova Scotia Home for Colored Children History Education Initiative (DOHR) back in 2015 and further into 2016 when the GI offered recourses to support the successful application of my 2016 SSHRC Partnership Development Grant. DOHR is a community-driven project with former residents, scholars, and stakeholders to co-design a grade 11 Canadian History curriculum that includes an oral history-based virtual reality experience. This project makes significant scholarly contributions for: a restorative approach to research; historical thinking for reconciliation; virtual reality education, and trauma-informed oral history, and is among the first oral history projects to design a curriculum and conduct empirical research about its educational value. When the scope of the project shifted and we saw new avenues to expand this work, it was by connecting with other GI members that DOHR was able to bring parts of the project to museums and further create immersive environments. The GI has provided critical pathways to partnerships to support this work such as Dr. Oliver Schneider, whose work in haptics has featured in the application or a SSHRC New Frontiers in Research Grant to explore how haptics affects storytelling in museums."

– Dr. Kristina Llewellyn, Professor, Social Development Studies

"A lot of the skills that I use in my day-to-day job at the Writing and Communications Centre at the University of Waterloo are ones I learned from my time at the GI. Having skills that go beyond the traditional writing approach means I'm able to do things like edit a podcast, design a poster, and develop a more multi-modal approach to communication. People really need to understand how special something like the GI is. I've talked a lot about how graduate students feel they don't have a community of scholars they can rely on. But to be able to work on your thesis work not all alone in your office means you can talk to people about it. Suddenly you can get these interesting things about being able to think about something you've thought out."

– Dr. Elise Vist, PhD Graduate, Department of English Language and Literature

"The community at the GI is incredibly welcoming and full of people with fascinating research topics. The GI staff do an amazing job at organizing social events for GI members, which helps people intermingle and get to know each other. The Games Institute is honestly the best academic/work environment I've ever been in, and it's made my time at Waterloo substantially better."

- Arden Song, Master's Student, Department of Management Science and Engineering

"I think of the Games Institute as a 'star light' community. It is a luminous group of people from diverse fields who question, create, tinker, and game - serious fun! - and investigate the sciences & strategies of human play. Twinkling conversations are often afoot here; I relish the laughter and surprising encounters, which are the name of the game. As a historian and new faculty member, I am constantly learning at the GI workshops and dialogues just like any fellow engineer or artist or critic or designer or writer or student. How grand! The GI is lit by a shared spirit of adventure."

- Dr. Daria Ho, Lecturer, Department of History

That I loved about it was having such a big network of people you can always ask for advice or help with your research. From what I've seen at other spaces it's very one sided, but people at the GI are very open to help you out. It's a nice community. I connected with other people from Mexico and together we built an altar for Día de los Muertos, and it was really nice to be embraced for our culture. Now that it keeps happening every year and that people have continued the tradition at the GI, each year it just gets better."

- Ana Lucia de Leon Derby, Master's Graduate, Department of Management Science and Engineering

"When working on the GI Seed funded project "Dementia Friendly Edu-action for Indigenous First Responders", much of my experience was learning how to work with different communities. From Indigenous first responders to non-Indigenous first responders, academics, and Indigenous Elders, there was a lot of collaboration in a highly interdisciplinary environment. Many times, I would have to ask myself things like how can we acknowledge the time of our participants? Because at the time there were few protocols to guide me. Many of the people I worked with were volunteers and most of them were from the Indigenous communities. At the time there were no specific guidelines at Waterloo on how to acknowledge the time of our Elders, the time of our Indigenous participants, so I worked closely with GI administrative staff, Agata Antkiewicz and Pamela Maria Schmidt, to try and come up with a solution."

- Dr. Hector Perez, Postdoctoral Fellow, School of Public Health Sciences

"While my primary research interests were around why people do the things that they do, I found through the GI that games are a wonderful vehicle for actually studying these things. The GI hosts researchers from every faculty at UW who work with games in one way or another. What makes this community tick is that it's community oriented and volunteer driven with a high level of engagement from the students."

- Dr. Cayley MacArthur, Assistant Professor, Stratford School of Interaction Design and Business

The interdisciplinary environment at GI positively influenced my research by allowing me to collaborate with experts from different backgrounds. Coming from a psychological background, it was beneficial to engage with expertise in other fields. Compared to universities in my country, GI has more professionals working in the HCI field, providing a great opportunity to discover new tools and broaden my research approach.

- Federica Gini, Visiting PhD Candidate, University of Trento, Italy

Events

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Month	Events
Recurring	Weekly Social, All GI Members, "Coffee and Games"
January	 January 5-6 Workshop, "Counterspeech Lab to Address Online Islamophobic Hate" January 12 Meeting, "W23 Games Institute Town Hall" January 12 Social, "Hybrid Research Speed Dating Event and Pizza Party" January 30 – February 5 Global Game Jam captained by Alexander Glover and Natalie Nova
Februrary	 February 9 ADE Speaker Series, "Workshop on Structures of Care and Accessibility" with Squinky and Dr. Jess Rowan Marcotte February 23 ADE Speaker Series, "The Impact of Genuine and Mindful Inclusion of Marginalized Communities in Creative Works" with Elaine Gómez-Sanchez
March	 March 7 Meeting, "Delegation from Saxion University of Applied Sciences and GI/Saxion Research Presentations" March 22 Social, "ADE Committee Winter Community Input and Eat-and-Greet" March 23 ADE Speaker Series, "Researching Disability and Play - Where's the Fun in That?" with Dr. Katta Spiel (A) March 30 ADE Speaker Series, "Panel on Designing for Disability and Accessibility" with Dr. Cayley MacArthur, Dr. Katta Spiel (A), and Triskal deHaven
April	 April 19 ADE Speaker Series, "The Changing Same: Blackness, Representation, and Video Games" with Dr. André Brock April 20 Social, "Agata's 10 Year Anniversary at the GI Celebration" April 21 Meeting, "PD Day Tour of GI for Regional Highschool teachers and Research Presentations" April 26 ADE Speaker Series, "Panel on Just Relationships for Research" with Dr. Kishonna Gray, Dr. Liz Nilsen, and Dr. Rhona Hanning
May	 May 3 Meeting, "BMO, Unity, and Rogers Tour of the GI and Meeting for Collaborative Design Challenge" May 10 ADE Speaker Series, "From Custer's Revenge to Red Dead Redemption: Changing the Language of Indigenous Representation in Video Games" with Dr. Ashlee Bird May 15-19 Conference, "International Conference on Games and Narrative" May 26 ADE Speaker Series, "Panel on Indigenous Research and Epistemology" with Dr. Kelly Laurila and Dr. Hector Perez
June	 June 16 Tour, "Robotics Summer English Immersion Program from Mexico and Research Presentations" June 19 Social, "Games Institute and Centre for Biotechnology and Bioengineering Research Speed Dating and BBQ"
July	
August	 August 9 Panel, "Psychological Measures for Games and VR" with Dr. John Muñoz and Dr. Ifi Mavridou August 10 Student Speaker Series, "Machine Talk: Speech in Human-Agent Interaction" with Nima Zargham

September	 September 20 ADE Speaker Series, "Panel on Emerging Voices in Black Games Studies" with Dr. Akil Fletcher, Cyan DeVeaux, and Dr. Steven Dashiell September 22 Tour, "Student Association for Graduates in English and GI Graduate Student Orientation and Research Presentations" September 22 Meeting, "F23 Games Institute Town Hall" September 25 ADE Speaker Series, "Black Virtuality" with A.M. Darke
October	 October 4 Workshop, "Workshop on Using Psychological Measures for Games and VR" with Dr. John Muñoz October 23 ADE Speaker Series, "Workshop on Building Equitable and Sustainable Game Development Education" with Kenzie Gordon, Vishal Sooknanan, Dr. Sean Gouglas, Dr. Johanna Weststar, Dr. Alison Harvey, and Dr. Jennifer Whitson October 27 Guest Lecture, "The Psychology of Fun and Frustration: Understanding the Demands and Interactivity in VR/AR and Video Games" with Dr. Nicholas Bowman October 31 Social, "Games Institute Halloween Social, Potluck, and Costume Contest" October 31 ADE Speaker Series, "The Case for Paratopian Design" with Dr. Rilla Khaled
November	 November Social, "National Noval Writing Month - Writing Hour" November 2 Guest Lecture, "Fused Spectatorship: Designing Bodily Experiences Where Spectators Become Players" with Rakesh Patibanda November 14 ADE Speaker Series, "Skins Deep: Race, Gender, and Nationality in eSports" with Dr. Tara Fickle November 15 Symposium, "Royal Society of Canada Celebration of Excellence and Engagement - GI Booth and Research Presentations" November 20 ADE Speaker Series, "Panel on Emerging Voices in Asian/American Game Studies" with Dr. Sarah Christina Ganzon, Dr. Huan He, and Dr. Matthew Dungsuk Howard November 30 Symposium, "Waterloo Institute for Sustainable Engery's 2023 Annual General Meeting - GI Booth and Research Presentations"
December	 December 7 ADE Speaker Series, "Workshop with Onkwehonwe Games" with Dallas Squire December 12 Social, "Games Institute Holiday Party and Potluck"

Games Institute Knowledge Mobilization

Title	Category	Researchers	Date	Link
The Games Institute secures \$50,000 of funding for Esports Scholarship Program	News Bite	The Games Institute		https://uwaterloo.ca/games-institute/news/games-institute-secures-50000-funding-esports-scholarship
GI Faculty Member Adan Jerreat-Poole Gives Virtual Talk to McMaster's Sherman Centre for Digital Scholarship	News Bite	Dr. Adan Jerreat-Poole		https://uwaterloo.ca/games-institute/news/gi-faculty-member-adan- jerreat-poole-gives-virtual-talk
GI Faculty Members Lili Liu and Ben Thompson Awarded Graham Seed Fund	News Bite	Dr. Lili Liu, Dr. Ben Thompson	1-Feb-23	https://uwaterloo.ca/games-institute/news/gi-faculty-members-lili-liu-and-ben-thompson-awarded-graham
Dr. Oliver Schneider is Seeking a Post-Doctoral Researcher for the Haptic Experience (HX) Lab!	News Bite	Dr. Oliver Schneider	10-Feb-23	https://uwaterloo.ca/games-institute/news/dr-oliver-schneider-seeking- post-doctoral-researcher-haptic
GI Member Toben Racicot Presents Everything Should Be Findable: Redesigning Loot in RPGs	News Bite	Toben Racicot	15-Feb-23	https://uwaterloo.ca/games-institute/news/gi-member-toben-racicot-presents-everything-should-be
GI Faculty Member Will Zhao and GI Collaborator Evan Jones, Discuss the Impacts and Future of Artificial Intelligence	News Bite	Dr. Will Zhao, Evan Jones	15-Feb-23	https://uwaterloo.ca/games-institute/news/gi-faculty-member-will-zhao-and-gi-collaborator-evan-jones
Delegation of Researchers from Saxion University of Applied Sciences Visits the GI	News Bite	Dr. Hector Perez, Sid Heeg, Marco Moran-Ledesma, Florian Marcher, Dr. Eugene Kukshinov, Dr. Lili Liu, Dr. Sjors Groeneveld, Dr. Marjolein den ouden, Dr. Marloes Bults, Dr. Margariet Braun.	7-Mar-23	https://uwaterloo.ca/games-institute/news/delegation-researchers-saxion-university-applied-sciences
Haptics Experience Lab is looking for a developer for the development of the Haptiverse research platform	News Bite	Dr. Oliver Schneider, Mohamed Fouda	14-Mar-23	https://uwaterloo.ca/games-institute/news/haptics-experience-lab-looking-developer-development
The Canadian History Museum is Looking for a Curator, Sport and Leisure	News Bite	The Canadian History Museum	5-Apr-23	https://uwaterloo.ca/games-institute/news/canadian-history-museum-looking-curator-sport-and-leisure
Terrorarium by Stitch Media Nominated for Canadian Game Award	News Bite	Stitch Media	6-Apr-23	https://uwaterloo.ca/games-institute/news/terrorarium-stitch-media- nominated-canadian-game-award
GI Faculty Member Craig S. Kaplan Discovers Elusive Einstein Tile	News Bite	Dr. Craig Kaplan	10-Apr-23	https://uwaterloo.ca/games-institute/news/gi-faculty-member-craig-s-kaplan-discovers-elusive-einstein
GI Faculty Member is Hiring an RA	News Bite	Dr. Gerald Voorhees	12-Apr-23	https://uwaterloo.ca/games-institute/news/gi-faculty-member-hiring-ra
International Conference on Games and Narrative Returns for Second Series	News Bite	Dr. Neil Randall	1-Jun-23	https://uwaterloo.ca/games-institute/news/international-conference-games-and-narrative-returns-second
Dr. Michael Barnett-Cowan Interviewed on CBC Listen and CTV News	News Bite	Dr. Michael Barnett-Cowan	8-Jun-23	https://uwaterloo.ca/games-institute/news/dr-michael-barnett-cowan-interviewed-cbc-listen-and-ctv-news
GI Faculty Member Kishonna Gray Interviewed in Kotaku	News Bite	Dr. Kishonna Gray	10-Jul-23	https://uwaterloo.ca/games-institute/news/gi-faculty-member-kishonna-gray-interviewed-kotaku
First Person Scholar is looking for Volunteers!	News Bite	First Peron Scholar	11-Jul-23	https://uwaterloo.ca/games-institute/news/first-person-scholar-looking-volunteers
PhD Candidate Sabrina Sgandurra Presents at DiGRA	News Bite	Sabrina Sgandurra	9-Aug-23	https://uwaterloo.ca/games-institute/news/phd-candidate-sabrina- sgandurra-presents-digra
HCI Games Group Members Awards Announcements	News Bite	Dr. Sebastian Cmentowski, Dr. Reza Hadi Mogavi, Dr. Eugene Kukshinov, Dr. Lennart Nacke	11-Aug-23	https://uwaterloo.ca/games-institute/news/hci-games-group-members-awards-announcements
Esports Scholarships Continued	News Bite	The Games Institute	11-Sep-23	https://uwaterloo.ca/games-institute/news/esports-scholarships- continued

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Title	Category	Researchers	Date	Link
ADE Committee Speaker Series Continues with 8 Fall Events	News Bite	Dr. Gerald Voorhees, Dr. Daniel Harley	19-Sep-23	https://uwaterloo.ca/games-institute/news/ade-committee-speaker-series-continues-8-fall-events
Dr. Lai-Tze Fan Appointment to Research Chair	News Bite	Dr. Lai-Tze Fan	2-Oct-23	https://uwaterloo.ca/games-institute/news/dr-lai-tze-fan-appointment-research-chair
PhD Candidate Nima Zargham Presents at Student Speaker Series	News Bite	Nima Zargham	2-Oct-23	https://uwaterloo.ca/games-institute/news/phd-candidate-nima-zargham-presents-student-speaker-series
GI Faculty Members Secure CFI Funding	News Bite	Dr. Lai-Tze Fan, Dr. Neil Randall, Dr. Susan Roy	2-Oct-23	https://uwaterloo.ca/games-institute/news/gi-faculty-members-secure- cfi-funding
GI Members at the Urgency of Social Justice	News Bite	Dr. Brianna Wiens, Dr. Shana MacDonald, Jay Smith, Jared Cubilla, Sid Heeg, Dr. Marcel O'Gorman	10-Oct-23	https://uwaterloo.ca/games-institute/news/gi-members-urgency-social-justice
The Light Within Interactive Display	News Bite	Ludwig Wilhelm Wall	7-Nov-23	https://uwaterloo.ca/games-institute/news/light-within-interactive-display
Physiological Measures for Games and VR: Novel Tools and Approaches - A Workshop	News Bite	Dr. John Muñoz	13-Nov-23	https://uwaterloo.ca/games-institute/news/physiological-measures-games-and-vr-novel-tools-and
GI Members Participate in Royal Society of Canada Symposium	News Bite	Marco Moran-Ledesma, Sid Heeg, Pamela Maria Schmidt, Agata Antkiewicz	20-Nov-23	https://uwaterloo.ca/games-institute/news/gi-members-participate-royal-society-canada-symposium
The Psychology of Fun and Frustration	News Bite	Dr. Nick Bowman, Dr. Eugene Kukshinov	21-Nov-23	https://uwaterloo.ca/games-institute/news/psychology-fun-and-frustration
Physiological Measures for Games and VR: Novel Tools and Approaches	Research Spotlight	Dr. John Muñoz, Ifi Mavridou	12-Sep-23	https://uwaterloo.ca/games-institute/blog/physiological-measures-games-and-vr-novel-tools-and
Dr. Cayley MacArthur Gives Keynote Speech at the Jeux & Accessibilité Conference	Research Spotlight	Dr. Cayley MacArthur	12-Sep-23	https://uwaterloo.ca/games-institute/blog/dr-cayley-macarthur-gives-keynote-speech-jeux-accessibilite
ICGaN 2023 - Isolation and Return Through the World of Hybrid Viewing	Research Spotlight	Alex Fleck, Lindsay Meaning	26-Sep-23	https://uwaterloo.ca/games-institute/blog/icgan-2023-isolation-and-return-through-world-hybrid-viewing
The Legacy of the Stickers: A Snapshot of Florian Marcher's Time at the GI	Research Spotlight	Florian Marcher	3-Oct-23	https://uwaterloo.ca/games-institute/blog/legacy-stickers-snapshot-florian-marchers-time-gi
Dr. Cayley MacArthur and the Quest for the Triple E (EEE) Degrees	Research Spotlight	Dr. Cayley MacArthur	20-Nov-23	https://uwaterloo.ca/games-institute/blog/dr-cayley-macarthur-and-quest-triple-e-eee-degrees
Pay it Forward: Five Lessons from a Departing Postdoctoral Fellow	Research Spotlight	Dr. Hector Perez	27-Nov-23	https://uwaterloo.ca/games-institute/blog/pay-it-forward-five-lessons-departing-postdoctoral-fellow
Welcome Back to Season Two	GI Podcast	Toben Racicot, Sid Heeg	2-Feb-23	https://podcasts.apple.com/ca/podcast/038-welcome-back-to-season-two/id1465789684?i=1000597913956
Boardgame Design with AC Atienza	GI Podcast	Toben Racicot, Sid Heeg, AC Atienza (A)	3-Mar-23	https://podcasts.apple.com/ca/podcast/039-board-game-design-with-ac-atienza/id1465789684?i=1000602790847
Haptic Experiences with Oliver Schneider	GI Podcast	Toben Racicot, Sid Heeg, Dr. Oliver Schneider	10-Apr-23	https://podcasts.apple.com/ca/podcast/040-haptic-experiences-with-oliver-schneider/id1465789684?i=1000607750838
Social Consensus and Empathy with Dr. Steve Wilcox	GI Podcast	Toben Racicot, Sid Heeg, Dr. Steve Wilcox (A)	5-May-23	https://podcasts.apple.com/ca/podcast/041-social-consensus-and-empathy-with-dr-steve-wilcox/id1465789684?i=1000611900409
Social Media and Activism with Dr. Brianna Wiens	GI Podcast	Toben Racicot, Sid Heeg, Dr. Brianna Wiens	9-Jun-23	https://podcasts.apple.com/ca/podcast/042-social-media-and-activism-with-dr-brianna-wiens/id1465789684?i=1000616298681
Living History and the DMZ Project with Dr. Haria Ho	GI Podcast	Toben Racicot, Sid Heeg, Dr. Daria Ho	7-Jul-23	https://podcasts.apple.com/ca/podcast/043-living-history-and-the-dmz-project-with-dr-daria-ho/id1465789684?i=1000619919820

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Title	Category	Researchers	Date	Link
Serious Games for the Aging Population with Dr. Lili Liu and Dr. Hector Perez	GI Podcast	Toben Racicot, Sid Heeg, Dr. Lili Liu, Dr. Hector Perez	4-Aug-23	https://podcasts.apple.com/ca/podcast/044-serious-games-for-theaging-population-with-dr/id1465789684?i=1000623469560
Lord of the Rings and Adaptation with Dr. Neil Randall	GI Podcast	Toben Racicot, Sid Heeg, Dr. Neil Randall	1-Sep-23	https://podcasts.apple.com/ca/podcast/lord-of-the-rings-and-adaptation-with-dr-neil-randall/id1465789684?i=1000626473734
Home-Away-Home with Dr. Derritt Mason	GI Podcast	Toben Racicot, Sid Heeg, Dr. Derritt Mason	6-Oct-23	https://podcasts.apple.com/ca/podcast/046-home-away-home-with-dr-derritt-mason/id1465789684?i=1000630461142
Theatre and Narrative Games with Shawn Desouza- Coelho	GI Podcast	Toben Racicot, Sid Heeg, Shawn Desouza-Coelho (A)	10-Nov-23	https://podcasts.apple.com/ca/podcast/047-theatre-and-narrative-games-with-shawn-desouza-coelho/id1465789684?i=1000634407618
Adapting Player Experience with Joe Tu	GI Podcast	Toben Racicot, Sid Heeg, Joseph Tu	1-Dec-23	https://podcasts.apple.com/ca/podcast/048-adapting-player-experience-with-joe-tu/id1465789684?i=1000637436734
Spring 2023: Games Institute Globetrotters	Instant Replay	ALL		https://uwaterloo.ca/games-institute/sites/default/files/uploads/documents/7-s23_instant_replay-5_0.pdf
Winter 2023: Collaboration, Cooperation and Connection	Instant Replay	ALL		https://uwaterloo.ca/games-institute/sites/default/files/uploads/documents/w23instant_replay.pdf
Fall 2023: Gathering Global Guests	Instant Replay	ALL		https://uwaterloo.ca/games-institute/sites/default/files/uploads/documents/8-f23-instant-replaypdf
Impact Report 2022	Instant Replay	ALL		https://uwaterloo.ca/games-institute/our-research/research-reports/impact-report-2022
Seas the Day	Knowledge Translation Poster	Dr. John Muñoz, Samira Mehrabi		
Energize Play for Reality: Conveying Sustainability Challenges Through Game Mechanics	Knowledge Translation Poster	AC Atienza		
Interactive Training Tool For Injury Assessment of a Human Joint	Knowledge Translation Poster	Marco A. Moran-Ledesma		
Building Vaccine Confidence Infographics	Knowledge Translation Poster	Dr. Shana McDonald		

Publications and outreach

Book Chapters

- 1. "The Tropes: Metaphor and Its Friends" by **Dr. Randy Harris** was published in the *Routledge Handbook of Language and Persuasion*.
- 2. "Rhetoric, Linguistics, and the Study of Persuasion: An Overview and an Introduction" by **Dr. Randy Harris** and Jeanne D. Fahnestock were published in the *Routledge Handbook of Language*and Persuasion.
- 3. "Logic and algorithms in computational linguistics" by **Dr. Randy Harris** was published in *Rules* are *Rules: Rhetorical Figures as Algorithms*.

First Person Scholar Articles

- 1. Christopher Howell. "Enchanted Outer Worlds." Commentary, January 31.
- 2. Aleksander Franiczek. "Reconceiving Player Agency with Disco Elysium." Essay, January 31.

- 3. Luke Arnott. "To Grasp GAMEBOOKS, Turn to MEDIA ARCHAEOLOGY." Essay, January 31.
- 4. Scott DeJong "Review of Writing for Games: Theory and Practice by Hannah Nicklin." Book Review, January 31.
- 5. Zain Zahran. "The Image Stares Back: Spectacular Violence In Danganronpa." Commentary, December 8.
- 6. Michael Stamper. "Water, Survival-Horror's Most Untapped Potential." Essay, December 8.
- 7. Alexander Hurezeanu. "EverQuest and the Progressive Nostalgia of Project 1999." Essay, December 8.
- 8. Serafina Paladino. "Nostalgia in Play: How Video Games Shape a Player's Coming of Age." Commentary, December 8.
- 9. Nathan Schmidt. "Please Save the Booklet for Future Reference: The Meaning and Value of Manual Archives." Essay, December 8.

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First Person Scholar Podcast Episodes

- 1. "Oops, Did I Do That? Benevolence, Malevolence, and Playing God in Video Games." First Person Podcast. Collin Walsh, **Sabrina Sgandurra**, and Dakota Pinheiro. January 31.
- 2. "War... Changes? Exploring the Popularity of Post Apocalyptic Settings in Video Games." First Person Podcast. Collin Walsh, Dakota Pinhero, Christophe McMahon, and Autumn Wright. January 31.
- 3. "Min/Maxing and The Economy of Digital Love." First Person Podcast. Collin Walsh, Sabrina Sgandurra, Lyne Dwyer, and Sarah Chrstina Ganzon, March 1.
- 4. "The Bitter Rind: Exploring the Paradoxical Attraction to Punishment and Extreme Difficult." First Person Podcast. Collin Walsh, Aleksander Franiczek, Ruby Seals, Spencer Baughman, March 1.

Journal Articles

- 1. "An Aperiodic Monotile" by David Smith, Joseph Samual Myers, **Dr. Craig S. Kaplan**, and Chaim Goodman-Strauss was published in *arXiv*.
- 2. "Can Artificial Intelligence be used to Improve the Quality of Vision in Patients with Amblyopia? The First Digital Pill in Medicine Administered Under Al" by Robert Hess and **Dr. Benjamin Thompson** was published in the *Expert Review of Ophthalmology*.
- 3. "Comprehending the Crypto-Curious: How Investors and Inexperienced Potential Investors Perceive and Practice Cryptocurrency Trading" by Hilda Hadan, Dr. Leah Zhang-Kennedy, Dr. Lennart Nacke, and Dr. Ville Mäkelä was published in the International Journal of Human-Computer Interaction.
- 4. "Development of Classifiers to Determine Factors Associated with Older Adult's Cognitive Functions and Game User Experience in VR Using Head Kinematics" by **Dr. John Muñoz,** Faraz Ali, Aysha Basharat, **Samira Mehrabi, Dr. Michael Barnett-Cowan, Dr. Shi Cao,** Laura Middleton, and **Dr. Jennifer Boger** was published in Transactions on Games.
- 5. "Digital Storytelling with Persons Living with Dementia: Elements of Facilitation, Communication, Building Relationships, and Using Technology" by Kara Hollinda, Christine Daum, Adriana Rios Rincón and **Dr. Lili Liu** was published in the Journal of Applied Gerontology.
- 6. "Exploring User Perspectives on ChatGPT: Applications, Perceptions, and Implications for Allntegrated Education" by **Dr. Reza Hadi Mogav**i, Chao Deng, Justin Juho Kim, Pengyuan Zhou, Young D. Kwon, Ahmed Hosny Saleh Metwally, Ahmed Tlili, **Simone Bassanelli**, Antonio Bucchiarone, Sujit Gujar, **Dr. Lennart Nacke**, and Pan Hui was published in *arXiv*.
- 7. "Harnessing Brain Plasticity to Improve Binocular Vision in Amblyopia: An Evidence-Based Update" by **Dr. Benjamin Thompson**, Marica Concetta Morrone, Peter Bex, Anthony Lozama, and Berhard Sabel was published in the *European Journal of Ophthalmology*.
- 8. "An Ontology for Modelling Users' Profiles and Activities in Gamified Education" by Paula Palomino, Armando Toda, Luiz Rodrigues, Wilk Oliveira, **Dr. Lennart Nacke**, and Seiji Isotani was published in *Research and Practice in Technology Enhanced Learning*.
- 9. "PalmGazer: Unimanual Eye-hand Menus in Augmented Reality" by Ken Pfeuffer, Jan Obernolte, Felix Dietz, **Dr. Ville Mäkelä**, Ludwig Sidenmark, Pavel Manakhov, Minna Pakanen, and Florian Alt was published in *arXiv*.
- 10. "Predicting User Types with Symbolic Images: An Empirical Validation Based on Two Card-Sorting Studies" by Paula Palomino, Luiz Rodrigues, Alessandra Luz, Armando Toda, **Dr. Lennart**

- Nacke, and Seiji Isotani was published in Entertainment Computing.
- 11. "The Queer and Feminist Worlds of Witches & Magical Beings in Feminist YA Graphic Novels" by **Dr. Shana MacDonald** was published in *MAI*.
- 12. "RecHap: An Interactive Recommender System for Navigating a Large Number of Mid-Air Haptic Designs" by **Karthikan Theivendran**, Andy Wu, William Frier, and **Dr. Oliver Schneider** was published in *Transactions on Haptics*.
- 13. "Reparative Play in Dungeons and Dragons" by **Guiseppe Femia** was published in the International *Journal of RolePlaying*.
- 14. "Sensory, Reweighting: A Common Mechanism for Subjective Visual Vertical and Cybersickness Susceptibility" by William Chung and **Dr. Michael Barnett-Cowan** was published in Virtual Reality.
- 15. "Transforming Relations Through Oral History Performance: Restorative Justice and the DOHR Project" by **Dr. Kristina Llewellyn**, Jennifer Llewellyn, **Dr. Jennifer Roberts-Smith**, Gerry Morrison, Tony Smith, and Tracy Dorrington-Skinner was published in the Journal of Applied Theatre and Performance.
- 16. "Virtual Reality as a Tool to Explore Multisensory Processing Before and After Engagement in Physical Activity" by **Samira Mehrabi, Dr. John Muñoz, Dr. Michael Barnett-Cowan,** Aysha Basharat, Laura Middleton, **Dr. Shi Cao,** and **Dr. Jennifer Boger** was published in Frontiers in Aging Neuroscience.

Non-referred Articles

- 1. "ADE for Games Communities Overview" by **Sophia Richardson, Dr. Daniel Harley,** and **Dr. Gerald Voorhees** was published on the ADE Games and Speaker Series website by the Games Institute..
- 2. "The Al Arms Race Highlights the Urgent Need for Responsible Innovation" by **Dr. Marcel O'Gorman** was published in The Conversation.
- 3. "How to Write Better CHI Papers (with LaTeX in Overleaf)" by **Dr. Lennart Nacke** was published in Extended Abstracts of the 2023 CHI Conference on Human Factors in Computing Systems.
- 4. "Afterword: The Many Voices of Modern Physics" by **Dr. Randy Harris** was published in The Many voices of Modern Physics by the University of Pittsburgh Press.
- 5. "The Stabbing Attack at the University of Waterloo Underscores the Dangers of Polarizing Rhetoric about Gender" by **Dr. Shana MacDonald** and Dr. Alysia Kolentsis was published in The Conversation.
- 6. "Summary of André Brock The Changing Same: Blackness, Representation, and Video Games" by **Sophia Richardson, Dr. Daniel Harley,** and **Dr. Gerald Voorhees** was published on the ADE Games and Speaker Series website by the Games Institute.
- 7. "Summary of Ashlee Bird From Custer's Revenge to Red Dead Redemption: Changing the Language of Indigenous Representation in Video Games" by **Sophia Richardson, Dr. Daniel Harley,** and **Dr. Gerald Voorhees** was published on the ADE Games and Speaker Series website by the Games Institute.
- 8. "Summary of D. Squinkifier and Jess Marcotte Structures of Care and Accessibility" by **Sophia Richardson, Dr. Daniel Harley, and Dr. Gerald Voorhees** was published on the ADE Games and Speaker Series website by the Games Institute.

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- 9. "Summary of Elaine Gómez-Sanchez Impact of Genuine and Mindful Inclusion" by **Sophia Richardson, Dr. Daniel Harley,** and **Dr. Gerald Voorhees** was published on the ADE Games and
 Speaker Series website by the Games Institute.
- 10. "Summary of Katta Spiel Researching Disability and Play: Where's the Fun in That?" by **Sophia Richardson, Dr. Daniel Harley,** and **Dr. Gerald Voorhees** was published on the ADE Games and Speaker Series website by the Games Institute.
- 11. "Summary of Kishonna Gray, Liz Nilsen, Rhona Hanning Just Relationships for Research" by **Sophia Richardson, Dr. Daniel Harley,** and **Dr. Gerald Voorhees** was published on the ADE Games and Speaker Series website by the Games Institute.
- 12. "Summary of Kelly Laurila, Hector Perez Indigenous Research and Epistemology" by **Sophia Richardson, Dr. Daniel Harley**, and **Dr. Gerald Voorhees** was published on the ADE Games and Speaker Series website by the Games Institute.
- 13. "Summary of Triskal DeHaven, Katta Spiel, Cayley MacArthur Designing for Disability and Accessibility" by **Sophia Richardson, Dr. Daniel Harley,** and **Dr. Gerald Voorhees** was published on the ADE Games and Speaker Series website by the Games Institute.
- 14. "Universities Need to Take Lead Role in Providing COVID-Safe Learning" by Anna Drake, Honor Brabazon, and **Dr. Kristina Llewellyn** was published by Policy Options.
- 15. "User Experience Design and Research in Games" by **Dr. Lennart Nacke** was published in Extended Abstracts of the 2023 CHI Conference on Human Factors in Computing Systems.

Media Appearances

- 1. **Dr. Ben Thompson** was interviewed on the podcast CBC Quirks on December 31st, 2022.
- 2. **Dr. Jennifer Whitson** and **Dr. Shana Macdonald** were interviewed by Terry Lender of the Toronto Star for the article "First pandemic of social media age a communications failure."
- 3. **Dr. John Muñoz** spoke on Rogers TV about how to work with VR games and how they can be used to assist people living with dementia.
- 4. **Jonathan Baltrusaitis** had his PhD work on the use of digital technology to be used in war memorials showcased in The Waterloo Region Record.
- 5. **Dr. Kishonna Gray** was interviewed by Kotaku in the article "The Brilliant Scholar Who's Challenging Racism In Game Design."
- 6. **Dr. Kristina Llewellyn** was interviewed in The Waterloo Region Record about student wellness in schools and how it correlates to academic achievement.
- 7. **Dr. Lai-Tze Fan** was interviewed by The Star about her research on Al and voice assistants and the gendered way things like Alexa are constructed and built.
- 8. **Dr. Lili Liu** was interviewed by Isabel Buckmaster of City News Kitchener for the article "Searchand-rescue research project educates first responders on dementia wellness checks."
- 9. **Dr. Marcel O'Gorman** was interviewed by Global News in "How one Ontario city is blazing the trail for public sector Al use."
- 10. **Dr. Michael Barnett-Cowan** was interviewed on CBC Radio and CTV News about the work of the Multisensory Brain and Cognition Lab.
- 11. Dr. Shana MacDonald was a guest on The Big Story podcast in the episode "Did online rhetoric

lead to violence in the classroom?"

12. **Dr. Shana MacDonald** and **Dr. Brianna Wiens** were interviewed by the Waterloo Region Record in "Social media sparking new feminist wave, say Waterloo researchers."

Conferences

Conference Presentations

AGE-Well Annual Conference – October 24 – 26

1. **Dr. Lili Liu, Dr. Hector Perez**, C. Daum, E. Letts, and Antonio Miguel Cruz. "Validation of a Scale to Assess an Individual Living with Dementia's Risk of Getting Lost."

Canadian Game Studies Association – June 6 - 9

- 1. Aleksander Franiczek. "Interpreting Gameplay Experience through Narrative Design."
- 2. Dr. Betsy Brey. "Queer Dialogics: A Method for the Study of Video Game Narrative."
- 3. Christine Tran and Dr. Jennifer Whitson. "Seminar/ Workshop: Collaborative Co-authorship."
- 4. **Dr. Jason Hawreliak** (A) and Arianna Maiorani. "Meaning in Motion: A Kinesemiotic Approach to Videogame Analysis."
- 5. Guiseppe Femia. "Reparative Play as Disability Narrative Methodology."
- 6. **Dr. Michael Hancock** (A). "Retelling and Replaying: The Time Loop in Videogame Adaptations of Myths."
- 7. **Dr. Steve Wilcox** (A). "Interpretive Agency: Strategies and Tactics for Developing Moral Agency."

Conference on Human Factors in Computer Systems – April 23 - 28

1. Dr. Ville Mäkelä (Session Chair). "Student Game Competition."

Digital Games Research Association – June 19 - 23

1. **Sabrina Sgandurra**. "Our Player Friend Here... They Already Hold the Key...": Redefining Genre Limits in Inscryption."

Game Developers Conference – March 17 - 21

1. **Dr. John Muñoz**, Ifigeneia Mavridou, and Romain Trachel. "Biometrics: Novel Tools, Methodologies, and Practices."

International Communication Association – May 25 - 29

1. **Dr. Brianna Wiens** and **Dr. Shana MacDonald**. "The Feminine Urge to RESIST: Feminist Memes as Affective Socio-Political Vernaculars."

International Conference on Aging, Innovation, and Rehabilitation – May 8

1. Samira Mehrabi, Dr. John Muñoz, Sarah Mazen, Aysha Basharat, Dr. Shi Cao, Dr. Jennifer Boger, Dr. Michael Barnett-Cowan, and Laura Middleton. "Exploring the Feasibility and Usability of a Custom-made VR Exergame as a Home-Based Exercise Tool in Older Adults."

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International Conference on Games and Narrative – May 15 – 19

The International Conference on Games and Narrative (ICGaN) is an initiative spearheaded by GI graduate students and faculty members from the Games and Narrative Reading Group (GNRG). The conference has enabled GI members and the GI as a research institute to champion the interdisciplinary work of games scholars around the globe while also providing GI graduate student members with HQP opportunities to act as committee members, reviewers, moderators, panel chairs, volunteers, and presenters.

Committee Members

- 1. Aleksander Franiczek (Communications Committee)
- 2. Alexander Fleck (Logistics Organizing Committee)
- 3. **Jenn Rickert** (Content Committee)
- 4. **Joey Femia** (Programme Committee)
- 5. **Dr. Ken Hirschkop** (Conference Co-Chair)
- 6. Lindsay Meaning (Logistics Organizing Committee)
- 7. **Dr. Neil Randall** (Conference Co-Chair)
- 8. Nicholas Hobin (Content Committee)
- 9. Pamela Maria Schmidt (Professional Conference Organizer)
- 10. Rebecca Sherlock (Communications Committee)
- 11. Ritika Puri (Content Committee)

Panel Chairs

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- 1. Aleksander Franiczek. "Game Systems: Character and Narrative Agency."
- 2. Alexander Fleck. "Are You Afraid of the Dark? Aspects of Horror in Games."
- 3. Alexander Fleck. "On Form: Structural Analysis of Game Narratives."
- 4. **Dr. Hector Perez.** "Serious Game Projects: The Health Care Sector."
- 5. **Dr. Ken Hirschkop**. "Transmedial Narrative Worlds."
- 6. Lindsay Meaning. "Playing with Paratext: History, Literature, and Blockchain."
- 7. Lindsay Meaning. "Strong Female Character: Weaponized Sexuality, Trauma and Recovery."
- 8. Mohamed Fouda. "Capital Ideas (and Alternatives) in Games."
- 9. **Mohamed Fouda**. "Mapping Queerness and "The Other" in Virtue Systems, Character, and Space."
- 10. **Mohamed Fouda**. "Shaping the Shadowverse: Language, Immersion, Time, Community, and Character."
- 11. Dr. Neil Randall. "Game Worlds: Narrative, Experience, and Ontology."
- 12. Nicholas Hobin. "Players and Characters: The Virtual Self."

- 13. **Nicholas Hobin.** "Telling Stories Through Worlds: Game Objects, Architecture, and Nonhuman Animals."
- 14. Dr. Stuart Hallifax. "Who Makes the Game: Design, Development, Representation."
- 15. Toben Racicot. "Conversations with Games: Emergent Narratives and Gameplay Experience."
- 16. Dr. Will Zhao. "Endless Possibilities: Innovation and Subversion in Game Systems."

Presentations

- 1. Aleksander Franiczek. "Immersion as Narrative Engagement and Player Desire."
- 2. Dr. Betsy Brey. "Navigating Non-Binaries: Assessing the Queerness of Digital Place-Making."
- 3. Dr. Geneva Smith. "Creating Believable Stories with NPCs."
- 4. **Dr. Jason Hawreliak** and Paul Drotos. "More than Just Vibes: A Multimodal Approach to Atmospheric Narrative Analysis in Videogames."
- 5. **Dr. Kishonna Gray** (Keynote Speaker). "Narrating Race: Intersectional Practices in Design and Digital Gaming."
- 6. Noel Brett. "Political Conversations with Games."
- 7. Sasha Soraine. "Conversations with Games: Emergent Narratives and Gameplay Experience."
- 8. **Sid Heeg** and **Pamela Maria Schmidt**. "Horror As Medium: An Examination of Environmental Horror in Video Games."

Academic Streaming Sessions

- 1. Aleksander Franiczek. Disco Elysium.
- 2. **Dr. Ken Hirschkop**. *Civilization VI*.
- 3. Nicholas Hobin. *Stray*.
- 4. Pamela Maria Schmidt and Toben Racicot. The Legend of Zelda: Breath of the Wild.

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Workshops

1. **Toben Racicot.** "Narrative Co-Creation Workshop."

Additional Volunteers

- 1. AC Atienza (Logistical Support)
- 2. Alexander Glover (Technical Support)
- 3. Dr. Betsy Brey (Submission Reviewer)
- 4. **Dr. Gerald Voorhees** (Submission Reviewer)
- 5. **Jay Smith** (Logistical Support)
- 6. **Joseph Tu** (Photographer)
- 7. Sabrina Sgandurra (Submission Reviewer)
- 8. **Sahand Ajami** (Logistical Support)

- 9. **Sid Heeg** (Submission Reviewer, Communications Manager)
- 10. **Sina Torabi** (Logistical Support)

Institute of Electrical and Electronics Engineers World Haptics Conference – July 10 - 13

- 1. Donal Degraen, Georg Freitag, Bruno Fruchard, **Bibhushan Raj Joshi**, Alexander Ramian, Nihar Sabnis, and Dennis Wittchen. "CollabJam: Collaborative Rapid-Prototyping of Vibrotactile Patterns for Multi-Actuator Interfaces."
- 2. Mohamed Eid, and **Dr. Oliver Schneider** (Sessional Chair). "Vibrotactile and Electrotactile Displays."

International Society of Physical and Rehabilitation Medicine – June 4 - 8

1. **Dr. John Muñoz**, Jose Lopez, Felipe Villada, and David Lopez. "Virtual Reality Exergames in Rehabilitation."

International Society of Posture and Gait Research – July 9 - 13

1. Megan Goar, **Dr. Michael Barnett-Cowan**, William McIlroy, and Brian Horslen. "Sensorimotor Gain Reweighting of Vestibular Reflexes in the Presence of Vestibular-Light Touch Conflict."

Interservice/Industry Training, Simulation, and Education Conference – November 27 – December 1

1. **Dr. John Muñoz**. "ViTAL (Virtual Training Augmentation Layer)."

Jeux & Accessibilité Montréal – August 17 – 18

1. **Dr. Cayley MacArthur.** "Can Making Games Inclusively Help to Make More Inclusive Games?"

Leadership Committee for English Education in Quebec – February 7

1. **Dr. Kristina Llewellyn** and Jennifer Llewellyn. "Restorative Justice in Education."

PasDas Data Summit – March 30 – 31

1. **Dr. Randy Harris.** "Human-like Linguistic Generalizations, Emergent Syntax, and Rhetorical Figuration."

RhetCanada 2023 – May 30 – June 1

1. **Dr. Randy Harris.** "Rhetorical Figures and Emergency Syntax."

Timing Research Forum – October 4 - 6

1. Dr. Michael Barnett Cowan. "Temporal and Multisensory Processing in Virtual Reality."

Conference Proceedings

Annual Symposium on Computer-Human Interaction in Play – October 10 - 13

CHI PLAY was started by GI faculty member Dr. Lennart Nacke. It has been a valuable conference experience for many of the GI's student members in providing them with opportunities to present, moderate, and volunteer at an internationally renowned conference experience.

Organizing Committee

1. Alessandra Luz (Engagement Chair)

- 2. Ali Rizvi (Local Arrangements Chair)
- 3. **Dr. Daniel Harley** (Student Design Competition Chair)
- 4. **Derrick Wang** (Interactivity and Play Chair)
- 5. **Dr. Jennifer Whitson** (General Co-Chair)
- 6. **Dr. Jim Wallace** (General Co-Chair)
- 7. **Ken Jen Lee** (Student Volunteer Chair)
- 8. **Dr. Pejman Mirza-Babaei** (Connections Chair)
- 9. **Veen Wong** (Accessibility Chair)

Panel Chairs

- 1. Anke Reinschlüssel and Alessandra Luz. "Interactivity & SGDC Streams."
- 2. Anke Reinschlüssel and Alessandra Luz. "Hybrid post-conference gaming session."
- 3. Anke Reinschlüssel and Alessandra Luz. "Hybrid pre-conference gaming session."
- 4. Anke Reinschlüssel and Alessandra Luz. "Did R2 kill player 1?"
- 5. Cody Phillips and Sukran Karaosmanoglu. "Esports & Toxicity."
- 6. Derrick M. Wang, Dennis Reidsama, and Licinio Roque. "Interactivity Lightning Round."
- 7. **Dr. Jennifer Whitson**. "Banquet Keynote."
- 8. **Dr. Jennifer Whiston**. "Inside Industry: Game Marker's Panel."
- 9. **Dr. Jennifer Whitson, Dr. Jim Wallace**, Guo Freeman, Scott Batman, Regan Mandryk, Silvia Ruzanka, **Dr. Daniel Harley**, Dennis Reidsma, **Derrick Wang**, and Licinio Roque. "Conference Closing, Awards, and Hand Off."
- 10. **Dr. Jim Wallace, Dr. Jennifer Whitson**, Erik Harpstead, Beth Bonsignore, Julian Frommel, Anke Reinschlüssel, and **Alessandra Luz**. "Conference Opening."
- 11. Dr. Maximilian Altmeyer (A) and Christos Mousas. "Works-in-Progress Lightning Round."
- 12. Dr. Pejman Mirza-Babaei. "Educational Games Aren't Bad, But They Need Attention!"
- 13. Dr. Pejman Mirza-Babaei. "The Role of Generative Al in Games Research."
- 14. Scott Bateman and Dr. Sebastien Cmentowski. "Playing with Materials."
- 15. Silvia Ruzanka and **Dr. Daniel Harley.** "Student Game Design Competition Lighting Round."
- 16. Vero Vanden Abeele, Phoebe Toups Dugas, **Dr. Jennifer Whitson**, and **Dr. Jim Wallace**. "CHI PLAY Town Hall."

Panel Presentations

- 1. **Sabrina Sgandurra**, Scott DeJong, Winnie Kan, Effie Argyropoulos, and Kahentawaks Tiewishaw. "Educational Games Aren't Bad, But They Need Attention!"
- 2. **Dr. Stuart Hallifax** (A), Jayme Last, Graeme Lenonn, Shahrin Kahn, and Damian Sommer. "Inside Industry: Game Maker's Panel."

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Proceedings

- 1. Audrey Serna, **Dr. Stuart Hallifax** (A), and Elise Lavoue. "Investigating the Effects of Tailored Gamification on Learners' Engagement Over Time in a Learning Environment."
- 2. German Schabert, Marc Schubhan, Michael Shcmitz, and **Dr. Maximilian Altmeyer** (A). "Faster, Harder? Investigating the Impact of Changing Background Music Speed on Gameplay Performance and Player Experience in an Endless Runner Game."
- 3. Eftychia Roumelioti, **Federica Gini**, Antonia Laura Philipa Jakobi, Annapaola Marconi, Boglárka Nyúl, Maria Paola Paladino, Gianluca Schiavo, and Massimo Zancanaro. "StandByMe: a Gamified Educational Platform to Raise Awareness on Gender-Based Violence."
- 4. Jana Franceska Funke, Anja Schikorr, **Sukran Karaosmanoglu**, Teresa Hirzle, Frank Steinicke, and Enrico Rukzio. "Tiles to Move: investigating Tile-Based Locomotion for Virtual Reality."
- 5. **Joseph Tu, Derrick Wang, Ekaterina Durmanova** (A), **Dr. Lennart Nacke.** "LEVI: Exploring Possibilities for an Adaptative Board Game Design."
- 6. **Joseph Tu, Arielle Grinberg, Dr. Mark Hancock,** and **Dr. Lennart Nacke**. "Multimedia Showdown: A Comparative Analysis of Audio, Video, and Avatar-Based Communication."
- 7. Katie Seaborn, **Dr. Katja Rogers** (A), Somang Nam, and Miu Kojima. "Kawaii Game Vocalics: A Preliminary Model."
- 8. Michel Wijkstra, **Dr. Katja Rogers** (A), Regan Mandryk, Remco Veltkamp, and Julian Frommel. "Help, My Game is Toxic! First Insights from a Systematic Literature Review on Intervention Systems for Toxic Behaviors in Online Video Games."
- 9. **Dr. Sebastian Cmentowski, Sukran Karaosmanoglu,** Fabian Kievelitz, Frank Steinicke, and Jens Harald Krueger. "A Matter of Perspective: Designing Immersive Character Transitions for Virtual Reality Games."
- 10. Silvia Ruzanaka and Dr. Daniel Harley. "Student Game Design Competition Lightning Round."
- 11. **Sukran Karaosmanoglu**, Tom Schmolzi, and Frank Steinicke. "Playing with Friends or Strangers? The Effects of Familiarity between Players in an Asymmetric Multiplayer Virtual Reality Game."
- 12. **Dr. Stuart Hallifax** (A), **Dr. Maximilian Altmeyer** (A), **Kristina Nagel** (A), Maria Rauschenberger, and **Dr. Lennart Nacke**. "From Points to Progression: A Scoping Review of Game Elements in Gamification Research with a Content Analysis of 280 Research Papers."
- 13. Vahid Ranandeh, and **Dr. Pejman Mirza-Babaei.** "Beyond Equilibrium: Utilizing Al Agents in Video Game Economy Balancing.

Additional Volunteers

- 1. Dr. Cayley MacArthur
- 2. Dr. Leah Zhang-Kennedy
- 3. Natalie Nova

Conference on Human Factors in Computer Systems – April 23 - 28

- 1. **Ahmed Anwar, Tianzheng Shi,** and **Dr. Oliver Schneider**. "Factors of Haptic Experience across multiple Haptic modalities."
- 2. Arman Hafizi, Jay Henderson, Ali Neshati, Wei Zhou, Edward Lank, and Dr. Daniel Vogel. "In-

- vehicle Performance and Distraction for Midair and Touch Directional Gestures."
- 3. Cheryl Lao, Yanting Zhang, **Dr. Daniel Vogel, Dr. Craig S. Kaplan, Dr. Morgan McGuire**, and Victor Zordan. "A Preliminary Study of World Customizability for Virtual Reality Co-Play."
- 4. Daekun Kim, Nikhita Joshi, and **Dr. Daniel Vogel**. "Perspective and Geometry Approaches to Mouse Cursor Control in Spatial Augmented Reality."
- 5. Damien Masson, Sylvain Malacria, Géry Casiez, and **Dr. Daniel Vogel**. "Charagraph: Interactive Generation of Charts for Realtime Annotation of Data-Rich Paragraphs."
- 6. Damien Masson, Sylvain Malacria, **Dr. Daniel Vogel,** Edward Lank, and Géry Casiez. "ChartDetective: Easy and Accurate Interactive Data Extraction from Complex Vector Charts."
- 7. Fabrice Matulic, Taiga Kashima, Deniz Beker, Diachi Suzuo, Hiroshi Fijiwara, and **Dr. Daniel Vogel**. "Above-Screen Fingertip Tracking with a Phone in Virtual Reality."
- 8. Graeme Zinck, Roya Cody, Che Yan, Da-Yuan Huang, Wei Li, and **Dr. Daniel Vogel**. "Evaluating Across-Hinge Dragging with Pen and Touch on Curved and Foldable Displays."
- 9. Jay Henderson, Ali Nesthai, Sachi Mizobuchi, Wei Zhou, **Dr. Daniel Vogel**, and Edward Link. "Interaction Region Characteristics for Midair Barehand Targeting on a Television."
- 10. Jeanine Krath, **Dr. Maximilian Altmeyer** (A), **Dr. Gustavo Tondello** (A), and **Dr. Lennart Nacke**. "Hexad-12: Developing a Developing and Validating a Short Version of the Gamification User Types Hexad Scale."
- 11. **Dr. Katja Rogers** (A), Katie Seaborn. "The Systematic Review-lution: A Manifesto to Promote Rigour and Inclusivity in Research Synthesis."
- 12. **Dr. Leah Zhang-Kennedy**, Saira Aziz, Oluwafunminitemi (Temi) Oluwadare, Lyndon Pan, Zeyu Wu, Sydney Lamorea, Soda Ll, Michael Sun, and **Dr. Ville Mäkelä**. "Passenger Perceptions, Information Preferences, and Usability of Crowding Visualizations on Public Displays in Transit Stations and Vehicle."
- 13. **Dr. Lennart Nacke**. "How to Write Better CHI Papers with LaTeX in Overleaf."
- 14. **Dr. Lennart Nacke, Dr. Pejman Mirza-Babaei**, and Anders Drachen. "User Experience Design and Research in Games."
- 15. **Dr. Marcela Costa Camara Do Bomfim** (A), Erin Wong, Paige Liang, and **Dr. Jim Wallace**. "Design and Evaluation of Technologies for Informed Food Choices."
- 16. **Dr. Pejman Mirza-Babaei**, and Samantha Nicole Stahlke. "Interaction Design (IxD) in Digital Games."
- 17. Raquel Robinson, **Dr. Pejman Mirza-Babaei**, Alberto Alvarez, Muriel Garreta Domingo, Regan Mandryk, and Katherine Isbister. "Games and Play SIG: Connecting Through Society and Playful Technologies."
- 18. **Dr. Sebastian Cmentowski, Sukran Karaosmanoglu, Dr. Lennart Nacke,** Frank Steinicke, and Jens Harald Krueger. "Never Skip Leg Day Again: Training the Lower Body with Vertical Jumps in a Virtual Reality Exergame."

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19. Yen-Ting Yeh, Fabrice Matulic, and **Dr. Daniel Vogel**. "Phone Sleight of Hand: Finger-Based Dexterous Gestures for Physical Interaction with Mobile Phones."

Designing Interactive Systems – July 10 – 14

1. **Dr. Daniel Harley** and **Dr. Cayley MacArthur.** "Sharing Play Spaces: Design Lessons from Reddit Posts Showing Virtual Reality in the Home."

International Conference on Advances in Social Networks Analysis and Mining – November 6 - 9

1. **Dr. Reza Hadi Mogavi**, Dr. Ehasan Ul Haq, Yiming Zhu, Zijun Lin, Haodi Weng, Gareth Tyson, Lik-Hang (Paul) Lee, Tristan Braud, and Pan Hui. "Understanding Catalyst Users in the WallStreetBetsCommunity."

International Conference on Conversational User Interfaces – July 19 - 21

1. **Nima Zargham**, Vino Avanesi, Leon Reicherts, Ava Elizabeth Scott, Yvonne Rogers, and Rainer Malaka. ""Funny How?" A Serious Look at Humor in Conversational Agents."

Guest Lectures

Ashby Dialogue Series – April 19

1. **Chris Lawrence.** "Sheik, Cyborgs, and Twine Games: A Nonbinary Approach to Teaching Game Studies."

Dalhousie University - August 23

1. **Dr. Oliver Schneider.** "The Pursuit of Haptic Experience."

DS Bytes: A Lunchtime Speaker Series

- 1. Dr. Adan Jerreat-Poole. "Glitch: Disability, Feminism, Technology." January 19.
- 2. **Dr. Lai-Tze Fan.** "E.Q. vs. I.Q. Testing Gendered Al in Apple's Siri." March 21.

Geriatric Academic Rounds – November 22

1. **Dr. Lili Liu.** "Managing Risks of Going Missing Among Persons Living with Dementia by Building Capacities of SAR Personnel, First Responders and Communities."

The Institute of Argumentation, Linguistics and Semiotics – January 17

1. **Dr. Randy Harris.** "Transformations and Truthiness: Chomsky Arguing with Searle."

Lupina Foundation Postdoctoral Research Showcase – June 26

1. **Dr. Eugene Kukshinov**. "Well Represented": The Positive Effect of Avatar Customization (via Presence) On Mental Wellbeing in Social VR."

Maths Innovation Research Discovery Days - May 17 - 18

1. **Dr. Lai-Tze Fan**, Axel Ngoga, Ehsan Amjadian, and Koray K. "Mitigating Risks of Al."

New York University Abu Dhabi

1. **Dr. Anita Layton**. "Women in Maths Nights – Featured Speaker."

Projects and Research by English Students Lecture Series

- 1. Toben Racicot. "Everything Should Be Findable: Redesigning Loot in RPGs." January 25.
- 2. Joey Femia. "Failure in Disability Games Studies." March 24.

Shaking up the Archive – June 23

1. **Dr. Shana MacDonald, Dr. Brianna Wiens,** and Nick Ruest. "Activists Archiving the Internet: Social Justice Informed Approaches to Digitally Born Content."

Symposium on Aging Research at the University of Waterloo – May 2

1. **Samira Mehrabi**, Sara Drisdelle, Hanna R. Dutt, and Laura Middleton. "Breaking barriers: Exercise professionals' perspective of remote physical activity supports for older adults during and beyond the pandemic."

Awards and Appointments

Students

- 1. **Aleksander Franiczek** is a recipient of the English Graduate Award for Academic excellent and the Lea Vogel-Nimmo English Graduate Professionalization Award from the Department of English.
- 2. **Amerald Fang** was a finalist in the 2023 GRADflix competition with his video "Hydraulic erosion with game engines."
- 3. **Michael Xu** is a recipient of the Schulich Leader Scholarship, Canada's largest annual science, technology, engineering, and mathematics scholarship.
- 4. **Samira Mehrabi** received the Canadian Institute of Health Research award and attended the Summer Program in Aging as part of it.
- 5. **Toben Racicot** is a recipient of the Independent Graduate Instructor Award for Excellence in Teaching from the Department of English.

Faculty

- Drs. Ben Thompson and Lili Liu are both recipients of the Graham Seed Fund, which seeks
 to support innovative health-care solutions. Congratulations to Thompson on his project
 "Enhancing Adherence to amblyopia treatment using social robotics" and Liu's project
 "Acceptance and usability of the GuardIO, a mobile application to support care partners of
 persons living with dementia."
- 2. **Dr. Cayley MacArthur** was named Equity Co-Chair for the Special Interest Group on Computer-Human Interaction.
- 3. **Dr. Craig S. Kaplan** along with collaborators David Smith, Joseph Samuel Myers, and Chaim Goodman-Straus made a mathematic discovery called the "Einstein" tile, an aperiodic monotile that can cover an infinite plan without creating a repeating pattern. It is the first discovery of its kind! Congratulations to the team for this momentous occasion. Read more on the discovery and what it means for the math community.
- 4. Damien Masson, Sylvain Malacria, **Dr. Daniel Vogel**, Edward Lank, and Géry Casiez won the best paper award for "ChartDetective: Easy and Accurate Interactive Data Extraction from Complex Vector Charts," presented at CHI 2023.
- 5. **Dr. Igor Grossman** was elected to become a member of The Royal Society of Canada's College of new Scholars, Scientists and Artists.
- 6. **Dr. Jennifer Whitson** was a recipient of the Outstanding Performance Award, awarded by the University of Waterloo.

- 7. **Drs. Lai-Tze Fan** and **Randy Harris** both received the Arts Award for Excellence in Research.
- 8. **Dr. Michael Barnett-Cowan** was appointed associate chair of graduate studies in the Department of Kinesiology and Health Science

Other

1. *Terrorarium*, a game developed by GI members in partnership with Stitch Media, was nominated for the best VR/AR Game by the Canadian Game Awards.

People

Departing Members

For more information on the following members and their time at the GI, please see the Membership Breakdown on pg. 61.

- 1. **Ai-Jou Pan** finished her role as a graduate research assistant and returned to her home institution.
- 2. **Alexa Huxley** finished her role as an undergraduate research assistant and returned to her home institution.
- 3. Alizeh Charania finished her role as an undergraduate research assistant and returned to her studies.
- 4. **Anastasiia Avksientieva** finished her role as a research assistant and returned to her home institution.
- 5. **Benjamin Valles** finished his role as an undergraduate research assistant and returned to his studies.
- 6. **Blair Knyspel** finished her role as an undergraduate research assistant and returned to their home institution.
- 7. **Florian Marcher** finished his role as a graduate research assistant and returned to his home institution.
- 8. **Dr. Hector Perez** completed his time as a Postdoctoral Fellow in the School of Public Health Sciences, supervised by Dr. Lili Liu. He will be working with the Hamilton Police Services as a Business and Program Evaluation Specialist.
- 9. **Irtika Khan** finished her role as an undergraduate research assistant and returned to her home institution.
- 10. Jared Cubilla finished his role as an undergraduate research assistant and returned to his studies.
- 11. Jay Ren finished his role as a research intern and returned to his final year of high school.
- 12. Justine Scheifele finished her role as a research assistant and returned to her home institution.
- 13. **Kartik Chinda** finished his role as an undergraduate research assistant and returned to his home institution.
- Kristine Yuan finished her role as an undergraduate research assistant and returned to her studies.

- 15. **Negin Azizi** finished her role as a graduate research assistant and returned to her home institution.
- 16. **Nimun Kaur Bajwa** finished her role as an undergraduate research assistant and returned to her studies.
- 17. **Nirali Modi** finished her role as an undergraduate research assistant and returned to her home institution.
- 18. **Po-Chun Wang** finished his role as an undergraduate research assistant and returned to his home institution.
- 19. **Pradipti Mondal** finished her role as an undergraduate research assistant and returned to her studies
- 20. Ritika Puri finished her role as an undergraduate research assistant and returned to her studies.
- 21. **Sarah Casey** finished her role as a graduate research assistant and returned to her home institution.
- 22. **Siddarth Vagavolu** finished his role as an undergraduate research assistant and returned to his studies.
- 23. Simone Bassanelli finished his role as a research assistant and returned to his home institution.
- 24. Stepan Boiko finished his role as a research assistant and returned to his home institution.
- 25. **Sukran Karaosmanoglu** finished her role as a graduate research assistant and returned to her home institution.
- 26. **Thomas Deffontaines** finished his role as a graduate research assistant and returned to his home institution.
- 27. **Trisha Sharad Pawar** finished her role as an undergraduate research assistant and returned to her studies.
- 28. **Tor-Salve Dalsgaard** finished his role as a graduate research assistant and returned to his home institution.
- 29. *Vanessa Duong* finished her role as an undergraduate research assistant and returned to her studies.

Graduating Members

- 1. Ana Lucia Diaz de Leon Derby successfully defended her MSc thesis "Tickle Trunk: a Toolkit for Communication and Brainstorming Between Hapticians and Non-Hapticians" in May with Dr. Oliver Schneider as supervisor.
- 2. **Dr. Betsy Brey** successfully defended her PhD dissertation in English Language and Literature, "Digital Dialogism: Space, Time, and Queerness in Video Games," in April with **Dr. Gerald Voorhees** and **Dr. Neil Randall** as co-supervisors.
- 3. **Dr. Elise Vist** successfully defended their PhD dissertation in English Language and Literature, "The Intimate Fandoms of Men's Hockey Real Person Fanfiction," in December with Dr. Aimée Morrisson as supervisor.
- 4. **Jay Smith** successfully defended their MA thesis "Representational Queerness Within Marvel's Loki: Liminality through Identity, Genre, and Medium" in December with **Dr. Brianna Wiens** as supervisor.

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5. **Dr. Pierson Browne** successfully defended his PhD dissertation in Sociology, "Doing Transparent and Reproducible Quantitative Sociology," in December with Dr. John McLevey as his supervisor.

Staff Arrivals and Departures

- 1. **Akshana Ranaganathan**, an undergraduate student in the School of Public Health Sciences, joined the GI as the Operations Coordinator for her Winter 2023 co-op term.
- 2. **Elraida Suliman**, an undergraduate student in the department of Sociology and Legal Studies, joined the GI as the Operations Coordinate for her Fall 2023 co-op term.
- 3. **Kyle Mason**, an undergraduate student in the School of Accounting and Finance, joined the GI as the Operations coordinator for her Fall 2023 co-op term.
- 4. **Miguel Illustre**, an undergraduate student in the department of Political Science, joined the GI as the Research Communications Coordinator for his Winter 2023 co-op term.
- 5. **Montana White**, an undergraduate in the department of Psychology, joined the Gl as the Operations Coordinator for her Spring 2023 co-op term.
- 6. **Shae Ashcroft,** a recent graduate student from the department of English Language and Literature, joined the GI as the Research Communications Coordinating for the Spring and Fall 2023 terms.
- 7. **Sophie Valleteau De Moulliac**, an undergraduate student in the Environmental and Business program, joined the GI as the Operations Coordinator for her Winter 2022 co-op term.

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New M	embers	Faculty
 Adeshola Ogunsanya Alizeh Charania Bella Chen Benjamin Valles Jared Cubilla Justine Scheifele Kate Bradley Mackenzie Leclaire Macy Takaffoli 	 10. Nadia Formisano 11. Rachel Heather Jou-ter Woort 12. Ritika Puri 13. Sakeenah Ashique 14. Sarah Casey 15. Tatum Weicker 16. Tiffany Truc Thanh Trinh 17. Trisha Sharad Pawar 	Arts
18. Ali Yamini 19. Amanda Yu 20. Chris Wang 21. Dazhuang Teng 22. Derrick Wang 23. Ellie Sanoubari 24. Faduma Ahmed 25. Jalaja Shanmugalingam	26.Jen Shin 27. Jieun Lee 28. Karthik Prasad 29. Mustapha Unubi Momoh 30. Pradipti Mondal 31. Syed Ali Qasim Rizvi 32. Tianzheng Shi	Engineering
33. Hongliang Lyu 34. Sophia Richardson		Environment
35. Nic Hobson 36. Vanessa Duong		Health
37. Ansh Sharma 38. Kartik Chinda 39. Kristine Yuan 40. Siddharth Vagavolu		Mathematics
41. Ai-Jou Pan42. Federica Gini43. Nima Zargham44. Po-Chun Wang45. Irtika Khan46. Michael Xu47. Tor-Salve Dalsgaard	48. Alexa Huxley 49. Blair Knyspel 50. Nimun Kaur Bajwa 51. Kristina Kölln 52. Negin Azizi 53. Nirali Modi 54. Sukran Karaosmanoglu	International Students (Visiting)
55. Geneva Smith 56. Noel Brett 57. Sasha Soraine 58. Sina Torabi		External Members
59. Dr. Dmytro Chumachenko 60. Dr. Karen Cochrane 61. Dr. Kerstin Dautenhahn 62. Dr. Reza Hadi Mogavi 63. Dr. Sebastian Cmentowski		Professors and Post Doctoral Fellows
64.Georgia Loewen 65.Jay Ren 66.Nick Bowman		Other

2023 Research Members

Member Names	Position	Faculty	Department	Program
Abhishesh Homagain	Master's student	Health	Kinesiology and Health Sciences	Master of Kinesiology
Adan Jerreat-Poole	Faculty	Arts	Communication Arts	Assistant Professor
Ahmed Anwar	Master's student	Engineering	Management and Science Engineering	Master of Applied Science
Alê Luz Lam	PhD candidate	Mathematics	Cheriton School of Computer Science	Doctor of Philosophy in Computer Science
Aleksander Franiczek	PhD candidate	Arts	English Language and Literature	Doctor of Philosophy in English, Essay Section Editor for First Person Scholar
Alexander Glover	Master's student	Engineering	Systems Design Engineering	Master of Applied Science
Alexander Fleck	PhD candidate	Arts	English Language and Literature	Doctor of Philosophy in English
Ali Rizvi	PhD candidate	Engineering	Management Science and Engineering	Doctor of Philosophy in Management Sciences
Ali Yamini	Master's student	Engineering	Electrical and Computer Engineering	Master of Applied Science
Ana Lucia Diaz de Leon Derby	Master's student	Engineering	Systems Design Engineering	Master of Applied Science
Anchit Mishra	Master's student	Mathematics	Cheriton School of Computer Science	Master of Mathematics in Computer Science
Anita Layton	Faculty	Mathematics	Applied Mathematics	Professor
Ansh Sharma	Master's student	Mathematics	Cheriton School of Computer Science	Master of Mathematics in Computer Science
Arden Song	Master's student	Engineering	Management Science and Engineering	Master of Applied Science in Management Sciences
Arielle Grinberg	PhD candidate	Engineering	Management Science and Engineering	Doctor of Philosophy in Management Sciences
Ben Feng	Faculty	Mathematics	Statistics and Actuarial Science	Associate Professor
Ben Thompson	Faculty	Science	School of Optometry and Vision Science	Professor
Betsy Brey	PhD candidate	Arts	English Language and Literature	Doctor of Philosophy in English
Bibhushan Joshi	PhD student	Engineering	Management Science and Engineering	Doctor of Philosophy in Management Sciences
Brianna Wiens	Faculty	Arts	English Language and Literature	Assistant Professor, Co-director of Feminist Think Tank
Catherine Burns	Faculty	Engineering	Systems Design Engineering	Professor
Cayley MacArthur	Faculty	Arts	Stratford School of Interaction Design and Business	Professor
Clark Dickerson	Faculty	Science	Kinesiology and Health Sciences	Professor, Executive Director for the Centre of Bioenginnering and Biotechnology
Colin Ellard	Faculty	Arts	Psychology	Professor
Craig Kaplan	Faculty	Mathematics	Cheriton School of Computer Science	Professor
Dan Vogel	Faculty	Mathematics	Cheriton School of Computer Science	Professor
Daniel Harley	Faculty	Arts	Stratford School of Interaction Design and Business	Assistant Professor
Daria Ho	Faculty	Arts	History	Lecturer
David Bell	Master's student	Engineering	Mechanical and Mechatronics Engineering	Master of Mechanical and Mechatronics Engineering
Derek Robinson	Faculty	Environment	Geography and Environmental Management	Associate Professor
Derrick Wang	PhD student	Engineering	Systems Design Engineering	Doctor of Philosophy in Management Sciences
Diana Moreno Ojeda	PhD candidate	Arts	English Language and Literature	Doctor of Philosophy in English
Edith Law	Faculty	Mathematics	Cheriton School of Computer Science	Associate Professor
Ekaterina Durmanova	Master's student	Engineering	Systems Design Engineering	Master of Engineering in Systems Design Engineering
Ellie Sanoubari	PhD student	Engineering	Systems Design Engineering	Doctor of Philosophy in Systems Design Engineering
Eugene Kushkinov	Postdoctoral fellow	Arts	Stratford School of Interaction Design and Business	Lupina Foundation Postdoctoral Research Fellows

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Member Names	Position	Faculty	Department	Program
Fen-Sang Lien	Faculty	Engineering	Mechanical and Mechatronics Engineering	Professor
Gerald Voorhees	Faculty	Arts	Communications Arts	Associate Professor
Hector Perez	Postdoctoral fellow	Health	School of Public Health Sciences	Aging and Innovation Research Program (AIRP)
Hilda Hadan	PhD student	Engineering	Systems Design Engineering	Doctor of Philosophy in Systems Design Engineering
Hongliang Lyu	Master's student	Environment	Geography and Environmental Management	Master of Environmental Science in Geography
Ian Milligan	Faculty	Arts	History	Professor, Associate Vice-President of Reserach Oversight and Analysis in the Office of Research
Igor Grossman	Faculty	Arts	Psychology	Professor
Isabella Chawrun	PhD student	Health	School of Public Health Sciences	Doctor of Philosophy in Public Health Sciences
Jacob Teng	Master's student	Engineering	Systems Design Engineering	Master of Applied Science in Systems Design Engineering
Jalaja Shanmugalingam	PhD student	Engineering	Management Sciences and Engineering	Doctor of Philosophy in Management Sciences
Jane Tingley	Faculty	Arts	Stratford School of Interaction Design and Business	Assistant Professor, cross-listed between UWaterloo and York University
Jason Grove	Faculty	Engineering	Chemical Engineering	Lecturer, Associate Chair of Undergraduate Studies
Jay Smith	Master's student	Arts	English Language and Literature	Master of Arts in English, Experimental Digital Media
Jen Shin	PhD student	Engineering	Mechanical Mechatronic Engineering	Doctor of Philosophy in Mechanical and Mechatronic Engineering
Jennifer Rickert	PhD candidate	Arts	English Language and Literature	Doctor of Philosophy in English
Jennifer Whitson	Faculty	Arts	Stratford School of Interaction Design and Business, Sociology and Legal Studies	Associate Professor
Jesse Hoey	Faculty	Mathematics	Cheriton School of Computer Science	Professor
Jieun Lee	Master's student	Engineering	Systems Design Engineering	Master of Applied Science in Systems Design Engineering
Jim Wallace	Faculty	Health	School of Public Health Sciences	Associate Professor, cross-appointment with Computer Science
Joey Femia	PhD student	Arts	English Language and Literature	Doctor of Philosophy in English, copy editor for First Person Scholar
John Muñoz-Cardonna	Faculty	Engineering	Systems Design Engineering	Adjunct Assistant Professor
Jonathan Baltrusaitis	PhD student	Arts	English Language and Literature	Doctor of Philosophy in English
Justin Carpenter	PhD student	Arts	English Language and Literature	Doctor of Philosophy in English
Karen Cochrane	Faculty	Arts	Stratford School of Interaction Design and Business	Assistant Professor
Karthik Theivendran	Master's student	Science	Electrical and Computer Engineering	Master of Applied Science in Electrical and Computer Engineering
Kaylena Ehgoetz Martens	Faculty	Health	Kinesiology and Health Sciences	Assistant Professor
Ken Hirschkop	Faculty	Arts	English Language and Literature	Professor
Ken Jen Lee	PhD candidate	Mathematics	Cheriton School of Computer Science	Doctor of Philosophy in Computer Science
Kerstin Dautenhahn	Faculty	Engineering	Electrical and Computer Engineering	Professor
Kevin Harrigan	Faculty	Arts	Stratford School of Interaction Design and Business	Lecturer, Head of Gambling Research Team
Kristina Llewellyn	Faculty	Renison College	Social Developmental Studies	Professor
Lai-Tze Fan	Faculty	Arts	Sociology and Legal Studies	Associate Professor, Director of the U&AI Lab
Leah Zhang-Kennedy	Faculty	Arts	Stratford School of Interaction Design and Business	Assistant Professor

Member Names	Position	Faculty	Department	Program
Leila Homaeian	Postdoctoral fellow	Health	School of Public Health Sciences	
Lennart Nacke	Faculty	Arts	Stratford School of Interaction Design and Business	Professor Associate Director for the HCI Games Group
Lili Liu	Faculty	Health	School of Public Health Sciences	Professor, Dean of the Faculty of Health
Lili Choong	Master's student	Mathematics	Cheriton School of Computer Science	Master of Mathematics in Computer Science
Lindsay Meaning	PhD candidate	Arts	English Language and Literature	Doctor of Philosophy in English
Ludwig Wilhelm Wall	PhD candidate	Mathematics	Cheriton School of Computer Science	Doctor of Philosophy in Computer Science
Luka Mazza	Master's student	Health	School of Public Health Sciences	Master of Science in Publich Health Sciences
Luke Potwarka	Faculty	Health	Recreation and Leisure Studies	Associate Professor, Director of the Spectator Experience and Technology (SEAT) Laboratory, Co-director of the University of Waterloo Interdisciplinary Network (UWIN) for Esports
Mackenzie Leclaire	Master's student	Arts	Sociology and Legal Studies	Master of Arts in Sociology
Marcel O'Gorman	Faculty	Arts	English and Legal Studies	Professor, Unviersity Research Chair, Director of the Critical Media Lab
Marcela Bomfim	PhD candidate	Health	School of Public Health Sciences	Doctor of Philosophy in Public Health Sciences
Marco Moran-Ledesma	PhD candidate	Engineering	Systems Design Engineering	Doctor of Philosophy in Systems Design Engineering
Mark Hancock	Faculty, Staff	Engineering	Management Science and Engineering	Assistant Professor, Associate Director of The Games Institute
Marvin Pafla	PhD candidate	Mathematics	Cheriton School of Computer Science	Doctor of Philosophy in Computer Science
Michael Hancock	Faculty	Arts	English Language and Literature	Sessional Lecturer
Michael Barnett-Cowan	Faculty	Health	Kinesiology and Health Sciences	Associate Professor, Director of Multisensory Brain and Cognition Lab
Mina Momeni	Faculty	Arts	Communication Arts	Assistant Professor
Mustapha Momoh	Master's student	Engineering	Systems Design Engineering	Master of Engineering in Systems Design Engineering
Nadia Formisano	Master's student	Arts	English Language and Literature	Master of Arts in English Rhetoric and Communication Design
Natalie Nova	Master's student	Engineering	Management Science and Engineering	Master of Applied Science in Management Engineering
Neil Randall	Faculty, Staff	Arts	English Language and Literature	Associate Professor, Executive Director of The Games Institute
Nicholas Hobin	PhD candidate	Arts	English Language and Literature	Doctor of Philosophy in English, Book Reviews and Interviews Associate Editor for First Person Scholar
Nicholas Hobson	PhD candidate	Health	Kinesiology and Health Sciences	Doctor of Philosophy in Kinesiology and Health Sciences
Nick Tibert	PhD candidate	Health	Kinesiology and Health Sciences	Doctor of Philosophy in Kinesiology and Health Sciences
Ning Jiang	Faculty	Engineering	Systems Design Engineering	Professor
Oliver Schneider	Faculty	Engineering	Management Science and Engineering	Associate Professor, Director of the Haptics Experience Lab (HX Lab)
Paul Cegys	Faculty	Arts	Communication Arts	Lecturer
Punit Kunjam	Master's student	Mathematics	Cheriton School of Computer Science	Master of Mathematics in Computer Science
Randy Harris	Faculty	Arts	English Language and Literature	Professor
Rebecca Sherlock	PhD candidate	Arts	English Language and Literature	Doctor of Philosophy in English

Member Names	Position	Faculty	Department	Program
Reza Habi Mogavi	Postdoctoral fellow	Arts	Stratford School of Interaction Design and Business	Lupina Foundation Postdoctoral Research Fellows
Rob Burns	Faculty	Health	Kinesiology and Health Sciences	Clinical Instructor
Robert Gauthier	PhD candidate	Health	School of Public Health Sciences	Doctor of Philosophy in Public Health Sciences
Sabrina Sgandurra	PhD candidate	Arts	English Language and Literature	Doctor of Philosophy in English, Editor-in-Chief for First Person Scholar
Sahand Ajami	Master's student	Engineering	Mechanical and Mechatronics Engineering	Master of Applied Science in Mechanical and Mechatronics Engineering
Samira Mehrabi	PhD candidate	Health	School of Public Health Sciences	Doctor of Philosophy in Public Health Sciences
Sarah Casey	Master's student	Arts	English Language and Literature	Master of Arts in English Rhetoric and Communication Design
Sebastian Cmentowski	Postdoctoral fellow	Arts	Stratford School of Interaction Design and Business	Provost's Program for Interdisciplinary Postdoctoral Scholars
Shana MacDonald	Faculty	Arts	Communication Arts	Associate Professor, Co-director of Feminist Think Tank
Shi Cao	Faculty	Engineering	Systems Design Engineering	Associate Professor
Sig Heeg	PhD candidate	Environment	School of Environment, Enterprise, and Development	Doctor of Philosophy in Sustainability Management, Co-host for the Games Institute Podcast, Research Communications Writer for The Games Institute
Steven Bednarski	Faculty	History	St. Jerome's University	Professor, Lab Director for DRAGEN Lab
Susan Elliot	Faculty	Environment	Geography and Environmental Management	Professor
Susan Roy	Faculty	Arts	History	Associate Professor
Suzanne Kearns	Faculty	Environment	Geography and Environmental Management	Associate Professor
Tianzheng Shi	Master's student	Engineering	Management of Science and Engineering	Master of Applied Science
Toben Racicot	PhD candidate	Arts	English Language and Literature	Doctor of Philosophy in English, Co-host for the Games Institute Podcast
Triskal DeHaven	PhD candidate	Engineering	Systems Design Engineering	Doctor of Philosophy in Systems Design Engineering
Umair Shah	Faculty	Engineering	Management Science and Engineering	Lecturer
Veen Wong	PhD candidate	Health	School of Public Health Sciences	Doctor of Philosophy in Public Health Sciences
Ville Mäkelä	Faculty	Arts	Stratford School of Interaction Design and Business	Assistant Professor
Will Zhao	Faculty	Arts	Stratford School of Interaction Design and Business	Assistant Professor

Community Members

Member Name	Position	Company or Institution	Role
AC Atienza	Community Member	Cloudfall Inc. and Wiggles 3D	Professional board game designer and student mentor
Alvaro Uribe Quevedo	External Faculty	Ontario Tech University	Associate Professor
Andrea Kerswill	Community Member	The Farm Mutual Reinsurance Plan	Assistant Vice President of Innovation
Aynur Kadir	External Faculty	University of British Columbia	Assistant Professor
Bart Simon	External Faculty	Concordia University	Director of the Milieux Institute
Carly Turnbull	UW Staff	Centre for Biotechnology and Bioengineering	Associate Director

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Member Name	Position	Company or Institution	Role
Evan Jones	Community Member	Stitch Media	Found and Creative Director and Producer
Geneva Smith	External PhD Graduate	University of McMaster	Graduate Instructor
Georgia Loewen	External PhD student	Carleton University	Co-supervised by Dr. Karen Cochrane
Greg Mittler	UW Staff	Department of Recreation and Athletics	Coordinator for Esports and Gaming, Co-director of the University of Waterloo Interdisciplinary Network (UWIN) for Esports
Jay Ren	Community Member	Laurel Heights	High school student working for Dr. Randy Harris on the Rhetoricon project
Jennifer Boger	Community Member	ESGai Technologies	Chief Scientific Officer
Jennifer Roberts-Smith	External Faculty	Brock University	Professor, Department Chair of Dramatic Arts
Kishonna Gray	External Faculty	University of Kentucky College of Arts and Sciences	Associate Professor
Macy Takaffoli	Community Member	Poetix	UX Research Assistant for Dr. Ville Mäkelä
Mohamed Fouda	Community Member	GC Notify	Team Lead, Research Assistant for Dr. Oliver Schneider
Morgan McGuire	Community Member	Roblox	Chief Scientist
Negin Azizi	Community Member	University of Waterloo	Research Assistant in the Social Intelligence Robotics Research Lab
Nick Bowman	Faculty	Syracuse University	Associate Professor
Noel Brett	External PhD student	McMaster Unviersity	PhD candidate, Graduate Instructor
Sasha Soraine	External PhD student	McMaster Unviersity	PhD candidate, Graduate Instructor
Sina Torabi	External PhD student	Western University	PhD candidate
Stacey Scott	External Faculty	University of Guelph	Professor

Visiting Researchers

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Member Name	Home Institution	Country	Position	Program	Role
Ai-Jou Pan	National Cheng Kung University	Taiwan	PhD student	Doctor of Philosophy Engineering	International Visiting Graduate Student (IVGS) program working with Dr. Will Zhao on a Mitacs Project
Alexa Huxley	University of Bath	United Kingdom	Master's student	Computer Science	International Visiting Graduate Student (IVGS) program working with Dr. Oliver Schneider on a Mitacs Project
Anastasiia Avksientieva	Kyiv Polytechnic Institute	Ukraine	Master's student	Computer Science	Ukranian student supported by Waterloo.AI to complete master's degree
Bella Chan	Shandong University	China	Bachelor's student	Industrial Design	Visting undergraduate student working with Dr. Leah Zhang- Kennedy on a Mitacs Project
Blair Knyspel	University of Edinburgh	Scotland	Bachelor's student	Computer Science and Mathematics	International Visiting Graduate Student (IVGS) program working with Dr. Ville Mäkelä on a Mitacs Project
Dmytro Chumachenko	National Aerospace University	Ukraine	Postdoctoral fellow	Systems and Means of Artificial Intelligence	UbiLab researcher
Federica Gini	University of Trento	Italy	PhD student	Doctor of Philosophy in Cognitive Science	International Visiting Graduate Student (IVGS) program working with Dr. Lennart Nacke

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Member Name	Home Institution	Country	Position	Program	Role
Halyna Padalko	National Aerospace University	Ukraine	PhD candidate, Master's student	Doctor of Philosophy in Computer Science (National Aerospace Unviersity), Master of Arts in Global Governance (UW)	Ukranian student supported by Waterloo.AI to complete PhD degree; UWaterloo Master's student
Irtika Khan	Patil University	India	Bachelor's student	Computer Engineering	Visting undergraduate student working with Dr. Ville Mäkelä on a Mitacs Project
Kartik Chinda	Kalinga Institute of Industrical Technology	India	Bachelor's student	Computer Science and Engineering	Visting undergraduate student working with Dr. Ville Mäkelä on a Mitacs Project
Karyna Sukhina	Taras Shevchenko National University of Kyiv	Ukraine	Master's student	Master's Degree, Project Managment	Ukranian student supported by Waterloo.AI to complete master's degree
Kristina Nagel	University of Seville	Spain	PhD student	Doctor of Philosophy in Human Computer Interaction	International Visiting Graduate Student (IVGS) program working with Dr. Lennart Nacke
Nazarii Kulyk	Taras Shevchenko National University of Kyiv	Ukraine	Master's student	Master's Degree, Computer Science	Ukranian student supported by Waterloo.AI to complete master's degree
Nima Zargham	University of Bremen	Germany	PhD student	Doctor of Philosophy in Human Computer Interaction	International Visiting Graduate Student (IVGS) program working with Dr. Lennart Nacke
Nirali Modi	Indian Institute of Technology	India	Bachelor's student	Materials Engineering	Visting undergraduate student working with Dr. Cayley MacArthur on a Mitacs Project
Po-Chun Wang	National Cheng Kung University	Taiwan	PhD student	Doctor of Philosophy in Mathematics	International Visiting Graduate Student (IVGS) program working with Dr. Will Zhao on a Mitacs Project
Pradipti Mondal	Indian Institute of Technology (IIT)	India	Undergraduate Research Assistant	Patna (Bachelor's of Technology, Electrical and Electronics Engineering)	Mitacs Global Link Intern working with Dr. Oliver Schneider
Severyn Balaniuk	Kyiv Polytechnic Institute	Ukraine	Bachelor's student	Computer Engineering	Ukranian student supported by Waterloo.AI to complete bachelor's degree
Stepan Boiko	Lviv Polytechnic National University	Ukraine	Bachelor's student	Bachelor's Degree, Computational Science	Ukranian student supported by Waterloo.AI to complete bachelor's degree
Sukran Karaosmanoglu	University of Hamburg	Germany	PhD candidate	Doctor of Philosophy in Human Computer Interaction	International Visiting Graduate Student (IVGS) program working with Dr. Lennart Nacke
Tor-Salve Dalsgaard	University of Copenhagen	Denmark	PhD candidate	Doctor of Philosophy in Computer Science	International Visiting Graduate Student (IVGS) program working with Dr. Will Zhao on a Mitacs Project
Vasyl Chomko	Taras Shevchenko National University of Kyiv	Ukraine	Master's student	Master's Degree, Computer Science	Ukranian student supported by Waterloo.AI to complete master's degree
Vladyslav Shein	Drahomanov Ukrainian State University	Ukraine	Master's student	Master's Degree, Computer Science	Ukranian student supported by Waterloo.AI to complete master's degree, Waterloo A.I Institute Intern
Vsevolood Slavinskyi	Kyiv Polytechnic Institute	Ukraine	Master's student	Master's Degree in Computer Science and Higher Education	Ukranian student supported by Waterloo.AI to complete master's degree

Undergrad Research Assitants

Member Names	Faculty	Department	Program	Role
Adeshola Ogunsanya	Arts	History	Arts and Buisness (ARBUS)	Research Assistant for Dr. Randy Harris working on the "Rhetoricon" project
Alizeh Charania	Arts	Psychology	Reasearch Intensive Specializtion Co-op Program	Research Assistant for Dr. Daniel Harley on the Social Virtual Reality project
Amanda Yu	Engineering	Systems Design Engineering		Research Assistant for Dr. Lai-Tze Fan
Amerald Fang	Environment	Geography and Environmental Management	Geomatics	Research Assistant for Dr. Derek Robinson
Andy Wu	Mathematics	Cheriton School of Computer Science	Statistics	Research Assistant for Dr. Oliver Schneider on the Virtual Reality (VR) Speech Therapy project with the HX Lab
Ben Valles	Arts	Stratford School of Interaction Design and Business	Global Business and Digital Arts	Research Assistant for Dr. Ville Mäkelä in projects surrounding Virtual Reality and HCI
Chris Wang	Engineering	Management Science and Engineering	Management Engineering	Research Assistant for Dr. Oliver Schneider for the HX Lab, working on developing hardward and software prototyping for interactive haptic, VR, and tangible experiences
Faduma Ahmed	Engineering	Electrical Computer and Engineering	Computer Engineering	Research Assistant for Dr. Oliver Schneider
Jackie Yi	Engineering	Mechanical and Mechatronics Engineering	Mechatronics, Robotics, and Automation Engineering	UW's eSports Broadacasting club
Jared Cubilla	Arts	English Language and Literature	Rhetoric, Media, and Professional Communication, Honours, Co-op	Research Assistant for Dr. Gerald Voorhees working on the ADE Speaker Series knowledge mobilization
Justine Scheifele	Arts	Communication Arts	Communication Studies	Research Assistant for Dr. Gerald Voorhees working on the ADE Speaker Series knowledge mobilization
Karthik Prasad	Engineering	Management Science and Engineering	Management Engineering	Research Assistant for Dr. Oliver Schneider on the Virtual Reality (VR) Speech Therapy project with the HX Lab
Kate Bradley	Arts	History	Honours History Co-op with Gender and Social Justice Minor	Research Assistant for Dr. Shana MacDonald working on digital archiving feminist memes
Kristine Yuan	Mathematics	Cheriton School of Computer Science	Computer Science	Research Assistant for Dr. Randy Harris working on the "Rhetoricon" project
Leon Zeng	Arts	Communication Arts	Communication Arts and Design Practice	Research Assistant for Dr. Oliver Schneider
Leslie Xin	Engineering	Systems Design Engineering	Applied Science	Research Assistant for Dr. Lai-Tze Fan
Michael Xu	Engineering	Engineering and Maths	Software Engineering	Research Assistant for Dr. Oliver Schneider for the HX Lab, working on the developing of haptic experiences
Navneet Kaur	Arts	Sociology and Legal Studies	Legal Studies and Psychology	Research Assistant for Dr. Shana MacDonald working on digital archiving feminist memes
Nikolas Drakulovic	Arts	Sociology and Legal Studies	Legal Studies	UW's eSports Broadacasting club
Nimun Bajwa	Mathematics	Cheriton School of Computer Science	Computer Science	Research Assistant for Dr. Randy Harris working on the "Rhetoricon" project
Rachel Heather Jou-ter Woort	Arts	English Language and Literature	English Literature and Rhetoric Co-op	Research Assistant for Dr. Neil Randall
Ritika Puri	Arts	English Language and Literature	English Literature and Rhetoric	Research Assistant for Dr. Randy Harris working on the "Rhetoricon" project
Sakeenah Ashique	Arts	Communication Arts	Arts and Buisness (ARBUS)	Research Assistant for Dr. Shana MacDonald working on digital archiving feminist memes

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Member Names	Faculty	Department	Program	Role
Siddharth Vagavolu	Mathematics	Mathematics	Mathematical Studies	Research Assistant for Dr. Randy Harris working on the "Rhetoricon" project
Sophia Richardson	Environment	Knowledge Integration	Science, Technology, and Society Specialization; Environment, Rescources, and Sustainability Minor	Research Assistant for Dr. Gerald Voorhees working on the ADE Speaker Series knowledge mobilization
Tatum Weicker-O'Connor	Arts	Sociology and Legal Studies	Sociology	Research Assistant for Dr. Lai-Tze Fan
Thuvaraka Makenthiran	Arts	Psychology	Psychology	Research Assistant for Dr. Shana MacDonald working on digital archiving feminist memes
Tiffany Trinh	Arts	Stratford School of Interaction Design and Business	Global Business and Digital Arts	UW's eSports Broadacasting club
Trisha Sharad Pawar	Arts	Stratford School of Interaction Design and Business	Global Business and Digital Arts	Research Assistant for Dr. Cayley MacArthur
Vanessa Duong	Health	School of Public Health Sciences	Honors Health Science	Research Assistant for Dr. Jim Wallace

Administrative Staff

Member Names	Position	Faculty	Department	Program
Agata Antkiewicz	Associate Director, Administration and Strategic Planning	Centres and Institutes	The Games Institute	
Pamela Maria Schmidt	Research Projects Manager	Centres and Institutes	The Games Institute	Graduate of Master of Arts in English, Experimental Digital Media Co-operative program (University of Waterloo, 2020)
Emma Vossen	en Research Communications Officer		The Games Institute	Doctorate of Philosophy in English (University of Waterloo, 2018), Former Editor-in-Chief of First Person Scholar
Elradia Suliman	Operations Coordinator	Arts	Sociology and Legal Studies	3B, Legal Studies, Honours, Co-operative Program
Kyle Mason	Operations Coordinator	Arts	School of Accounting and Finance	2B Accounting and Financial Management, Honours, Cooperative Program
Shae Ashcroft	Research Communications Coordinator	Arts	English Language and Literature	English Literature and Rhetoric
Miguel Illustre	Research Communications Coordinator	Arts	Political Science	3A Political Science, Honours, Legal Studies, Honours, Cooperative program
Akshana Ranaganathan	Operations Coordinator	Health	School of Public Health Sciences	2A Health Science, Honours, Co-operative program
Montana White	Operations Coordinator	Arts	Psychology	3B Psychology, Honours, Co-operative program
Lori Paniak	Computing Technology Specialist	Mathematics	Cheriton School of Computer Science	
Jameson Schildroth	Computing Technology Specialist	Arts	Arts Computing Office	

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Studies and Facility Usage

Researcher	Position	Title	Description / Study Abstract
Valdyslav Klein	Visiting Researcher	Implementation of a new approach to Bidirectional Encoder Representations from Transformers	
Samira Mehrabi	PhD Candidate		
Dr. John Munoz	Faculty	VR for conflict de-escalation training in law- enforcement officers	
Dr. John Munoz	Faculty	VR for conflict de-escalation training in law- enforcement officers	
Aleksander Franiczek	PhD Candidate		In part of my dissertation research, I investigate how narrative design has historically differed between RPGs made in Japan and those made in the West, but in more recent years we've seen how these two subgenres have started borrowing from each other and blending together. FFXVI is a case study I'll be using.
Nima Zargham	Visiting Researcher	Speech Interacon with NPCs (VR Game)	As the gaming industry advances, games aim to become increasingly immersive. Concurrently, recent advancements in speech recognion technology have substanally enhanced its accuracy and reliability, creang new opportunies for incorporang voice-based interacons into gameplay. Integrang speech interacon in single-player games with non-player characters (NPCs) introduces a new dimension of social interacon in games. Similar to toxicity observed in social media and mulplayer games, ansocial behavior can inltrate interacons with NPCs, generang a toxic gaming atmosphere. We designed a speech-based game called ``A Day at the Oce" and conducted a within-subject study with 26 parcipants to invesgate how players talk to characters possessing dierent human qualies in a speech-based video game. Furthermore, we introduce a courtesy-based game mechanic, where NPCs react to players' choice of words and loudness. We explored players' experiences with such game mechanics.
Dr. Hector Perez	Postdoctoral Fellow	Dementia Friendly First Responders, Edu-action	"Dementia is over-represented among First Nations. First responders lack awareness that dementia-related missing incidents differ from other types of missing occurrences. Search and rescue training for Indigenous communities is delivered by organizations like SAR-1. Education about dementia and how to address risks of persons with dementia going missing would increase awareness, capacity and competence among First Nations personnel. We will use storytelling and gamification to co-create a virtual training course to support Indigenous first responders and search and rescue personnel. We will collaborate with first responders (e.g., police and paramedics) in two Indigenous communities, the Games Institute, and SAR-1. "
Dr. Hector Perez	Postdoctoral Fellow	Dementia Friendly First Responders, Edu-action	"Dementia is over-represented among First Nations. First responders lack awareness that dementia-related missing incidents differ from other types of missing occurrences. Search and rescue training for Indigenous communities is delivered by organizations like SAR-1. Education about dementia and how to address risks of persons with dementia going missing would increase awareness, capacity and competence among First Nations personnel. We will use storytelling and gamification to co-create a virtual training course to support Indigenous first responders and search and rescue personnel. We will collaborate with first responders (e.g., police and paramedics) in two Indigenous communities, the Games Institute, and SAR-1. "
Dr. Hector Perez	Postdoctoral Fellow	Dementia Friendly First Responders, Edu-action	"Dementia is over-represented among First Nations. First responders lack awareness that dementia-related missing incidents differ from other types of missing occurrences. Search and rescue training for Indigenous communities is delivered by organizations like SAR-1. Education about dementia and how to address risks of persons with dementia going missing would increase awareness, capacity and competence among First Nations personnel. We will use storytelling and gamification to co-create a virtual training course to support Indigenous first responders and search and rescue personnel. We will collaborate with first responders (e.g., police and paramedics) in two Indigenous communities, the Games Institute, and SAR-1. "

Researcher	Position	Title	Description / Study Abstract
Dr. Hector Perez	Postdoctoral Fellow	Dementia Friendly First Responders, Edu-action	"Dementia is over-represented among First Nations. First responders lack awareness that dementia-related missing incidents differ from other types of missing occurrences. Search and rescue training for Indigenous communities is delivered by organizations like SAR-1. Education about dementia and how to address risks of persons with dementia going missing would increase awareness, capacity and competence among First Nations personnel. We will use storytelling and gamification to co-create a virtual training course to support Indigenous first responders and search and rescue personnel. We will collaborate with first responders (e.g., police and paramedics) in two Indigenous communities, the Games Institute, and SAR-1. "
Sabrina Alicia Sqnadurra	PhD Candidate		
Sahand Ajami	Master's student		Haptics improves realism in mirror therapy
Sahand Ajami	Master's student		Haptics can improve motor learning for post stroke patients in virtual environment
Dr. John Munoz	Faculty	VR for conflict de-escalation training in law-enforcement officers	As evident by Black-Lives-Matter protests and unexpected funerals, "wartime operations" now include routine domestic situations. For instance, only in the police department, trainees spend an average of 71 hours against 21 in firearms training versus conflict de-escalation. Crucial elements for personalized training of law-enforcement officers (LEOs) include mastering very specific body responses associated with controlled breathing, cognitive readiness, and physiological awareness. Under high-stress situations, LEO trainees are affected by poorly regulated body and brain responses that can significantly impact their performance during missions. Virtual reality (VR) technologies offer a controlled, realistic, and highly interactive environment to enhance conventional training via simulations and interfaces that allow the acquisition or refreshing of important skills. Police officers, first responders, and warfighters face fear, risking their lives on a daily basis. Despite its increasing usage for skill training, VR is still facing many technical challenges associated with the creation of truly adaptive, controlled, and immersive virtual environments capable of offering effective training with measurable benefits. The integration of better mechanisms to train unseen human factors associated with conflict deescalation could enhance the training results in VR. This can be done via involving new developments in human-computer interaction which involve biofeedback technologies and interfaces to connect the brain and body responses to the VR simulations.
Dr. John Munoz	Faculty	VR for conflict de-escalation training in law-enforcement officers	As evident by Black-Lives-Matter protests and unexpected funerals, "wartime operations" now include routine domestic situations. For instance, only in the police department, trainees spend an average of 71 hours against 21 in firearms training versus conflict de-escalation. Crucial elements for personalized training of law-enforcement officers (LEOs) include mastering very specific body responses associated with controlled breathing, cognitive readiness, and physiological awareness. Under high-stress situations, LEO trainees are affected by poorly regulated body and brain responses that can significantly impact their performance during missions. Virtual reality (VR) technologies offer a controlled, realistic, and highly interactive environment to enhance conventional training via simulations and interfaces that allow the acquisition or refreshing of important skills. Police officers, first responders, and warfighters face fear, risking their lives on a daily basis. Despite its increasing usage for skill training, VR is still facing many technical challenges associated with the creation of truly adaptive, controlled, and immersive virtual environments capable of offering effective training with measurable benefits. The integration of better mechanisms to train unseen human factors associated with conflict deescalation could enhance the training results in VR. This can be done via involving new developments in human-computer interaction which involve biofeedback technologies and interfaces to connect the brain and body responses to the VR simulations.

Researcher	Position	Title	Description / Study Abstract
Dr. John Munoz	Faculty	VR for conflict de-escalation training in law-enforcement officers	As evident by Black-Lives-Matter protests and unexpected funerals, "wartime operations" now include routine domestic situations. For instance, only in the police department, trainees spend an average of 71 hours against 21 in firearms training versus conflict de-escalation. Crucial elements for personalized training of law-enforcement officers (LEOs) include mastering very specific body responses associated with controlled breathing, cognitive readiness, and physiological awareness. Under high-stress situations, LEO trainees are affected by poorly regulated body and brain responses that can significantly impact their performance during missions. Virtual reality (VR) technologies offer a controlled, realistic, and highly interactive environment to enhance conventional training via simulations and interfaces that allow the acquisition or refreshing of important skills. Police officers, first responders, and warfighters face fear, risking their lives on a daily basis. Despite its increasing usage for skill training, VR is still facing many technical challenges associated with the creation of truly adaptive, controlled, and immersive virtual environments capable of offering effective training with measurable benefits. The integration of better mechanisms to train unseen human factors associated with conflict deescalation could enhance the training results in VR. This can be done via involving new developments in human-computer interaction which involve biofeedback technologies and interfaces to connect the brain and body responses to the VR simulations.
Dr. John Munoz	Faculty	VR for conflict de-escalation training in law- enforcement officers	
Dr. Hector Perez	Postdoctoral Fellow	Dementia Friendly First Responders, Edu-action	"Dementia is over-represented among First Nations. First responders lack awareness that dementia-related missing incidents differ from other types of missing occurrences. Search and rescue training for Indigenous communities is delivered by organizations like SAR-1. Education about dementia and how to address risks of persons with dementia going missing would increase awareness, capacity and competence among First Nations personnel. We will use storytelling and gamification to co-create a virtual training course to support Indigenous first responders and search and rescue personnel. We will collaborate with first responders (e.g., police and paramedics) in two Indigenous communities, the Games Institute, and SAR-1. "
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Dr. Hector Perez	Postdoctoral Fellow	Dementia Friendly First Responders, Edu-action	"Dementia is over-represented among First Nations. First responders lack awareness that dementia-related missing incidents differ from other types of missing occurrences. Search and rescue training for Indigenous communities is delivered by organizations like SAR-1. Education about dementia and how to address risks of persons with dementia going missing would increase awareness, capacity and competence among First Nations personnel. We will use storytelling and gamification to co-create a virtual training course to support Indigenous first responders and search and rescue personnel. We will collaborate with first responders (e.g., police and paramedics) in two Indigenous communities, the Games Institute, and SAR-1. "

Researcher	Position	Title	Description / Study Abstract
Kristine Yuan	Undergraduate Co-op Fullstack developer	Rhetoricon Database Research Team	Full stack development for the GoFigure game and Rhetoricon website, lead by Professor Randy Harris
Vladyslav Shein	Visiting Researcher	Implementation of a new approach to Bidirectional Encoder: Representations from Transformers	
Vladyslav Shein	Visiting Researcher	Implementation of a new approach to Bidirectional Encoder: Representations from Transformers	
Nima Zargham	Visiting Researcher	Speech Interacon with NPCs (VR Game)	As the gaming industry advances, games aim to become increasingly immersive. Concurrently, recent advancements in speech recognion technology have substanally enhanced its accuracy and reliability, creang new opportunies for incorporang voice-based interacons into gameplay. Integrang speech interacon in single-player games with non-player characters (NPCs) introduces a new dimension of social interacon in games. Similar to toxicity observed in social media and mulplayer games, ansocial behavior can inltrate interacons with NPCs, generang a toxic gaming atmosphere. We designed a speech-based game called ``A Day at the Oce" and conducted a within-subject study with 26 parcipants to invest how players talk to characters possessing dierent human qualies in a speech-based video game. Furthermore, we introduce a courtesy-based game mechanic, where NPCs react to players' choice of words and loudness. We explored players' experiences with such game mechanics.
Florian Marcher	Visiting Researcher		Procedural Content Generation (PCG) is a way of creating game content using algorithms. It is often used in video games, either to create things in real-time (like dungeons) or as an editing tool (like software that helps make plants in a game). However, PCG has some problems, like not having enough variety, not giving the user enough control, not being high quality, and being hard to use. For this project, we will create a prototype tool to test ways to improve those shortcomings. Then we will ask game developers to try out the prototype and tell us about their experience with it. We will also ask them if they like using the prototype more than the PCG tools they are currently using. The main goals of this project are to learn about current PCG tools, create a prototype tool to improve on these tools, and see if the new tool is better.
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Anchit Mishra	Master's student		
Sabrina Sgandurra	PhD Candidate		
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Noel Brett	Visiting Researcher		
Marco Moran Ledesma	PhD Candidate		
Jackie Yi	Undergraduate Research Assistant		
Jackie Yi	Undergraduate Research Assistant		
Dr. Brianna Wiens	Faculty	Exploring Digital Feminist Futures: Creating Media Tools and Interventions for the Resistance	Over the last two decades, both feminist and antifeminist sentiments—including racist, imperialist, queerphobic, transphobic, and ableist sentiments—have been on the rise, with the daily technologies we use responsible for circulating these media toxicities by their very design. Despite repeated calls for regulation and protections, few exist. As such, there remains a need for everyday people to harness the potentialities of the internet to learn not only how to protect themselves but how to fight back. This project directly addresses this need through an explicit research-creation approach to studying and designing public digital toolkits for resistance via programming, archiving, and designing tactics informed by data feminist principles.
Dr. Brianna Wiens	Faculty	Exploring Digital Feminist Futures: Creating Media Tools and Interventions for the Resistance	Over the last two decades, both feminist and antifeminist sentiments—including racist, imperialist, queerphobic, transphobic, and ableist sentiments—have been on the rise, with the daily technologies we use responsible for circulating these media toxicities by their very design. Despite repeated calls for regulation and protections, few exist. As such, there remains a need for everyday people to harness the potentialities of the internet to learn not only how to protect themselves but how to fight back. This project directly addresses this need through an explicit research-creation approach to studying and designing public digital toolkits for resistance via programming, archiving, and designing tactics informed by data feminist principles.
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Dr. Hector Perez	Postdoctoral Fellow	Dementia Friendly First Responders, Edu-action	"Dementia is over-represented among First Nations. First responders lack awareness that dementia-related missing incidents differ from other types of missing occurrences. Search and rescue training for Indigenous communities is delivered by organizations like SAR-1. Education about dementia and how to address risks of persons with dementia going missing would increase awareness, capacity and competence among First Nations personnel. We will use storytelling and gamification to co-create a virtual training course to support Indigenous first responders and search and rescue personnel. We will collaborate with first responders (e.g., police and paramedics) in two Indigenous communities, the Games Institute, and SAR-1. "
Jenn Rickert	PhD Candidate	Brand and Community: Responsibility, Intentional Design, and Agency in the Video Game Industry	Video game spaces and virtual communities have steadily increased in popularity over the recent years, further amplified by the work/study-from-home and lockdown requirements of the COVID-19 pandemic. These online spaces served as places to conduct business, continue our education, and to socialize with our peers – all from the safety of our own homes. The news cycle was filled with tips and tricks to help people adapt to these online spaces, discussing etiquette, ways of navigating new software, and also the scandals of people who didn't interact quite the same as everyone else. Most importantly, we started to see more questions about the kinds of responsibilities that tech companies had to the people who used their technology to inhabit their communities—a question the video game industry should equally have a solid grasp on. This project will utilize interdisciplinary game studies principles in order to explore practical applications of virtual community, brand identity, and human computer interaction research. Partnering with Certain Affinity, this project will pair company metrics and development plans with a literature review and industry case-study analysis in order to answer meaningful questions about building intentional communities and brand identities in the games industry
Marco Moran Ledesma	PhD Candidate	DOHR Project	
Punit Kunjam	Master's student		
Sahand Ajami	Master's student	Virtual reality-based rehabilitation	
Stepan Boiko	Visiting Researcher		
Stepan Boiko	Visiting Researcher	Stories of Ukraine: A Student Photo Exhibit	
Dr. Hector Perez	Postdoctoral Fellow	Dementia Friendly First Responders, Edu-action	"Dementia is over-represented among First Nations. First responders lack awareness that dementia-related missing incidents differ from other types of missing occurrences. Search and rescue training for Indigenous communities is delivered by organizations like SAR-1. Education about dementia and how to address risks of persons with dementia going missing would increase awareness, capacity and competence among First Nations personnel. We will use storytelling and gamification to co-create a virtual training course to support Indigenous first responders and search and rescue personnel. We will collaborate with first responders (e.g., police and paramedics) in two Indigenous communities, the Games Institute, and SAR-1. "
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