DEPARTMENT OF KNOWLEDGE INTEGRATION ANNUAL REPORT

May 1, 2024 to April 30, 2025

Special Meeting of the Environment Faculty Council, May 2025

This year, KI celebrated the convocation of the thirteenth group of Bachelor of Knowledge Integration students. For the first time, we held KI's two capstone projects—the third-year museum exhibits and the fourth-year senior honours projects—together in the St. Jerome's gymnasium. Both sets of capstone projects aligned with the theme of Waterloo's Global Futures. As always, the Bachelor of Knowledge Integration (BKI) students displayed excellent academic performance and involvement in a wide range of collaborative and independent projects.

Recruitment & Marketing

KI continues to focus departmental efforts on increasing awareness of the program to high school students, both nationally and internationally. We have implemented over half of the 19 strategies that were recommended through an in-depth branding and marketing study in 2023-2024. Many of the strategies we've already implemented revolve around our digital presence: redesigning our prospective student-facing webpages including our <u>alumni profiles wall</u>; publishing <u>community interviews</u> and stories; rolling out four new social media series about student extracurriculars, international experiences, summer experiences and KImmunity highlights; and working with the Environment faculty's social media accounts to collaborate more on posts. Additional new recruitment initiatives included hosting virtual Q&A informational sessions for prospective students, connecting with over 400+ International Baccalaureate (IB) coordinators across Canada and the United States to highlight connections between IB and KI, and designing specific resources for IB coordinators to share with high school students.

We also published a physical booklet to celebrate Kl's 15-year anniversary, which featured an overview of Kl's journey through its first 15 years, profiles and stories from current students, alumni, and present and past staff and faculty, and a message about what we have in store for the future. This publication was an excellent opportunity to showcase all the achievements KI has celebrated and has been an effective marketing tool that enables us to share more about the program with interested students and their families.

KI is launching its first Diploma in Fall 2025, which will enable us to engage even more students from across campus. The KI Diploma is the perfect opportunity for students to gain valuable transferable skills like critical thinking, collaboration, and creative problem-solving, all of which are increasingly becoming essential in today's workplace. While UW students can also choose to pursue a KI Minor, the KI Diploma only requires the completion of four courses, making it easier for students in programs with few electives to complete the Diploma.

Events & Programming

Second-year KI students visited Berlin, Germany, in May 2024 as part of their INTEG 230 Museum Course field trip to prepare them for their third-year design capstone. There, they immersed themselves in museums and culture, and honed their observational skills in a new environment.

In July 2024, KI hosted the Shad high school enrichment program on behalf of the university, with Rob Gorbet serving as the Program Director and Solène Jollivet serving as Program Manager. KI first hosted Shad Waterloo when the BKI was founded – transferring over from Engineering with KI founder, Ed Jernigan.

In March 2025, KI celebrated two upper-year projects aligned with the themes of Waterloo's Global Futures. The students in *INTEG 321: Museum Course Practicum and Presentation* launched two exhibits, one of which focused on the perception of safety in cities at night, while the other explored the mental health benefits of hobbies. Also present were the fourth-year students' posters from their *INTEG 420: Senior Honours Project* capstone course. Students tackled a range of topics including AI in a changing climate, food security, social media addiction, metacognitive skill development, and more. The exhibits were visited by 560 attendees the KIX exhibits at St. Jerome's University over a six-day period, which included prospective students, alumni, and KW community members.

KI continued to offer its *INTEG 10: Knowledge Integration Seminar* on Fridays, having switched to a biweekly model at the request of the community to increase engagement and free up time for students to organize social events or use the time to study during the alternating weeks. Sessions included a career workshop, advice on applying to graduate school, lectures from faculty in SEED and Anthropology, and the wildly popular Clash-of-the-Cohorts competition. We also hosted our annual alumni panel, which included four KI alumni who came back to discuss their post-KI journey and reflect on how they have been applying the knowledge and skills they developed in KI.

Lastly, the Anti-Oppression Knowledge Integrators (AOK) working group continued their important work promoting anti-oppression and other EDIJ efforts in our curriculum and activities. KI Assistant Professor Mathieu Feagan served as chair, working with several KI students and alumni. This year, AOK sessions included a panel discussion on neurodiversity and inclusion and an opportunity to discuss *Why Does On-Camping Anti-Oppression Work Matter to You?* in partnership with Dr. Leslie Wexler and Dr. Vanessa Schweizer. This session also offered a chance to review and reflect on all of the important work AOK has been doing over the last five years.

Faculty and Staff Updates

After 11 years in KI, **John McLevey** has rejoined his family in St. John's, Newfoundland and Labrador. He continues to be connected to the KI community as Adjunct Professor, and now works as Professor and Department Head of Sociology at Memorial University. KI is grateful for all of his years of teaching and community-building. We wish him all the best!

In January 2025, the KI department announced an exciting new partnership with the School of Environment, Resources and Sustainability (SERS). The two units will merge as of July 1, 2025, creating further opportunities to strengthen both programs and communities together. **Katie Plaisance**, in her second year of KI Chair appointment, will move to an Associate Director position in July and lead community-building efforts through INTEG 10, which will bring together students, staff, and faculty from both SERS and KI.

On the staff front, **Emily Beilby** has taken on a new advising position in GEM in February. We wish her well in this new capacity, and thank her for her year of hard work in KI! Solène Jollivet continues to work as Outreach & Administrative Manager and providing marketing support to the department.

Faculty Research Highlights

The KI faculty had another productive year in terms of their research and scholarly activities. Here are some highlights.

Rob Gorbet returned to the <u>Domaine de Boisbuchet</u> art & design retreat to deliver a <u>Shadows & Whispers</u> workshop this past August, for 11 early- and mid-career designers from across Europe. In early 2025, he and the team at the <u>Living Architecture Systems Group</u> installed their latest testbed, <u>Aria</u>, at the Delft Science Centre (DSC) at partner campus, TUDelft. The LASG is also expanding the dissemination of STEAM creativity kits via our partnership with the DSC. Rob continues to produce the <u>Living Dialogs podcast</u>, now in its third season. He's excited to be part of the recently-awarded €4.2M Horizon EXPLORA grant, to create a doctoral network studying the development of perceptual models for how humans make sense of dynamic, immersive spaces during active exploration. Interested folks can download many of the LASG publications about our work on our <u>folios page</u>.

Katie Plaisance began leading Waterloo's contribution to a \$2.5 million SSHRC Partnership Grant in May 2024. The project provides graduate students across Canada with foundational skills training and community-based experiential learning opportunities. Katie has also worked with Sandra Lapointe, the project PI, to develop a new tool for skills literacy and articulation that is being used as part of the training. Katie also continues to lead her SSHRC Insight Grant project on fostering interdisciplinary collaboration between researchers in the humanities and STEM. The most recent phase of this project included a large-scale survey of over 2,000 scientists and engineers across Canada and the US regarding their views towards and experiences with interdisciplinary collaboration. On the educational leadership front, Katie continues to engage in research on the Scholarship of Teaching and Learning (SoTL) and initiatives to improve teaching and learning at Waterloo and beyond. She recently published an open-access paper in the Canadian Journal for the Scholarship of

Teaching and Learning that assessed the effectiveness of INTEG 210: Making Collaboration Work. Katie and her co-authors found improvements in students' attitudes towards diversity in teams, their beliefs about the value of teamwork, and their ability to cultivate psychologically safe teams. (Note that this course is offered by KI every fall and is open to all 2A+ students at UW.) Katie also been working with Carrie Mitchell in Planning to pilot WiSER@Waterloo: Wellbeing in Student Education and Research, which is being supported by a 2024 UW LITE grant. In June 2024, WiSER offered training workshops for faculty in Planning and KI to incorporate evidence-based practices that enhance belonging, wellbeing, and equity amongst undergraduate students; these practices were co-developed by WiSER's third member, Dr. Christine Logel in Social Development Studies at Renison.

Vanessa Schweizer continues to co-lead (with Prof. Eric Croiset, Chemical Engineering) a Climate Action and Awareness Fund project (managed by ECCC) on dynamic adaptive policy pathways for direct air capture deployment in Canada. The 2024 phase of the project included two online scenario workshops with international experts on direct air capture. Related to this project, Vanessa was an invited panelist at the Fall 2024 American Geophysical Union session on Scaling Potentials of Carbon Dioxide Removal Technologies. Additionally, two of Vanessa's trainees lead-authored publications. In May 2024, PhD student Stephanie Rose Cortinovis (co-supervised with Prof. Neil Craik) lead-authored a publication in the journal Frontiers in Climate regarding the configuration of the Canadian regulatory environment for carbon sequestration and direct air capture. In February 2025, PhD student Kasra Motlaghzadeh lead-authored a publication in the journal Communications Earth & Environment about how the incorporation of equity principles into the Paris Agreement of the UN Framework Convention on Climate Change might double the carbon-dioxide removal obligations of high-emitting countries such as Canada. As part of the author team for the latter article, Vanessa was an invited panelist on the webinar series Scrubbing the Skies hosted by the Institute for Responsible Carbon Removal at American University. With trainees in the Waterloo Climate Intervention Strategies Lab, Vanessa co-organized two sessions for the 2024 Earth Systems Governance Forum on insights from carbon removal projects (also with Fraunhofer ISI in Germany) as well as managing a breach of the Paris Agreement target of 1.5 °C. Vanessa also co-authored a Comment in Nature Communications regarding accelerating progress on the Sustainable Development Goals and a chapter in the white paper "A guide to anticipation: Working Paper on Tools and Methods or Horizon Scanning and Foresight" published by the International Science Council.

Mathieu Feagan is the Principal Investigator on the New Frontiers In Research Fund - Exploration project entitled, "Just transitions as consciousness change: Learning with front-line communities," which brings together Indigenous, migrant, and settler community organizing struggles in Southern Ontario, Phoenix, and Bogotá to develop new intersectional frameworks for bottom-up approaches to just transitions. Matt continues developing an active research program around using different ways of knowing to advance just transitions towards sustainable and equitable futures. His most recent publication on co-producing new knowledge systems through diverse stakeholder collaborations was recently featured here. On March 7 2025, Matt cohosted a session with Indigenous colleagues and KI's Anti-Oppression Knowledge Integrators working group (AOK) posing the question: why does anti-oppression work at the University of Waterloo matter to you? With Dr. Leslie Wexler and former PhD student Julia Burke, Matt has a new manuscript accepted for publication in a special issue of the journal New Directions in Teaching and Learning, entitled "Weaving Indigenous and Western Knowledges as a Relational Approach to Decolonize Climate Complexity Education." This publication is part of the outputs emerging from the Two-Row learning sessions hosted by the Department of Knowledge Integration in the fall of 2023. Moreover, Matt continues to attract new research funding, with two more small grants from the Climate Institute and from the Robert Harding & Lois Claxton Humanities and Social Sciences Endowment fund. Matt continues to be active in supporting other climate justice efforts at the University of Waterloo, including the Envigorate Environmental Festival, where he participated as a panelist sharing reflections on "Climate Optimism: Perceptions vs. Realities," and he recently gave an invited talk at the University of Toronto Scarborough's Department of Physical and Environmental Sciences, where he hopes to develop new research collaborations on knowledge co-production for sustainability and justice.

KI faculty have continued to co-supervise four Postdoctoral Fellows, three of whom are hosted in Knowledge Integration. Dr. **Maryam Mohiuddin Ahmed** began working with KI Professor Katie Plaisance on a SSHRC Partnership Grant in July 2024, with a focus on developing training for graduate students interested in social innovation, just after completing her PhD in SEED under the supervision of Associate Professor Sean Geobey.

Dr. **Sara Doody**, supervised by Katie Plaisance and Ashley Mehlenbacher, continues to investigate how interand transdisciplinary teams of researchers collaborate and communicate research within teams and to the public more generally. Dr. **Stuart Schussler** is in his last year of his postdoctoral fellowship under the cosupervision of KI Professor Katie Plaisance and Renison's Craig Fortier. Stuart is one of the Provost's Interdisciplinary Postdoctoral Scholars. Lastly, Dr. **Christopher Orr**, a Caivan Communities Postdoctoral Fellow co-supervised by KI Associate Professor Vanessa Schweizer and Professor Sarah Burch in the Department of Geography and Environmental Management, is working on developing a community of practice for Canadian cities to harness climate data for sustainable action agendas. Dr. Orr convened the CityClimateData workshop at the Balsillie School of International Affairs April 21-22, 2025.

On behalf of the Department of Knowledge Integration I'd like to thank everyone in the Faculty of Environment for their collegiality and support as we continue to build this truly innovative approach to undergraduate education.

Submitted by: Katie Plaisance, Chair, on May 7, 2025