DEPARTMENT OF KNOWLEDGE INTEGRATION ANNUAL REPORT
MAY 1, 2022 TO APRIL 30, 2023
Special Meeting of the Environment Faculty Council, May 2023

This year, KI celebrated the convocation of the eleventh group of Bachelor of Knowledge Integration students, held the KI Exhibition of our third-year design course, and the senior honours projects symposium.

The Bachelor of Knowledge Integration (BKI) students continue to do well, with excellent academic performance and involvement in a wide range of collaborative projects.

We had a good group of first year students entering KI in September, and had a similar number of applications for Fall 2023. Figuring out how to target and market the program remains a challenge, and will be a focus for the next few years. An important part of that will be emphasizing and enhancing the ways that the KI program aligns with the University's Future Ready Framework, and how this might translate into language for applicants and their parents. This year we have been able to fund some contract work to develop marketing strategy, and have completed surveys, focus groups, and are analyzing the data now.

Our graduates also continue their successes and continue to stay connected with and supportive of the KI community. They went into post-secondary education or into the workforce in diverse fields including designers, consultants, researchers and strategists.

Our second cyclical academic program review is in progress, and the self-study process collected valuable input through surveys of current students, alumni, and employers. This review will inform the future direction of what we offer as a degree experience. External review is anticipated in Fall 2023.

We were pleased to be able to resume international travel and the *INTEG 230 Museum Course* field trip after a two-year hiatus. KI students visited Copenhagen in the spring, immersing themselves in museums and culture, and honing their observational skills in a new environment.

In March the students in the *INTEG 321 Museum Course* launched five exhibits aligned with the United Nations' Sustainable Development Goals. A record 759 visitors attended the exhibits at St. Jerome's University over 6 days during March Break, including potential students, alumni, and KW community members. In their exhibits the students explored the profit motives behind machine learning algorithms, and their impact on polarization; art and social activism; the use of psychedelics in mental health treatment; humour and its relationship to wellness; and brain health.

The Anti-Oppression Knowledge Integrators (AOK) working group, with KI Assistant Professor Mathieu Feagan serving as chair, continued their important work promoting anti-oppression in our curriculum and activities. This year, this included hosting an *INTEG 10* seminar on Indigenous Knowledge, *When IK meets KI*, in partnership with CTE experts on Indigenous Knowledge and Anti-Racist Pedagogies. As part of our efforts to look at our curriculum in this light, calendar revisions expanded the Ethics breadth requirement to include Social Justice, opening access to new courses in Black Studies as well as programs like Gender and Social Justice.

The KI "Future Ready" Portfolio and Skills Articulation Project is underway, with Associate Professors Katie Plaisance (Fall 2022) and Vanessa Schweizer (Winter 2023) working with two KI student research associates to help develop a framework which will integrate across KI courses. The project will help

students articulate the knowledge and skills they're acquiring in KI, develop a portfolio, and prepare for the job market and/or post-graduate studies.

Mary Stewart, an author, visual artist, retired university professor, and expert in creativity and teaching creative thinking visited us in September and October as a Fulbright Scholar. She participated in KI classes, especially *INTEG 251: Creative Thinking*, offered creativity workshops, interviewed KI students, faculty, and alumni, and continued research for her new book on creativity.

Rob Gorbet's term as Chair is wrapping up after many years of dedicated service since 2014, and Katie Plaisance will serve as the next Chair. Vanessa Schweizer and John McLevey shared the role of Associate Chair, Undergraduate studies.

The KI faculty had another great year in their research and scholarly activities, and here are some highlights.

Rob Gorbet was invited back to the [Domaine de Boisbuchet](#) art & design retreat in the south west of France, where he delivered a hands-on workshop *[Shadows and Whispers](#)* for 14 mid-career design professionals with [Living Architecture Systems Group](#) collaborator Philip Beesley. He continues to produce the podcast *Living Dialogs*, and received grant support from the Canada Council for the Arts for additional episodes in 2023 and 2024. He did several invited presentations on Art, Technology, and Collaboration.

Katie Plaisance gave several invited talks on interdisciplinary collaboration and team science this year, and she continues to lead a 5-year SSHRC-funded project aimed at fostering meaningful collaboration between science and humanities scholars. She has been applying this work to student training as well: over the past year, Katie has worked with colleagues at McMaster to develop a Foundational Skills Assessment tool, designed to help students articulate and evaluate transferable skills such as collaboration, communication, and conflict management, which will be rolled out in the next few months. This tool will be used as part of a "Future Ready" program that Katie and Vanessa Schweizer are developing for KI students. As of July 1, 2023, Katie will take on the role of KI Department Chair. She thanks Rob Gorbet for his many years of service in this position.

John McLevey's 4th book, *The Sage Handbook of Social Network Analysis*, co-edited with John Scott and Peter Carrington, is currently in production and will be in print by October 2023. He is currently on sabbatical as a visiting scholar at University of British Columbia, where he is working with collaborators across Canada, the US, UK, Europe, and Australia on his Insight Grant project Disinformation, Deliberation, and Political Polarization.

Vanessa Schweizer helped launch a new interdisciplinary Waterloo Climate Interventions Strategies Lab (WatCISL) with SEED colleagues Neil Craik and Juan Moreno-Cruz. WatCISL investigates a wide range of geophysical, economic and regulatory implications of climate intervention strategies such as carbon dioxide removal and reflecting sunlight, in a Canadian policy context. Schweizer also co-leads "Robust Decision Making Using Dynamic Adaptive Policy Pathways For Direct Air Capture Deployment in Canada" with Eric Croiset (Chemical Engineering). The project has a budget of over a million dollars, with $480,000 funded by Environment and Climate Change Canada's Climate Action and Awareness Fund. Schweizer's research with her trainees on modeling changes in values in socio-technical systems as well as 'big picture' scenarios for international social-ecological systems appeared in the journals *Prometheus: Critical Studies in Innovation* and *Sustainability Science*. As the current director of the Waterloo Institute for Complexity and Innovation (WICI), she is working with interdisciplinary WICI Steering Committee members (Dawn Parker, School of Planning; Chrystopher Nehaniv, Systems Design Engineering) to organize a joint workshop with the Fields Institute of Mathematical Sciences on "Mathematics for Complex Climate Challenges" to further develop the nascent Mathematics for Climate Change pan-Canadian network.

Mathieu Feagan's research remains focused on using different ways of knowing to address sustainability challenges, with a view towards social transformation and just futures. Some of this work is pedagogical in nature. For example, he has a grant from the Centre for Teaching Excellence that aims to understand [how we build transdisciplinary capacity using self-evaluation](#) in the context of urban sustainability; or in his latest publications he explores the [pedagogical dimensions of knowledge co-production](#) for holistic green infrastructure implementation, and he shares lessons about [transformative learning and teaching](#) in ecohealth communities of practice. Other work is focused more on building meaningful researcher-community relations. For example, through a grant from the Climate Institute/Water Institute with colleagues Dr. Marta Berbés and Dr. Nandita Basu, Prof. Feagan is developing partnerships with researchers working in informal settlements in Latin America, where local knowledge and struggles reveal innovative pathways for alternative futures. The theoretical core of his work remains anchored in the concept of ecological consciousness as understood through systems thinking, Indigenous ways of knowing, and critical theory, and he is currently developing an article re-evaluating the role of consciousness in social change.

We have been pleased to host Sara Doody, our first Postdoctoral Fellow, co-supervised by KI Associate Professor Katie Plaisance and Ashley Rose Mehlenbacher, Associate Professor of English Language and Literature. Dr. Doody's research explores how inter- and transdisciplinary teams of scientists (and social scientists) collaborate and communicate research both within interdisciplinary teams and to the public more generally.

There were changes on the staff front. Paul McKone retired after a long career at Waterloo, including helping found the Bachelor of Knowledge Integration, and his contributions to the KI experience will have long-lasting impact. Solène Jollivet, BKI'20, is advising our undergraduate students covering a leave, and is developing the KI marketing strategy.

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

Submitted by: Rob Gorbet, April 28, 2023