Alexi Orchard, PhD
Curriculum Vitae
Last updated August 2024

Professional Appointments

08/2024 +	**Assistant Teaching Professor,** [Technology and Digital Studies](#)
	College of Arts and Letters, University of Notre Dame, United States.
08/2024 +	**Director of Undergraduate Studies,** [Idzik Computing and Digital Technologies](#)
	minor, College of Arts and Letters, University of Notre Dame, United States.

Education

2020 - 2024	**Doctor of Philosophy: English Language and Literature**
	Co-supervised by Marcel O'Gorman (English Language & Literature) and Jennifer Boger (Systems Design Engineering)
	Thesis: Interdisciplinary Pedagogy for Ethical Engineering and Responsible Innovation
	University of Waterloo, Canada.
2019 – 2020	**Master of Arts: Experimental Digital Media**
	Major Research Project: Embedding Ethics and Empathy in the Engineering Curriculum
	University of Waterloo, Canada.
2017 – 2019	**Bachelor of Interdisciplinary Studies: Communication Major**
	Thesis: Perceptions of Data Privacy in the Age of Social Media Addiction
	Thompson Rivers University, Canada.
2015 – 2017	**Business Administration Diploma**
	Olds College, Canada.

Teaching

Assistant Teaching Professor, University of Notre Dame

Term	*Course Title, Course Code*
Fall 2024	Elements of Computing 1, CDT 30010
Fall 2024	Generative AI in the Wild, CDT 30750

Sessional Instructor, University of Waterloo

Term	*Course Title, Course Code*
Spring 2024	Rhetorical Theory and Criticism, ENGL 292
Fall 2023	Communication in the Engineering Profession, ENGL 192
Fall 2022	Communication in the Engineering Profession, ARTS 190

Teaching Assistant, University of Waterloo

Term	*Course Title, Course Code, Department*
Winter 2023	Ethics and Values in Design, GBDA 306, Global Business and Digital Arts
Winter 2022	Biomedical Engineering Ethics, BME 381, Biomedical Engineering
Fall 2021	Introduction to Design, SYDE 161, Systems Design Engineering
Spring 2020	Introduction to Academic Writing, ENGL 109, English
Winter 2020	Communication in the Sciences, ENGL 193, English
Fall 2019	Genres of Business Communication, ENGL 210F, English

Guest Lectures

MM/YYYY	"Lecture Title," Course Code: Course Title
01/2024	"Deceptive Design," ENGL 108D: Digital Lives
10/2023	"Engineering Ethics Education," PACS 315: Engineering and Peace
10/2023	"Persuasive Technology," ARTS 130: The Rhetoric of Smartphones
03/2023	"Designing for Equity in Public Spaces," SYDE 362: Systems Design Methods 2
03/2023	"Value Sensitive Design," ARTS 190: Communication in Engineering Profession
03/2023	"Persuasive Design," GBDA 306: Ethics and Values in Design
11/2022	"Intro to Machine Learning Ethics," BME 101: Intro to Biomedical Engineering
03/2022	"Surveillance and Privacy," ENGL 295: Social Media
11/2021	"Intro to Machine Learning Ethics," SYDE 101: Intro to Systems Engineering
11/2021	"Responsible Design," ENGL 392: Information Design
03/2021	"Intro to Machine Learning Ethics," SYDE 362: Systems Design Methods 2

Publications

A. Orchard and M. O'Gorman. "Fostering Responsible Innovation with Critical Design Methods." (2024) *Journal of Responsible Innovation*, *11*(1), 2318823. https://doi.org/10.1080/23299460.2024.2318823

A. Orchard and D. Radke. "An Analysis of Engineering Students' Responses to an AI Ethics Scenario." *Proceedings of the AAAI Conference on Artificial Intelligence, 37*(13), Article 13. https://doi.org/10.1609/aaai.v37i13.26880

M. Guerzhoy, M. Neumann, P. Virtue, C.J. Anderson*, Y.K. Singla*, A. Orchard*, & R. Ratn Shah*. (2023) "EAAI-23 Blue Sky Ideas in Artificial Intelligence Education from the AAAI/ACM SIGAI New and Future AI Educator Program." *AI Matters*, *9*(2), 24–29.

D. Radke and A. Orchard. "Presenting Multiagent Challenges in Team Sports Analytics." *Proc. of the 2023 International Conference on Autonomous Agents and Multiagent Systems*, 1781-1785. https://dl.acm.org/doi/abs/10.5555/3545946.3598839

A. Orchard, M. O'Gorman, C. La Vecchia, and J. Lajoie. "Augmented Reality Smart Glasses in Focus: A User Group Report." *CHI Conference on Human Factors in Computing Systems Extended Abstracts* (CHI '22 Extended Abstracts). https://doi.org/10.1145/3491101.3503565

C. Truax, A. Orchard, and H. Love, "The Influence of Curriculum and Internship Culture on Developing Ethical Technologists: A Case Study of the University of Waterloo," IEEE ISTAS 2021 Conf. Proc., pp.1-8, 10.1109/ISTAS52410.2021.9629124

H. Love, J. Lajoie, A. Orchard, J. Kim, K. Lubin, J. Boger, and P. Sodhi, "Uniting Sustainability and Ethics in Engineering Curriculum: A Literature Review of Shared Challenges and Opportunities," Canadian Engineering Education Association CEEA ACEG 2021 Conf. Proc., Abstract only.

J. Lajoie, A. Orchard, and H. Love, "Ethical Tech Pedagogy for Public Good: A Review of Educational Initiatives and Approaches," IEEE ISTAS 2020 Conf. Proc., pp. 29-32, doi: 10.1109/ISTAS50296.2020.9462181.

Forthcoming Contributions

A. Orchard. "Obstacles and Opportunities for an Embedded STS Program in Engineering" in
    Conference Proceedings of the Canadian Engineering Education Association CEEA
    ACEG 2024.

A. Orchard. "The Innovation Problem Finder Dartboard: Embedding Critical Design in the
    Engineering Workflow" in Conference Proceedings of the Canadian Engineering
    Education Association CEEA ACEG 2024.

Public Writing

A. Orchard. "Engineering students envision equity and access in Waterloo Park" Guest Blog at
    LA Tech4Good. May 2023. https://www.latech4good.org/news/waterloopark

Research Positions

10/2023 - 02/2024	**Research Assistant** "Emergent Encounters Action Project" PI: Craig Fortier. Funded by LITE Grant, Centre for Teaching and Learning Excellence. University of Waterloo. • Grant writing for a SSHRC Insight Development Grant 2024-25
05/2020 - 08/2024	**Lead Research Assistant** "Critical by Design: Fostering Responsible Innovation through Critical Design Methods" PI: Marcel O'Gorman. Funded by UW/SSHRC Explore Grant 2021-22 and SSHRC Insight Grant 2022-25. University of Waterloo. • Leading a team of two masters-level RAs conducting survey design and data analysis for 300+ study participants • Conducting focus groups of student cohorts completing the Tech Stewardship Practice Program (TSPP) with collaborators at University of Manitoba, York University, and Memorial University of Newfoundland "Ethical by Design: A Bottom-Up Approach to Fostering a 'Tech for Good' Ethos in the Innovation Ecology". PIs: Marcel O'Gorman, Jennifer Boger, Heather Love, Matt Borland. Funded by the Interdisciplinary Trailblazer Fund. University of Waterloo. • Data collection and analysis of 200+ participants feedback in curricular interventions
04/2021 - 06/2022	**Research Assistant** "Ethical Tech Innovation: Uniting Educational Initiatives and Professional Practice". PIs: Heather Love, Jason Lajoie, Jennifer Boger. Knowledge Synthesis Report funded by Social Sciences and Humanities Research Council and the Government of Canada's Future Skills program. University of Waterloo. • Qualitative analysis of 500+ sources in scoping review project
01/2020 – 04/2020	**Research Assistant** "Heads-Up User Group (HUUG): An Ethnographic Study of Augmented Reality Glasses" PI: Marcel O'Gorman. Critical Media Lab, University of Waterloo • Design, implementation, and evaluation of user study and focus group using augmented reality smart glasses; published at CHI 2022
05/2018 –	**Research Assistant**

05/2019   "First Impressions of Virtual Reality" PI: Andrew Fergus. Department of Human Enterprise & Innovation, Thompson Rivers University
- Facilitated participant VR experience and collected questionnaires.

Awards & Funding

2024	University of Waterloo: Graduate Research Studentship	$24,000 CAD
2023	University of Waterloo: Graduate Research Studentship	$24,000 CAD
	Ontario Graduate Scholarship	$15,000 CAD
	University of Waterloo: President's Graduate Scholarship	$5,000 CAD
2022	University of Waterloo: Graduate Research Studentship	$24,000 CAD
	Waterloo Artificial Intelligence Institute Scholarship	$5,000 CAD
	Ontario Graduate Scholarship	$15,000 CAD
	University of Waterloo: President's Graduate Scholarship	$5,000 CAD
2021	Ontario Graduate Scholarship	$15,000 CAD
	University of Waterloo: President's Graduate Scholarship	$5,000 CAD
	University of Waterloo: Graduate Research Studentship	$15,000 CAD
2020	University of Waterloo: Doctoral Entrance Award for Women	$5,000 CAD
	University of Waterloo: Interdisciplinary Trailblazer Fund	$15,000 CAD
2019	Thompson Rivers University: Research Coach Award	$1,500 CAD
	Thompson Rivers University: Social Media Ambassador Award	$1,000 CAD
	Thompson Rivers University: Graduate Research Award	$2,000 CAD
2018	Thompson Rivers University: Research Coach Award	$1,500 CAD

Conference Presentations and Workshops

06/2024	"Critical and speculative design for the responsible anticipation of science and technology" Accepted paper at Canadian Communication Association (CCA)
11/2023	"Practicing Responsible Innovation" Workshop with Rebecca Sherlock at the Conference for Diversity in Engineering 2023, University of Waterloo, Canada.
11/2023	"A Cross-Disciplinary Approach to Making Responsible Innovation Actionable for Engineers and Technologists" Accepted paper at Society for Social Studies of Science (4S) Annual Meeting 2023
02/2023	"Using Critical Design Methods to Teach AI Ethics" Blue Sky Ideas Presentation for the AAAI/ACM SIGAI New and Future Educator Program. Symposium of Educational Advances in Artificial Intelligence (EAAI), Co-located with the Association for the Advancement of Artificial Intelligence (AAAI) 2023, Washington, DC, USA.
10/2022	"Enhancing Technologists' Ethical Awareness Through Critical Design" Poster Presentation. Cybersecurity and Privacy Institute (CPI) Annual Conference, University of Waterloo, Canada.
06/2022	"Mending Engineering: A Workshop to Start Radically Repairing Engineering's Relationship with the Rest of the World" Accepted workshop with Matt Borland, Kate Mercer, Jenny Howcroft, Matt Robichaud, and Shannon Veitch. Canadian

Engineering Education Association (CEEA ACEG) 2022 Annual Conference, York University, Toronto, Ontario, Canada.

06/2021 "Critical Design Interventions in Engineering Curriculum." Accepted paper. Panel: "Making Media Theory: Critical Design in Action." Canadian Communication Association. Congress 2021 of the Humanities and Social Sciences. Accepted paper. University of Alberta, Edmonton, Canada. (Virtual)

06/2020 "Interdisciplinary Roundtable" Panel. Association of Canadian College and University Teachers of English. Congress 2020 of the Humanities and Social Sciences. *Accepted paper – Conference cancelled due to COVID-19*

07/2019 "ePortfolios" Student Panel. 2019 Association for Authentic, Experiential, Evidence-Based Learning (AAEEBL), CUNY Bronx Community College, USA

03/2019 "Perceptions of Data Privacy in the Age of Social Media Addiction" Accepted Paper. 2019 TRU Undergraduate Research Conference. Thompson Rivers University, Canada.

07/2018 "Creating a Collaborative Ecosystem" Sponsored Panel. 2018 Association for Authentic, Experiential, & Evidence-Based Learning (AAEEBL), Capilano University, Canada.

03/2018 "Preparing for the Real World: Four Perspectives on Interdisciplinary Studies" Poster Presentation. 2018 TRU Undergraduate Research Conference

Academic Service

08/2023 - 08/2024	Chapter Lead for Critical Media Lab in the Quantum Ethics Project, University of Waterloo, Canada
06/2023 - 08/2024	Member of Advisory Committee Centre for Society, Technology, and Values (CSTV), University of Waterloo, Canada
01/2022 - 08/2024	Lab Manager, Critical Media Lab Speaker Series Coordinator for Critical Tech Talk
10/2021	Conference Volunteer, 2021 Meeting of the Society for the Social Studies of Science (4S) University of Toronto, Canada.
09/2021	Faculty of Arts Graduate Student Liaison, Cybersecurity and Privacy Institute (CPI), University of Waterloo, Canada.
04/2021 - 11/2021	Conference Organizing Committee, Fundraising and Sponsorship Volunteer, Student-Volunteer Coordinator; IEEE International Symposium on Technology and Society (ISTAS), University of Waterloo, Canada.
2020-21	Chairperson of Student Committee, Council for Responsible Innovation and Technology, University of Waterloo, Canada.
05/2018 – 09/2020	Conference Organizing Committee, Annual Meeting Association for Authentic, Experiential, & Evidence Based Learning (AAEEBL), Capilano University, Canada (2018); Bronx Community College, USA (2019); Salt Lake Community College, USA (2020; *Postponed due to COVID-19*)

Professional Activity

08/2024	Book Review Editor, PUBLIC Journal
09/2023	Four Seasons of Indigenous Learning program, First Nations University of Canada
07/2023	Completion of WatSPEED Introduction to Python Programming 3 Certificate
11/2022	Completion of Leading Equitable Data Practices Workshop, LA Tech4Good
11/2022	Featured quote in All Tech is Human's Better Tech Future Report
05/2022	Alberta Machine Intelligence Institute (AMII) AI Week 2022; Received $1,500 AMII Talent Bursary
09/2021	Fundamentals of University Teaching certification, Centre for Teaching Excellence, University of Waterloo
06/2021	"SFU Data Fellowships: Towards Responsible Machine Learning." Big Data Initiative, Simon Fraser University, Canada.