# Dr. Kathryn S. Plaisance

Associate Professor
Department of Knowledge Integration
Cross-appointed to the Department of Philosophy
Cross-appointed to the Department of Psychology
University of Waterloo
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## Degrees

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| 2006 | Ph.D., Philosophy (minor in Bioethics), University of Minnesota<br>*Dissertation*: "Behavioral Genetics and the Environment: The Generation and Exportation of Scientific Claims" |
| 2004 | M.A., Philosophy, University of Minnesota |
| 2000 | B.S., Molecular Biology and Philosophy, University of Wisconsin-Madison |

## Professional Employment

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| 2016-present | Associate Professor, Department of Knowledge Integration, University of Waterloo (*Cross-appointed to the Departments of Philosophy & Psychology*) |
| 2013-2019 | Associate Chair, Undergraduate Studies, Department of Knowledge Integration |
| 2009-2016 | Assistant Professor, Department of Knowledge Integration, University of Waterloo |
| 2007-2009 | Postdoctoral Research Fellow, Center for Philosophy and Ethics of Science, Leibniz Universität Hannover, Germany |

## Areas of interest

Engaged philosophy of science, philosophy of the human behavioral sciences, social epistemology, interactional expertise, interdisciplinary collaboration, and the science of team science.

## Awards

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| 2022 | Ontario Undergraduate Student Alliance (OUSA) Teaching Excellence Award |
| 2021 | Ontario Confederation of University Faculty Associations (OCUFA) Teaching Award |
| 2020 | Outstanding Performance Award, University of Waterloo |
| 2016 | Distinguished Teacher Award, University of Waterloo |

**Research Grants – Active**

PI, SSHRC Insight Grant, "Engaging Science with Philosophy: Best Practices for Fostering Effective Collaboration," $188,179, June 2020 – May 2026.

Co-PI, SSHRC Insight Development Grant, "Inventory of Models and Practices in Community Focused and Interdisciplinary Social Sciences and Humanities Research," $60,764, June 2021 – May 2023. (PI: Sandra LaPointe)

PI, UW/SSHRC Explore Grant, "Developing a Collaborative Mindset: The Importance of Psychological Safety, Epistemic Humility, and Valuing Diverse Perspectives," $6978, Sept 2019 – Dec 2022.

**Research Grants – Completed**

Co-PI, Genetics & Human Agency Grant (funded by the Templeton Foundation), "Understanding 'What Could Be': Heritability in Randomized Twin Design," $550,000 CAD, Jan 2017 – Dec 2019. (PI: S. Alexandra Burt)

PI, SSHRC Insight Development Grant, "Increasing the Impact of Philosophy of Science in Scientific Domains," $59,302 CAD, June 2016 – Dec 2018. (Co-PI: John McLevey)

PI, UW International Research Partnership Grant, "Communities of Integration," $18,000 + $52,000 in matching funds, Jan 2014 – Aug 2016.

## Publications (* indicates student co-author)

<u>Refereed Journal Articles</u>

**Plaisance, Kathryn S**., and Kevin Elliott (2021). "A Framework for Analyzing Broadly Engaged Philosophy of Science," *Philosophy of Science*, 88(4): 594-615.

**Plaisance, Kathryn S.** (2021), Jay Michaud*, and McLevey, John. (2021). "Pathways of Influence: Understanding the Impacts of Philosophy of Science in Scientific Domains," *Synthese*, 199: 4865-4896.

**Plaisance, Kathryn S.** (2020). "The Benefits of Acquiring Interactional Expertise: Why (Some) Philosophers of Science Should Engage Scientific Communities," *Studies in History and Philosophy of Science Part A*, 83: 53-62.

Burgoyne, AP*; Carroll, S; Clark, DA; Hambrick, DZ; **Plaisance, KS**; Klump, KL; Burt, SA. (2020). "Can a Brief Intervention Alter Genetic and Environmental Influences on Psychological Traits? An Experimental Behavioral Genetics Approach," *Learning and Motivation*, 72.

**Plaisance, Kathryn S.**, Alexander V. Graham*, John McLevey, and Jay Michaud* (2019). "Show Me the Numbers: A Quantitative Portrait of the Attitudes, Experiences, and Values of Philosophers of Science Regarding Broadly Engaged Work," *Synthese*, 198: 4603-33.

Burt, S. Alex, **Kathryn S. Plaisance**, and Zach D. Hambrick (2019). "Understanding 'What Could Be': A Call for Experimental Behavioral Genetics," *Behavior Genetics*, 49: 235-243.

McLevey, John, Alexander V. Graham*, Reid McIlroy-Young*, Pierson Brown*, and **Kathryn S. Plaisance** (2018). "Interdisciplinarity and Insularity in the Diffusion of Knowledge: An Analysis of Disciplinary Boundaries Between Philosophy of Science and the Sciences," *Scientometrics*, 117: 331-349.

**Plaisance, Kathryn S**., and Eric B. Kennedy* (2014). "A Pluralistic Approach to Interactional Expertise," *Studies in the History and Philosophy of Science Part A*, 47: 60-68.

**Plaisance, Kathryn S**., Thomas A.C. Reydon, and Mehmet Elgin (2012). "Why the (Gene) Counting Argument Fails in the Massive Modularity Debate: The Need for Understanding Gene Concepts and Genotype-Phenotype Relationships," *Philosophical Psychology*, 25(6).

Fehr, Carla, and **Kathryn S. Plaisance** (2010). "Socially Relevant Philosophy of Science," *Synthese*, 177(3): 301-316.

Chapters in Books

**Plaisance, Kathryn S**., and Thomas A.C. Reydon (2012). "The Philosophy of Behavioral Biology," *Boston Studies in the Philosophy of Science*, 282: 3-24. Springer Press.

Books and Edited Volumes (*refereed*)

**Plaisance, Kathryn S.,** and Thomas A.C. Reydon, eds. (2012). "Philosophy of Behavioral Biology," *Boston Studies in the Philosophy of Science, vol. 282*. Springer Press.

**Plaisance, Kathryn S.,** and Carla Fehr, eds. (2010). "Making Philosophy of Science More Socially Relevant," *Synthese* [special issue], 177(3): 301-492.

Manuscripts Under Review

**Plaisance, Kathryn S**., Christopher Lok*, and Christine Logel (2022). "Making Collaboration Work: The Importance of Psychological Safety in Student Teams." *Under review at the Canadian Journal of the Scholarship of Teaching and Learning.*

## Presentations of Scholarly Work (*selected*)

*(For Scholarship of Teaching and Learning presentations, see the following section)*

Invited Talks

**Plaisance, Kathryn S.**, "Psychological Safety for Whom? Integrating Feminist Epistemology & Philosophy of Science with Research on Collaboration & Teamwork." McMaster University, Department of Philosophy, March 2022.

**Plaisance, Kathryn S.** "The Science of Team Science: How to Foster Productive Collaboration in Interdisciplinary Team Science." University of Toronto-Mississauga, Department of Biology, December 2021.

**Plaisance, Kathryn S.** and Kevin C. Elliott, "A Framework for Broadly Engaged Philosophy of Science." *Socially Relevant Philosophy of/in Science and Engineering (SRPoiSE) conference,* May 2021.

**Plaisance, Kathryn S.**, "Making Collaboration Work: The Importance of Deliberate Practice." *Science of Team Science conference*, online (due to COVID), June 2020.

**Plaisance, Kathryn S.**, "The Collaborative Skills Gap." Lyman Briggs College, Michigan State University. February 2020.

Refereed Conference Presentations

**Plaisance, Kathryn S.** and Sara Doody, "In Their Own Words: What Scientists and Engineers Say about Their Collaborations with Philosophers of Science." *Philosophy of Science Association*, November 2022.

**Plaisance, Kathryn S.** and Sara Doody, "Better Science with Philosophy: The Challenges and Benefits of Including Philosophers of Science on Science Teams." *Science of Team Science (SciTS)*, August 2022.

**Plaisance, Kathryn S.**, "Integrating Methods in the Human Behavioral Sciences: Implications for Scientific Pluralism." *Philosophy of Science Association, Society for Philosophy of Science in Practice Cognate Session*, November 2021.

**Plaisance, Kathryn S.** and Payton Mikrogianakis*, "Psychological Safety for Whom? Why We Need to Attend to Diversity, Status, and Power Dynamics in Science Teams." *Science of Team Science (SciTS)*, June 2021. (*Presented as a pre-recorded splash talk*.)

**Plaisance, Kathryn S.** and Kevin C. Elliott, "A Framework for Analyzing Broadly Engaged Philosophy of Science." *Public Philosophy Network (PPN),* Lansing, Michigan, October 2019.

**Plaisance, Kathryn S.,** John McLevey, Alexander V. Graham*, and Janet Michaud*, "Enhancing Our Understanding of the Relationship Between Philosophy of Science and the Sciences: Results from a Survey." *Philosophy of Science Association (PSA),* Seattle, Washington, Nov 2018*. (**Poster designed and presented by K. Plaisance**)

**Plaisance, Kathryn S.,** John McLevey, Alexander V. Graham*, and Janet Michaud*, "Enhancing Our Understanding of the Relationship Between Philosophy of Science and the Sciences: Results from a Survey." *International Consortium for Socially Relevant Philosophy of/in Science and Engineering (SRPoiSE),* Atlanta, Georgia, June 2018. (**Presented by K. Plaisance**)

**Plaisance, Kathryn S.,** "An Empirical Portrait of Engaged Philosophy of Science." *Philosophy of Science Association, SRPoiSE Cognate Session,* Chicago, November 2018.

**Plaisance, Kathryn S**., John McLevey, and Janet Michaud\*, "Investigating the Impact of Philosophy of Science in Scientific Domains." *Public Philosophy Network (PPN),* Boulder, Colorado, February 2018. (**Presented by K. Plaisance**)

**Plaisance, Kathryn S.** and Janet Michaud\*, "The Goals of Philosophy of Science (with Respect to Science)" *SRPoiSE*, Dallas, Texas, May 2016.

**Plaisance, Kathryn S.**, "Leveraging Diversity in Interdisciplinary Collaboration and Team Science: Theoretical and Empirical Considerations", *SciTS*, May 2016.

**Plaisance, Kathryn S.,** and John McLevey, "Mapping the Uptake of Philosophy of Science," *SRPoiSE*, Detroit, Michigan, March 2015.

**Plaisance, Kathryn S.,** and Robert Gorbet, "Overcoming Institutional Barriers to Interdisciplinary Collaboration" (co-written with Rob Gorbet), *SRPoiSE*, Detroit, Michigan, March 2015.

**Plaisance, Kathryn S.,** "A Feminist Approach to Facilitating Interdisciplinary Collaboration: A Re-evaluation of the Toolbox Project", *Philosophy of Science Association, SRPoiSE session*, Chicago (given in absentia by symposium co-organizers), November 2014.

**Plaisance, Kathryn S**., "A Feminist Approach to Facilitating Interdisciplinary Collaboration: A Re-evaluation of the Toolbox Project", *FEMMSS*, University of Waterloo, August 2014.

Non-refereed Conference Presentations

Burt, S. Alex, **Kathryn S. Plaisance**, and Zach D. Hambrick, "Understanding 'What Could Be': Heritability in a Randomized Twin Design – Methods" *Genetics and Human Agency annual meeting*, Charlottesville, VA, May 2018. (**Presented by K. Plaisance**)

Burt, S. Alex, **Kathryn S. Plaisance**, and Zach D. Hambrick, "Understanding 'What Could Be': Heritability in a Randomized Twin Design – Proposed Project" *Genetics and Human Agency annual meeting*, Charlottesville, VA, May 2018.


# Scholarship of Teaching and Learning (SoTL)

SoTL Presentations (*refereed*)

**Plaisance, Kathryn S.,** "Using Pre-course Surveys to Identify Students' Needs, Interests, and Prior Knowledge." *Faculty Summer Institute: Rebooting Students' Experiences*, May 2021.

**Plaisance, Kathryn S.**, Christopher Lok\*, and Christine Logel, "Closing the Collaborative Skills Gap: Assessing the Effectiveness of a University-Wide Course Designed to Teach Students How to Work in Diverse Teams." *Science of Team Science*, Lansing, Michigan, May 2019.

**Plaisance, Kathryn S.**, Christopher Lok\*, and Christine Logel, "Closing the Collaborative Skills Gap: How to Enhance Group Work in the Classroom." *University of Waterloo Teaching & Learning Conference,* May 2019.

LaMarre, Georgia\*, Akanksha Madan\*, Shane Morganstein\*, and **Kathryn S. Plaisance**, "Teaching Teamwork to Undergraduate Students: A Joint Faculty-Student Pilot Project at the University of Waterloo," *Science of Team Science*, May 2016.

SoTL Grants *(refereed)*

PI, UW Learning Innovation and Teaching Enhancement (LITE) grant, "Building Capacity to Teach Collaborative Skills at the University of Waterloo", $4000, 2019-22.
(Co-PI: Scott Anderson, Centre for Teaching Excellence)

PI, UW Learning Innovation and Teaching Enhancement (LITE) grant, "Closing the Collaborative Skills Gap: Assessing the Effectiveness of a University-Wide Course Designed to Teach Students How to Collaborate in Diverse Groups," $4970, 2018-19.
(Co-PI: Christine Logel, Social Development Studies)

PI, UW Learning Innovation and Teaching Enhancement (LITE) grant, "Breaking Down Barriers: A Student-Led Workshop on Interdisciplinary Collaboration," $5000, 2015-16.
(Co-PIs: Georgia LaMarre\*, Akanksha Madan\*, and Shane Morganstein\*, KI students)

# Educational Leadership

Teaching-Related Presentations at the University of Waterloo (*invited*)

Inaugural speaker for the Centre for Teaching Excellence SoTL Stories series, June 2022.

Invited panelist for the Centre for Teaching Excellence workshop, "Engaged Reading Using Perusall's Annotation Software," March 2021.

Invited presentation for the Centre for Teaching Excellence (CTE) workshop, "Using Technology to Enhance Collaboration," March 2016.

Invited presentation, "High Impact Practices and Peer Assessment," Department of Earth Sciences Teaching Retreat, April 2015.

Inaugural presentation for the Waterloo High Impact Practices group, "High Impact Practices in Knowledge Integration," January 2015.

Invited teaching presentation at University of Waterloo Senate, "Increasing Student Engagement through Collaborative Course Design," November 2014.

Invited teaching presentation on teaching scientific literacy, "Teaching Scientific Literacy with Humor: Monty Python and the Holy Grail," February 2010.

<u>Teaching-Related Presentations External to the University of Waterloo (*invited*)</u>

Invited talk, "The Science of Team Science." Colorado School of Mines, August 2020.

Invited keynote, "Making Collaboration Work: The Importance of Deliberate Practice." *Science of Team Science* conference (online due to COVID), June 2020.

"The Collaborative Skills Gap." Invited talk, *Lyman Briggs College, Michigan State University*, February 2020.

<u>Interactive Workshops on Student Collaboration & Teamwork</u>

Co-designed and co-led week-long workshop on "Making Collaboration Work," for Engineering Faculty at Tecnológio de Monterrey (TEC) in Monterrey, Mexico, December 2019.
(*Co-designed and facilitated with Rob Gorbet, Knowledge Integration*)

Designed and led workshop on "Interdisciplinary Collaboration" for the Collaborative Research & Training Experience (CREATE) program, UWaterloo Engineering, 2019.

Led Toolbox Dialogue Initiative (TDI) workshop at "Leveraging systems approaches to improve planetary and human health," UWaterloo Applied Health Sciences, April 2018.

Co-facilitated Toolbox Dialogue Initiative workshop at the International Consortium for Socially Relevant Philosophy in/of Science and Engineering (SRPoiSE) meeting, May 2016.

Developed & co-led workshop on "Enhancing Group Work," hosted by the Centre for Teaching Excellence (CTE) at the University of Waterloo, January & April 2016.
(*Co-designed and facilitated with Georgia LaMarre, Akanksha Madan, & Shane Morganstein*)

Developed & co-led "UW Collaborates: A Crash Course in Collaboration," January 2016, a full-day of presentations and training workshops for students from across UW.
(*Co-designed with Georgia LaMarre, Akanksha Madan, & Shane Morganstein*)

## Professional/Service Activities *(Selected)*

<u>Professional Association Leadership Activities (*selected*)</u>

Co-director of the International Consortium of Socially Relevant Philosophy of/in Science and Engineering (SRPoiSE), 2022-present.

Board member, International Network of the Science of Team Science (INSciTS), 2021-present.

Board member & co-founder of the International Consortium of Socially Relevant Philosophy of/in Science and Engineering (SRPoiSE), 2013-present.

Public Philosophy Network (PPN) Program Committee, 2018-19.

Philosophy of Science Association Public Forum committee, "Data for Whose Good: Values and Accountability in Data Science," 2017-18.

<u>Conference & Event Organizing</u> (*selected*)

Session organizer for "Engaging Science with Philosophy: Case Studies, Empirical Data, and Reflections on Collaborations Between Philosophers of Science and Scientists/Engineers" at the *Philosophy of Science Association*, November 2022.

Lead organizer for "Summit on Responsible Innovation and Technology" at the University of Waterloo, October 2019.

Co-organizer for "Responsible AI" panel at the Centre for International Governance and Innovation (with Rob Gorbet), Waterloo, November 2018.

Lead organizer for "Communities of Integration," a joint conference of the International Consortium of Socially Relevant Philosophy of/in Science and Engineering (SRPoiSE), Socio-Technical Integration Research (STIR), Studies of Experience and Expertise (SEE), and the Toolbox Dialogue Initiative (TDI), Kitchener, Ontario, June 2014.

Journal/book/grant referee: *Philosophy of Science*; *Synthese*; *Studies in the History and Philosophy of Science; Perspectives on Science*; *European Journal of Philosophy of Science; Behavior Genetics; Erasmus journal for Philosophy and Economics*; *IEEE International Symposium on Ethics in Engineering, Science, and Technology Ethics;* Cambridge University Press; MIT Press; Routledge Press; the National Science Foundation (NSF).

<u>Service to the University</u> (*selected*)

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| 2020-21 | Faculty of Environment Student Course Perceptions Survey Committee |
| 2019-20 | University of Waterloo Interdisciplinary Task Force (IDTF) |
| 2018-20 | Council for Responsible Innovation & Technology (CRIT) |
| 2014-19 | Research Ethics and Integrity Advisory Committee (REIAC) |
| 2018-19 | Science and Technology in Society Teaching Director (STSTG) |
| 2013-19 | Faculty of Environment Undergraduate Studies Committee |
| 2013-19 | Associate Chair, Undergraduate Studies, Knowledge Integration |
| 2015-17 | Faculty of Environment HeForShe Committee |
| 2014-16 | Program review committee, Knowledge Integration |
| 2011-12 | Faculty Association University of Waterloo Board Member (FAUW) |
| 2010-12 | Status of Women and Equity Committee (SWEC) |
| 2010-12 | Subcommittee on Inclusive Hiring Practices for the University Appointments & Review Committee (UARC) & SWEC |