

# Catherine Stinson

hello@catherinestinson.ca

## PROFILE

- International research experience in machine learning, mental health, and philosophy of science.
- Engaging, empathetic writer and speaker, able to convey complex ideas in plain language.
- Collaborative team-player able to advance strategic priorities in complex stakeholder settings.
- Dedication to advancing the public interest, particularly in health and social policy.

## EDUCATION

**PhD: University of Pittsburgh**, History & Philosophy of Science 2013

**MSc: University of Toronto**, Computer Science (machine learning) 2002

**BSc: University of Toronto**, Cognitive Science & Artificial Intelligence 1999

## WORK EXPERIENCE

*Senior Policy Associate* 2018 – present

Mowat Centre for Policy Alternatives, University of Toronto

- Conducting interviews and background research toward a policy paper about big data and AI in health.
- Presenting research to hospitals, industry, and the Office of the Information and Privacy Commissioner.

*Lecturer* 2016 – 2018

Cognitive Science Program, University of Toronto

- Pioneered an experiential learning course about the policy implications of AI in healthcare.
- Coordinated a student-led program evaluation and curriculum re-design.
- Built partnerships with e-health startups for student work placements.

*Postdoctoral Scholar* 2015 – 2018

Rotman Institute of Philosophy, University of Western Ontario

- Researched psychiatric classification, identifying causes of negative outcomes in eating disorder treatment.
- Published papers suggesting a roadmap for reforming psychiatry, identifying strategies for interdisciplinary collaboration, and elaborating how abstract computational methods explain their detailed real world targets.
- Organized a conference on the social determinants of mental health.
- Coordinated a program that places philosophers in neuroscience labs, fostering collaboration across silos.

*Assistant Professor (Limited Term)* 2014

Philosophy Department, Ryerson University

- Taught Critical Thinking to over 400 students with widely varied skills.
- Managed project deliverables, deadlines, and performance evaluations.
- Supervised a team of 10 teaching and research assistants.

*Postdoctoral Fellow* 2012 – 2013

Centre for Integrative Neuroscience, University of Tübingen & Max Planck Institute for Biological Cybernetics

- Collaborated on Virtual Reality experiments aimed at developing treatments for body image disorders.
- Presented research to external examiners, helping secure German Excellence Cluster funding.
- Mentored students, and facilitated communication between students, faculty and administrators.

*Programmer/Analyst: Openflows Networks* 2003 – 2005

- Developed open-source software tools in a co-operative business model.

*Research Programmer: University of Toronto Machine Learning Lab* 2002 – 2003

- Developed semi-supervised machine learning algorithms for classifying text and image datasets.




- Student Programmer:* University of Toronto Computational Vision Lab 1998 – 1999
- Developed visual hand gesture recognition algorithms for a teleconferencing robot.
- Student Researcher:* National Research Council: Institute of Aerospace Research 1998
- Tested aeronautical designs using neural networks to streamline fluid dynamics simulations.

## VOLUNTEER EXPERIENCE




- Policy Consultant:* Adopt4life, Ontario Adoptive Parents Association 2017
- Wrote a policy brief for submission to the Standing Committee on Justice Policy about Bill 89: Supporting Children, Youth and Families, aimed at ensuring continuity of services for children with disabilities.
- Diversity Task Force Lead:* Hogtown Roller Derby 2016 – present
- Modified financial disclosure process to increase privacy, while improving payment compliance.
  - Implemented policy to make league social events alcohol-safe spaces.
  - Revised code of conduct to ensure a positive environment for queer and trans players.
  - Designed a mentorship program to improve retention of players from marginalized groups.
- Community Arts Facilitator:* The Soft City Project 2005 – 2009
- Collectively designed and built a participatory civic engagement project.
  - Facilitated workshops for community groups, using art to inspire social change.
  - Organized and set up exhibitions in dozens of galleries and public spaces.

## RECENT PUBLICATIONS

### Academic

1. Stinson, C. (2018) Explanation and Connectionist Models. In *The Routledge Handbook of the Computational Mind*, Eds. M. Colombo and M. Sprevak. 120–133.
2. Stinson, C. (2017) The Absent Body in Psychiatric Diagnosis, Treatment, and Research. *Synthese*. 
3. Stinson, C. & Sullivan, J. (2017) Mechanistic Explanation in Neuroscience. In *The Routledge Handbook of Mechanisms and Mechanical Philosophy*, Eds. S. Glennan and P. Illari. 375–388.
4. Stinson, C. (2017) Back to the Cradle: Mechanism Schemata from Piaget to DNA. In *Eppur si muove: Doing History and Philosophy of Science with Peter Machamer*. Springer. 183–194.
5. Stinson, C. (2016) Mechanisms in Psychology: Ripping Nature at its Seams. *Synthese*. 193(5), 1585–1614. 
6. Piryankova, I.V., Wong, H.Y., Linkenauger, S., Stinson, C., Longo, M., Bühlhoff, H.H., Mohler, B.J. (2014) Owing an Overweight or Underweight Body: Distinguishing the Physical, Experienced and Virtual Body. *PLOS One* 9(8): e103428. 

### Popular Press

1. (July 6, 2018) Is My Fungus Going Viral?: Data Privacy in Healthcare. *The Globe and Mail*. 
2. (July/August 2018) Es hora de que la inteligencia artificial se ponga filosfica. *Revista de Occidente*.
3. (March 24, 2018) Deep Learning: Why It's Time for Artificial Intelligence to Get Philosophical. *The Globe and Mail*. 
4. (November 9, 2017) Are Women Especially Well-Suited to Science? *Rotman Institute of Philosophy blog*. 

## TECHNICAL SKILLS

Matlab, R, Python, Java, C, Perl, PHP, MySQL, HTML, LaTeX, UNIX, Microsoft Office.

## LANGUAGES

English, French, German