

Catherine Stinson

hello@catherinestinson.ca — www.catherinestinson.ca

AOS Ethics of AI, Philosophy of Neuroscience, Philosophy of Psychiatry

AOC Philosophy of Computation, Philosophy of Science, Science and Values

EDUCATION

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

Dissertation: “Cognitive Mechanisms and Computational Models: Explanation in Cognitive Neuroscience”

Committee: Kenneth Schaffner (co-advisor), Peter Machamer (co-advisor), Jim Bogen, Floh Thiels

Graduate Training Certificate, Center for the Neural Basis of Cognition 2013

University of Pittsburgh and Carnegie Mellon University

MSc: University of Toronto, Computer Science 2002

Thesis: “Adaptive Information Filtering with Labeled and Unlabeled Data”

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

ACADEMIC APPOINTMENTS

Postdoctoral Fellow in Philosophy and Ethics of AI 2019 – 2024

Leverhulme Centre for the Future of Intelligence, University of Cambridge

Center for Science and Thought, University of Bonn

Senior Policy Associate 2018

The Mowat Centre, School of Global Affairs and Public Policy, University of Toronto

Postdoctoral Scholar in Philosophy of Neuroscience 2015 – 2018

Rotman Institute of Philosophy, University of Western Ontario

Assistant Professor (Fixed term) 2014 – 2015

Philosophy Department, Ryerson University


Visual Embodiment Predoctoral Fellow 2012 – 2013




Centre for Integrative Neuroscience, University of Tübingen

Max Planck Institute for Biological Cybernetics

PUBLICATION LIST

Peer Reviewed Publications

1. Stinson, C. (forthcoming) Artificial Intelligence and the Future of Education. *Education for a Changing World*. New South Wales Department of Education.
2. Stinson, C. (2019) The Absent Body in Psychiatric Diagnosis, Treatment, and Research. *Synthese*. 196(6), 2153-2176. 
3. Stinson, C. (2018) Explanation and Connectionist Models. In *The Routledge Handbook of the Computational Mind*, Eds. M. Colombo and M. Spervak. 120–133.
4. 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.

5. 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*, Eds. M. Abrams, Z. Biener, U. Feest, J. Sullivan. Springer. 183–194.
6. Stinson, C. (2016) Mechanisms in Psychology: Ripping Nature at its Seams. *Synthese*. 193(5), 1585-1614. 
7. Piryanova, I.V., Wong, H.Y., Linkenauger, S., Stinson, C., Longo, M., Bühlhoff, H.H., Mohler, B.J. (2014) Owning an Overweight or Underweight Body: Distinguishing the Physical, Experienced and Virtual Body. *PLOS One* 9(8): e103428. 
8. Stinson, C. (2009) Searching for The Source of Executive Attention. *PSYCHE* 15(1): 137-154. (With commentary by Andy Clark.) 

Other Recent Publications

1. (forthcoming) Surveillance and AI in the 2019 Election. *THIS Magazine*.
2. (June, 2019) How Climate Change Will Impact Your Region Of Canada. *Chatelaine*. 
3. (February, 2019) Tough Love: Consent in Violent Sports in the Age of #MeToo. *Chatelaine*. 
4. (December 13, 2018) Healthy Data: Policy Solutions for Big Data and AI Innovation in Health. *The Mowat Centre*. 
5. (December 6, 2018) I Read the Terms of Service so you Don't Have to. *The Mowat Centre*. 
6. (July 6, 2018) Is My Fungus Going Viral?: Privacy in Digital Health. *The Globe and Mail*. 
7. (July/August 2018) Es hora de que la inteligencia artificial se ponga filosofica. *Revista de Occidente*.
8. (March 24, 2018) Deep Learning: Why It's Time for Artificial Intelligence to Get Philosophical. *The Globe and Mail*. 
9. (November 9, 2017) Are Women Especially Well-Suited to Doing Science? *Rotman Institute of Philosophy blog*. 
10. (May 20, 2014) Commentary on Philipp Koralus, "The Erotetic Theory of Attention." *Brains blog symposium for Mind & Language*. 

Work in Progress

- What Artificial Neurons Tell us about Real Brains (R&R at *Philosophy of Science*)
- The Role of Diversity in AI's Ethical Crisis
- A Feeling for the Algorithm: Bias in Machine Learning
- Between Model Organism and Human Body
- A Self-Induced Tactile Rubber-Hand Illusion

TEACHING EXPERIENCE

Instructor:

University of Toronto, Cognitive Science Program:

- Cognitive Science in Practice: Social Impact of AI in Health (experiential learning) Spring 2018
- Seminar in Cognitive Science: Cognitive Science of Political Disagreement Spring 2017
- Seminar in Cognitive Science: Delusions Spring 2016

Ryerson University, Philosophy Department:

- Critical Thinking Winter 2014
- Critical Thinking 1 (2 sections) Winter 2014

Max Planck Institute, Neuroscience Graduate School & University of Tübingen, Philosophy Department:
 • Epistemology of Experimentation (co-taught) Summer 2013
 • Mental Architectures (co-taught) Winter 2012

University of Pittsburgh, History & Philosophy of Science Department:
 • Causal Reasoning (hybrid online course) Spring 2009
 • Principles of Scientific Reasoning Fall 2008

Teaching Assistant:

University of Pittsburgh, History & Philosophy of Science Department:
 • Mind and Medicine Spring 2007
 • The Nature of the Emotions Fall 2006

University of Toronto, Computer Science Department:
 • CSC309 Web Programming Fall 2001, Fall 2002
 • CSC258 Computer Organization Fall 2000, Spring 2002
 • CSC238 Discrete Math for Computer Science Fall 1998, Fall 1999, Summer 2000
 • CSC384 Introduction to Artificial Intelligence Spring 1999, Spring 2000
 • CSC324 Programming Languages Summer 1999
 • CSC148 Introduction to Computer Science Fall 1997

PRESENTATIONS

“The Impact of Artificial Intelligence and Big Data on Health Policy”
Oncology Education, Cancer Link Ontario (invited) May 2019

“The Role of Diversity in AI’s Ethical Crisis”
 Philosophy Department, University of Guelph (invited) April 2019

“Le rôle de la diversité dans la crise éthique de l’intelligence artificielle”
 Département de philosophie, Université de Montréal (invited) February 2019

“Policy Solutions for Big Data and AI Innovation in Health”
Ethics and Governance of AI for Health, Joint Centre for Bioethics, Toronto (invited) December 2018

“Frankenstein’s Progeny: AI’s Culture of Exceptionalism”
200 Years of Mary Shelley’s Frankenstein, Texas Christian University (invited) November 2018
Reading Frankenstein: Then, Now, Next, University of Toronto (invited) October 2018

“Big Data in Health: Fostering Innovation While Respecting Patients’ Rights”
Technology is not Value Neutral: Engaging Technological Solutionism in Paediatrics, Sick Kids Hospital
 Bioethics Symposium, Toronto (invited) November 2018

“Health Data Privacy in the Age of AI”
 Office of the Information and Privacy Commissioner of Ontario (invited) August 2018

“How Artificial Neurons Tell us about Real Cognition”
Workshop on Non-Human Cognition, University of Toronto (invited) May 2018

“Abstract Mechanisms and Causal Powers” (with B. Hennig)
Canadian Society for History & Philosophy of Science, Toronto May 2017

“The Body in Mental Health” <i>Neuroscience and Society Lecture Series</i> , London ON (invited)	October 2016
“Mechanistic and Mathematical Explanation Unified” <i>Mechanistic Integration and Unification in Cognitive Science</i> , Warsaw	June 2016
“Grounding Inferences from Model Organisms” <i>First Principles in Science: Their Epistemic Status and Justification</i> , MCMP Munich	June 2016
“The Absent Body in Psychiatric Classification, Diagnosis, and Treatment” <i>Canadian Society for History & Philosophy of Science</i> , Calgary	May 2016
“Are ‘Computational Experiments’ Experiments?” Munich Center for Mathematical Philosophy, University of Munich (invited) Philosophy Department, York University (invited)	May 2014 April 2014
“Interoception, Eating Disorders, and the Rubber-Hand Illusion” <i>Body Perception: Clinical, Experimental, and Philosophical Approaches</i> , Tübingen	November 2013
“Computational Models as Experimental Systems” <i>Society for Philosophy of Science in Practice</i> , Toronto <i>Max Planck Institute for History of Science</i> , Berlin	June 2013 December 2010
“Abstract Models, Generic Mechanisms” <i>Models & Mechanisms</i> , Tilburg	December 2012
“Is Explanation in Psychology Mechanistic?” <i>Explaining Mental Phenomena</i> , University of Tübingen	July 2012
“Computational Models as Mechanistic Explanations” <i>Models and Simulations 5</i> , Helsinki <i>Computability in Europe: Turing Centenary Conference</i> , Cambridge	June 2012 June 2012
“Epistemology of Computational Modeling in the Social Sciences” Institute of Social Sciences, University of Kiel (invited)	May 2012
“What Mechanisms Can Do (for You)” Centre for Integrative Neuroscience, University of Tübingen (invited)	December 2011
“Aristotle’s Argument against Functionalism” (with B. Hennig) <i>International Society for History of Philosophy of Science</i> , Budapest	June 2010
“The Role of Computational Models in Cognitive Neuroscience” <i>Epistemology of Modeling and Simulation</i> , Pittsburgh <i>European Conference on Computing and Philosophy</i> , Barcelona <i>Association for the Scientific Study of Consciousness</i> , Berlin (poster)	April 2011 July 2009 June 2009
“Searching for The Source of Executive Attention” <i>Consciousness in a Natural and Cultural Context</i> , Edinburgh (invited)	June 2008
“Locating Executive Attention: Explanation and Levels of Description” <i>Graduate Conference in Philosophy, Psychology, Neuroscience and Biology</i> , Edinburgh (poster)	June 2008

- “Attention, Volition, and the Ghost in the Machine”
European Society for Philosophy and Psychology, Geneva July 2007
- “How are you People Going to get Things Done if None of you People Ever Participate?”
National Communication Association, Boston November 2005
- “On-line Learning from Labeled and Unlabeled Data”
Neural Information Processing Systems, Vancouver (poster) December 2001

SCIENTIFIC COLLABORATIONS

- Harris Lab: Centre for Vision Research, York University 2017 – 2018
 Consulting on multisensory perception experiments investigating body perception using VR
- Perception & Action in Virtual Environments: Max Planck Institute for Biological Cybernetics 2012 – 2013
 Designing full-body and tactile extensions to the Rubber-Hand Illusion
- Machine Learning Lab: University of Toronto 2002 – 2003
 Implementing Bayesian learning algorithms for letter recognition and text classification
- Artificial Intelligence Lab: University of Toronto 1998 – 1999
 Researching computational vision algorithms for gesture recognition in a communications robot
- Institute of Aerospace Research: National Research Council of Canada 1998
 Coding artificial neural network algorithms to streamline airplane wing design

AWARDS, GRANTS & SCHOLARSHIPS

- For *The Social Impact of Medicalizing Psychiatry* conference (with V. Arsiradam, D. Oswick): 2016
 School of Graduate Studies Grant, Minorities and Philosophy Grant, Rotman Institute of Philosophy Award, Research Western Award, Society of Graduate Students Grant, and Western Student Experience Grant
- Dean’s Tuition Scholarship, University of Pittsburgh 2013
- Best Student Paper Award, International Association for Computing and Philosophy 2011
 Epistemology of Modeling and Simulation Conference, University of Pittsburgh
- Pre-doctoral Fellowship: Max Planck Institute for History of Science, Berlin 2010
- Wesley Salmon Grant, for archival research 2009, 2011
- Shortlist, ESF Consciousness in a Natural and Cultural Context Essay Competition 2008

PROFESSIONAL SERVICE

Lead Organizer:

- Symposium: *From Naturalism to Metaphysics*, Canadian Society for History & Philosophy of Science 2017
- Conference: *The Social Impact of Medicalizing Psychiatry*, Rotman Institute of Philosophy 2017
- Workshop: *Body Perception: Clinical, Experimental, and Philosophical Approaches*, Tübingen 2013
- Seminar Series: *Body Perception*, Centre for Integrative Neuroscience, Tübingen 2012 – 2013

Committees:

- Program Committee: *Lab Associates Graduate Training*, Rotman Institute of Philosophy 2016 – 2018
- Outreach Committee: *The Brain Boom* public event series, Rotman Institute of Philosophy 2017
- Organizing Committee: *Explaining Mental Phenomena* workshop, Tübingen 2012
- Program Committee: *Models & Mechanisms* conference, Tilburg 2012
- Program Committee: *Annual Lecture Series*, Pittsburgh Center for Philosophy of Science 2009

Reviewer:

Synthese, Philosophy of Science, Philosophical Studies, Journal of Cognitive Science, Journal of Academic Ethics

Session Chair:

<i>Canadian Society for History and Philosophy of Science</i> , Toronto	2017
<i>Philosophy of Science Association</i> , Atlanta	2016
<i>Canadian Society for History and Philosophy of Science</i> , Calgary	2016
<i>Rethinking the Taxonomy of Psychology</i> , London, ON	2016
<i>Philosophy of Science Association</i> , Chicago	2014
<i>Explaining Mental Phenomena</i> , Tübingen	2012
<i>Models & Mechanisms</i> , Tilburg	2012
<i>Current Topics in the Philosophy of the Human Sciences</i> , Berlin	2010

Memberships:

Philosophy of Science Association
International Philosophy of Medicine Roundtable
Minorities and Philosophy

LANGUAGES

English: first language
French: good written and spoken
German: good written and good spoken