

# KATHLEEN CREEL

## ADDRESS

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## CONTACT INFORMATION

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## EDUCATION

University of Pittsburgh, Pittsburgh, PA  
PhD in History and Philosophy of Science, expected 2021.

Simon Fraser University, Burnaby, BC  
Masters in Philosophy, April 2015.

Williams College, Williamstown, MA  
Bachelor of Arts in Computer Science and in Philosophy, June 2010.

## AREAS OF SPECIALIZATION

Philosophy of Science, Philosophy of Machine Learning, Ethics of Technology

## AREAS OF COMPETENCE

Early Modern History of Philosophy, Bioethics, Metaphysics, Epistemology

## PUBLICATIONS

forthcoming, *Philosophy of Science*, "Transparency in Complex Computational Systems"

## CONFERENCE PRESENTATIONS

**Canadian Society for Epistemology**, Montreal November 2019  
"Anti-Reductionist Machine Testimony"

**Hermetica in Late Antiquity Workshop**, Oslo August 2019  
"The One and the Sun: Emanation and Hermetism in Plotinus"

**Cognitive Science**, Montreal July 2019  
Panel presentation in "What Makes a Good Explanation? Cognitive Dimensions of Explaining Intelligent Machines"

**ISHPSSB**, Oslo July 2019  
"Noise in a Noisy World: Finding Metagenomic Patterns"

**Pacific APA**, Vancouver April 2019  
"Early Modern Correspondences"

**Pacific APA**, Vancouver April 2019  
"Demystifying Publishing Together: A Twelve Week Intensive Graduate Workshop"

**Central APA**, Denver February 2019  
"What's the Signal?: The Signal-Noise Distinction and the Detection of Scientific Phenomena"

**SAS IV: Epistemic opacity in Computer Simulation & ML**, Stuttgart November 2018  
"Three Forms of Transparency in Scientific Machine Learning"

<b>History of Philosophy of Science (HOPOS)</b> , Groningen, NL ““There must be a Tub to Amuse the Whale”: Joseph Black’s Methodology Reconsidered”	July 2018
<b>Society for Philosophy of Science in Practice (SPSP)</b> , Ghent “Explainable AI”	June 2018
<b>Machine Learning Workshop</b> , Irvine, CA “Machine Learning and Transparency”	March 2018
<b>Models and Simulations 8 (MS8)</b> , Columbia, SC “Transparency in Complex Computational Systems”	March 2018
<b>Newberry Library Multi-Disciplinary Conference</b> , Chicago “Malebranche, Monsters, and the Maternal Imagination”	January 2018
<b>Philosophical Perspectives on Data-Intensive Science</b> , Hannover “Transparency in Complex Computational Systems”	October 2017
<b>Canadian Society for HPS</b> , Ryerson University “Incompressible Patterns: CRISPR vs. Dennett”	May 2017
<b>Philosophy of Scientific Experimentation (PSX4)</b> , Pittsburgh “Machine Learning as Experiment”	April 2014

#### INVITED COMMENTARY

<b>Central APA</b> , Chicago Invited comment on “Really Real Patterns,” Tyler Millhouse	February 2020
<b>Ethics of Technology At Work &amp; in Public Institutions</b> , Harvard Invited comment on “The Hidden Assumptions Behind Counterfactual Explanations & Principal Reasons,” Barocas, Selbst, & Raghavan	Jan. 2020
<b>Ethics of Algorithmic Decision-Making in Democratic Institutions</b> Invited comment at Princeton on “Power, Process, and Automated Decision-Making,” Ari Waldman	Nov. 2019
<b>Pacific APA</b> , San Diego, CA Invited Comment on “Prediction in Science: How Big Data Does - and Doesn’t - Help,” Robert Northcott	March 2018
<b>Will Science Remain Human?</b> , Rome Invited comment on panel of Paul Humphreys, Eric Winsberg, Emanuele Ratti	March 2018
<b>Pittsburgh-CMU Graduate Conference</b> Invited Comment on “Problems for counterfactual accounts of causation by omission,” Sebastian Murgueitio	March 2017

## RELEVANT WORK EXPERIENCE

**Research Assistant** Simon Fraser University Sept. 2011 - April 2015

Research Assistant to Dr. Holly Andersen, SSHRC Project on Causation. Researched and presented materials on information theory, pattern ontology, literature on causation. Spring & fall 2012, summer 2014.

Research assistant to Dr. Lisa Shapiro, summer 2013. Graduate fellowship spring 2014.

**Software Engineer** MIT Lincoln Laboratory July 2010 - August 2011

Applied research on next generation secure satellite systems. Development team for the Advanced Extremely High Frequency (AEHF) constellation and ground control terminals.

**Artificial Intelligence Research** University of Tennessee, Knoxville Summer 2009

Wrote a control architecture for heterogeneous robot teams working with humans to perform tasks in an unknown environment as part of a research internship in Dr. Lynne Parker's Robotics and Distributed Intelligence Lab.

## TEACHING

**Instructor** University of Pittsburgh Spring 2019  
Instructor of record for *Problem Solving: How Science Works*.

**Instructor** University of Pittsburgh Fall 2018  
Instructor of record for *Magic, Medicine, and Science*.

**Instructor** University of Pittsburgh Spring 2017  
Instructor of record for *Morality and Medicine*.

**Teaching Assistant** University of Pittsburgh Fall 2016  
Teaching assistant for *Philosophy of Science*.

**Teaching Assistant** Simon Fraser University September 2011 - April 2015  
Teaching assistant for *Introduction to Moral Philosophy, Introduction to Metaphysics and Epistemology, and Critical Thinking*. Taught three discussion sections per semester.

**Teaching Assistant** Williams College Fall 2007 - Spring 2010  
Teaching assistant for *Introduction to Computer Science* (Fall 2007 - Fall 2010) and *Introduction to Moral Philosophy* (Spring 2010).

## SERVICE

Reviewer for *Philosophy of Science* (x6), *British Journal of Philosophy of Science* (x2), *Dialogue*

Graduate Representative, elected, 2019-2020

Founder, *Graduate Publication Workshop*, 2019-2020

Award Committee and Judge for Elizabeth Baranger Teaching Award competition, 2018

Teaching Representative, elected, 2018

Organizer of Work In Progress Talks, elected, 2016

## **AWARDS**

Elizabeth Baranger Teaching Award, University of Pittsburgh, Honorable Mention, 2019

APA Travel Grant, 2019

HOPOS Syllabus Competition Winner, 2018

Newberry Travel Grant, 2018

Wesley Salmon Fund Travel Award, Fall 2017, Spring 2018

NSF Scholarship to Grace Hopper Conference for Women in Computing, 2009

Williams College Class of 1960's Scholar, 2006 - 2007

National Merit Scholar, 2005

## **COURSEWORK**

### **University of Pittsburgh**

#### *Philosophy of Science:*

Philosophy of Science, Models & Modeling, Extended Evolutionary Synthesis,\*  
Experimental Practice, Cognitive Science, Systems Neuroscience,  
Incommensurability, Causal Cognition, Realism.

#### *Metaphysics and Epistemology:*

Metaphysics of Relations,\* Metaphysics of Grounding,  
Epistemology of Disagreement and Higher Order Evidence,  
Science and Metaphysics, Laws of Nature.

#### *History of Science and History of Philosophy:*

History of Life Sciences, History of Physics,  
Aristotle's Biology, Teleology,  
Philosophy of Late Antiquity

### **Simon Fraser University**

#### *Philosophy of Science, Logic, and Language:*

Scientific Explanation, Philosophy and Psychology of Language,  
Topics in Logic: Hartry Field, Metaphysics & Philosophy of Science, Causation.\*

#### *Philosophy of Mind:*

Appearances, Neurophilosophy

#### *History of Philosophy:*

Descartes on Human Nature, Hume's Ethics,  
Topics in 17th & 18th Century: Pleasure,\* Kant's Critique of Pure Reason.\*

#### *Metaethics and Ethics:*

Contemporary Metaethics, Topics in Metaethics: Normativity,  
Methodology: Intuitions, History of Ethics,\* Moral Psychology.\*