

KONSTANTIN GENIN

Cluster of Excellence
Machine Learning: New Perspectives for Science
Eberhard Karls Universität Tübingen
Tübingen, Germany

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AREA OF SPECIALIZATION

Philosophy of Machine Learning and Statistics, Philosophy of Science, Formal Epistemology

ACADEMIC POSITIONS

Leader of Independent Research Group: Spring 2020—Present
“Epistemology and Ethics of Machine Learning,”
at the Cluster of Excellence:
“Machine Learning: New Perspectives for Science,”
Eberhard Karls Universität, Tübingen.

Postdoctoral Fellow, Department of Philosophy Fall 2018—Spring 2020
Faculty of Arts and Sciences, University of Toronto.

EDUCATION

Doctor of Philosophy, Logic, Computation and Methodology Fall 2012—Spring 2018
Department of Philosophy, Carnegie Mellon University
Dissertation Title: *The Topology of Statistical Inquiry*.
Dissertation Advisor: Kevin T. Kelly.

Master of Science, Logic, Computation and Methodology Fall 2012—Spring 2015
Department of Philosophy, Carnegie Mellon University
Thesis Title: *Theory Choice, Theory Change, and Inductive Truth-Conduciveness*.
Thesis Advisor: Kevin T. Kelly.

Bachelors of Arts, Mathematics and Philosophy Fall 2005—Spring 2009
Departments of Mathematics and Philosophy resp., Brown University
Magna Cum Laude

PUBLICATIONS

Konstantin Genin, Conor Mayo-Wilson (2020). “Statistical Decidability in Linear, Non-Gaussian Models,” Spotlight in *Causal Discovery and Causality-Inspired Machine Learning Workshop* at the *Thirty-Fourth Conference on Neural Information Processing Systems*

(*NeurIPS, 2020*).

Konstantin Genin, Franz Huber (2020). “Formal Representations of Belief,” in Edward N. Zalta, ed., *The Stanford Encyclopedia of Philosophy*.

Konstantin Genin (2019). “Full and Partial Belief,” in Richard Pettigrew and Jonathan Weisberg, eds., *The Open Handbook of Formal Epistemology*. PhilPapers Foundation. pp. 437-498.

Konstantin Genin, Kevin T. Kelly (2018). “Theory Choice, Theory Change and Inductive Truth-Conduciveness,” *Studia Logica*, 107(5): 948-989.

Konstantin Genin, Kevin T. Kelly (2017). “The Topology of Statistical Verifiability,” in Jérôme Lang, ed., *Proceedings of the Sixteenth Conference on Theoretical Aspects of Rationality and Knowledge (TARK)*, pp. 236-250.

Kevin T. Kelly, Konstantin Genin, Hanti Lin (2016). “Realism, Rhetoric, and Reliability,” *Synthese*, 193(4): 1191-1223.

Konstantin Genin, Kevin T. Kelly (2015). “Theory Choice, Theory Change, and Inductive Truth-Conduciveness,” in R. Ramanujam, ed., *Proceedings of the Fifteenth Conference on Theoretical Aspects of Rationality and Knowledge (TARK)*, pp. 111-121.

Kevin T. Kelly, Konstantin Genin (2014). “Complexity, Ockham’s Razor, and Truth,” in M. Lissack and A. Graber, eds., *Modes of Explanation: Affordances for Action and Prediction*. Palgrave Macmillan, pp. 121-131.

Ryan Carlson, Konstantin Genin, Martina Rau, Richard Scheines (2013). “Student Profiling from Tutoring System Log Data: When do Multiple Graphical Representations Matter?” in S.K. D’Mello et. al. eds., *Proceedings of the 6th International Conference on Educational Data Mining (EDM, 2013)*, pp. 12-20.

TALKS

“Morals and Methodology”

December, 2020

Seminar Series of the Cluster of Excellence:

“Machine Learning: New Perspectives for Science”

Eberhard Karls Universität, Tübingen.

“Simplicity and Scientific Progress”

1. Logic and Philosophy of Science Research Group Seminar,
Univeristy of Toronto.

October 2019

2. American Philosophical Association, Central Division
Chicago. February 2020
 3. Foundations of Probability Seminar,
Princeton. November 2020
 4. Logic and Interactive Rationality Seminar,
Amsterdam. December 2020
- “Progressive Methods for Causal Discovery” August, 2019
16th International Congress
Logic, Methodology and Philosophy of Science and Technology (CLMPST)
Czech Technical University, Prague.
- “Topological Learning Theory” June, 2019
Workshop in Philosophy and Physical Computing,
Virginia Tech, Blacksburg.
- “Progressive Methods for Statistical Inquiry” March, 2019
Statistics Department Seminar,
Washington University, St Louis.
- “Inductive vs. Deductive Statistical Inference” November, 2018
26th Biennial Meeting of the Philosophy of Science Association,
Seattle, Washington.
- “The Topology of Statistical Inquiry” October 20, 2018
Workshop on Logic, Information, and Topology, CMU, Pittsburgh.
- “Progressive Methods for Causal Discovery” September 22, 2018
Workshop on Foundations of Causal Discovery, CMU, Pittsburgh.
- “Topological Epistemology of Science” June 23-29, 2018
with Kevin T. Kelly,
North American Summer School of Logic, Language and Information (NASSLLI),
CMU, Pittsburgh.
- “Simplicity and Scientific Progress” June 2-3, 2018
7th CSLI Workshop on Logic, Rationality, and Intelligent Interaction,
Stanford, California.
- Reply to “Two Cheers for Akrasia” (Kevin Dorst) January 2018
Meeting of the American Philosophical Association Eastern Division,
Savannah, Georgia.
- “The Topology of Statistical Verifiability” July 2017

XVIth Conference on Theoretical Aspects of Rationality and Knowledge,
University of Liverpool.

“How Inductive is Bayesian Conditioning?” July 2017
Workshop in Experience and Updating,
University Bochum, Germany.

“The Topology of Statistical Inquiry.” June 2017
Workshop in Philosophy and Physical Computing,
Virginia Tech, Blacksburg (Invited Talk).

“What is Statistical Deduction?” June 2017
Workshop in Modality and Method,
CMU, Pittsburgh.

Reply to “Credal Omniscience and Relevance Confirmation.” (Joel Pust) March 2017
Meeting of the American Philosophical Association Central Division,
Kansas City.

“Deduction, Induction, Statistics and Topology.” November 2016
with Kevin T. Kelly,
Workshop in the Logical Structure of Correlated Information Change,
Institute for Logic, Language and Computation, Amsterdam.

“A Topological Explanation of Empirical Simplicity.” November 2016
with Kevin T. Kelly,
Philosophy of Science Association Meeting,
Atlanta.

“Deduction, Induction, and Statistical Inference.” September 2016
with Kevin T. Kelly,
Philosophy of Scientific Experimentation 5,
University of Belgrade.

“Simplicity and Scientific Questions.” June 2016
Questions and Attitudes Workshop,
Carnegie Mellon University, Pittsburgh.

“Theory Choice, Theory Change, and Inductive Truth Conduciveness.”

1. Bristol-Gröningen Conference in Formal Epistemology, July 2015
University of Bristol.
2. *XVth* Conference on Theoretical Aspects of Rationality and Knowledge, June 2015
Carnegie Mellon.

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| 3. Formal Epistemology Workshop,
University of Washington, St. Louis. | May 2015 |
| 4. CSLI Workshop on Logic, Rationality, and Intelligent Interaction,
Stanford (Invited Talk). | May 2015 |
| “A Topological Theory of Empirical Simplicity.”
with Kevin T. Kelly, Hanti Lin,
Philosophy of Science Association Meeting,
Chicago. | November 2014 |
| “Learning with Ockham: Simplicity in Inductive Inference.”
Cool Logic Seminar,
Institute for Logic, Language and Computation, Amsterdam. | October 2014 |
| “An Epistemic Justification of Ockham’s Razor”
with Kevin T. Kelly,
René Descartes Lectures,
Tilburg University. | October 2014 |
| “The St. Petersburg Paradox.”
with Remco Heesen,
Swiss Institute Exhibition,
New York City. | July 2014 |
| “Contraction and the Loss of True Belief.”
with Ted Shear, | |
| 1. North American Summer School in Logic, Language, and Information,
Univeristy of Maryland, College Park. | June 2014 |
| 2. Canadian Society for History and Philosophy of Science Meeting,
St. Catherine’s, Ontario. | May 2014 |
| 3. Association of Symbolic Logic North American Meeting,
University of Colorado, Boulder. | May 2014 |
| 4. Colombian Conference in Logic, Epistemology and Phil. of Science,
Universidad de Los Andes, Bogota. | February 2014 |
| “Tracking and Statistical Knowledge.”
11th Annual Graduate Student Conference in Epistemology,
University of Miami. | January 2014 |
| “When do Multiple Graphical Representations Matter?”
with Ryan Carlson, et. al.
Educational Data Mining Conference, | July 2013 |

Memphis.

“Empirical Simplicity, Efficient Inquiry, and Ockham’s Razor.”
with Kevin T. Kelly, Hanti Lin,
Workshop on the Logic of Simplicity,
Carnegie Mellon, Pittsburgh.

June 2013

TEACHING EXPERIENCE

Course Instructor, Carnegie Mellon University

Causation, Law and Social Policy

Spring 2018

Introduction to Political Philosophy

Summer 2017

Introduction to Philosophy

Fall 2016

Causation, Law and Social Policy

Spring 2016

Introduction to Philosophy

Summer 2015

Introduction to Philosophy

Summer 2014

TA or Grader, Carnegie Mellon University

Philosophy of Science

Fall 2017

Social Structure, Public Policy and Ethics

Spring 2017

Philosophy of Religion

Spring 2014

Philosophy and Psychology

Fall 2013

Social Structure, Public Policy and Ethics

Spring 2013

DISCIPLINARY SERVICE

Referee, *Ergo*

July 2020

Referee, *Synthese*

July 2020

Referee, *Philosophy of Science*

October 2019

Referee, *Synthese*

October 2018

Referee, *Journal for General Philosophy of Science*

April 2018

Referee, Sixth International Conference on Logic, Rationality and Interaction

May 2017

Referee, *Erkenntnis*

May 2017

Organizer, Pitt-CMU Grad Conference in Philosophy

March 2017

Referee, *Episteme*

December 2016

Referee, *Erkenntnis*

January 2016

Referee, *Ergo*

June 2015

Referee, *Erkenntnis*

May 2015

Referee, *British Journal for Philosophy of Science*

February 2015

Referee, *Studies in History and Philosophy of Science*

July 2014

Referee, *analytica*

December 2014

Referee, Pitt-CMU Grad Conference in Philosophy

Fall 2014

MEMBERSHIPS

American Philosophical Association
Philosophy of Science Association

LANGUAGES

English — Native Speaker
Russian — Fluent
French — Intermediate
German — Beginner