

# Boris Babic

Jackman Humanities Building, 170 St. George St. (Philosophy)  
Ontario Power Building, 700 University Ave (Statistical Sciences)  
(917) 267 9873 · boris.babic@utoronto.ca · babic917@gmail.com

<https://borisbabic.com>

last update: March 2023

## Academic Appointments

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Assistant Professor, <b>University of Toronto, St. George</b> Department of Philosophy and Department of Statistical Sciences (joint appointment) Faculty Fellow, Schwartz Reisman Institute for Technology and Society	2021-
Assistant Professor, <b>INSEAD</b> Department of Decision Sciences (France and Singapore)	2019-2021
Postdoctoral Scholar, <b>California Institute of Technology</b>	2017-2019

## Education

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PhD in Philosophy, University of Michigan, Ann Arbor <i>Dissertation Title:</i> Foundations of Epistemic Risk <i>Committee:</i> James Joyce (Chair), Peter Railton, Brian Weatherson, Rich Gonzalez (Statistics/ Psychology)	2013-2017
MS in Statistics, University of Michigan, Ann Arbor	2015-2017
JD, <i>cum laude</i> , Harvard Law School	2007-2010
BA, <i>summa cum laude</i> , York University	2003-2007

## Areas of Specialization and Competence

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**AOS:** Bayesian Statistics; Ethics Law and Policy of AI and Machine Learning; Epistemology  
**AOC:** Decision & Game Theory, Legal Theory

## Publications

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<b>Academic Journal Articles</b> .....	
1. The Algorithmic Explainability Bait and Switch, <b>Minnesota Law Review</b> with I. Glenn Cohen	Exp. 2023
2. Moral Encroachment Under Moral Uncertainty, <b>Philosophers' Imprint</b> with Zoë Johnson King	Exp. 2023

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| 3. Algorithmic Fairness and Resentment, <b>Philosophical Studies</b><br>with Zoë Johnson King  | Exp. 2023 |
| 4. Beware Explanations from AI in Health Care, <b>Science</b><br>with I. Glenn Cohen, Theodoros Evgeniou, and Sara Gerke   | 2021      |
| 5. Direct Advertising of Medical Machine Learning, <b>Nature Machine Intelligence</b><br>with I. Glenn Cohen, Theodoros Evgeniou, and Sara Gerke                                     | 2021      |
| 6. Normativity, Epistemic Rationality and Noisy Statistical Evidence,<br><b>British Journal for the Philosophy of Science</b><br>with Anil Gaba, Ilia Tsetlin, and Robert L. Winkler | 2021      |
| 7. Approximate Coherentism and Luck, <b>Philosophy of Science</b>  | 2021      |
| 8. A System View for Medical Machine Learning Policy, <b>Nature Digital Medicine</b><br>with I. Glenn Cohen, Theodoros Evgeniou, and Sara Gerke                                      | 2020      |
| 9. Moral Obligation & Epistemic Risk, <b>Oxford Studies in Normative Ethics</b><br>with Zoë Johnson-King   | 2020      |
| 10. Algorithms on Regulatory Lockdown, <b>Science</b><br>with I. Glenn Cohen, Theodoros Evgeniou, and Sara Gerke   | 2019      |
| 11. A Theory of Epistemic Risk, <b>Philosophy of Science</b>   | 2019      |

#### Other Writing.....

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| 12. Comment on Ariel Dora Stern, "Regulation of Medical AI",<br><b>The Economics of Artificial Intelligence</b><br>edited by Ajay Agrawal, Joshua Gans, and Avi Goldfarb | Exp 2023 |
| 13. Explaining Medical AI is Easier Said than Done, <b>STAT News</b><br>with Sara Gerke  | 2021     |
| 14. When Machine Learning Goes off the Rails, <b>Harvard Business Review</b><br>with I. Glenn Cohen, Theodoros Evgeniou, and Sara Gerke                                  | 2020     |
| 15. Can AI Decide Who Gets an Organ Transplant?, <b>Harvard Business Review</b><br>with I. Glenn Cohen, Theodoros Evgeniou, Sara Gerke, and Nikos Trichakis              | 2020     |
| 16. Onboarding AI, <b>Harvard Business Review</b><br>with Daniel Chen, Theodoros Evgeniou, and Anne-Laure Fayard   | 2020     |

## In Progress.....

17. Resolute and Correlated Bayesians (under review)

with Anil Gaba, Ilia Tsetlin, and Robert L. Winkler

18. Reframing the Interpretability Accuracy Tradeoff (under review)

with Zhanghan Yin

19. Bayesian Bandits and New Hypotheses (in progress)

with Ilia Tsetlin

20. The Cost of Data Bias:

A Model of the Diminishing Value of Noisy Information (in progress)

with Robin Gong

## Presentations

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“The Cost of Data Bias”

IMS International Conference on Statistics and Data Science, Lisbon (December 2023)

“Bayesian Bandits and New Hypotheses”

NYU-Rutgers Workshop on the Foundations of Probability (January 2023)

“The Case Against Explainable Medical Machine Learning”

Canadian Statistical Society, Annual Meeting (June 2021)

University of Toronto, Schwartz Reisman Institute (September 2021)

Frankfurt School of Finance and Management (June 2022)

University of Toronto, Rotman School of Management (October 2022)

“Resolute and Correlated Bayesians”

California Institute of Technology (June 2021)

University of Bristol (May 2021)

UC Irvine, Formal Epistemology Workshop (May 2022)

“Noisy Stereotypes”

UC Irvine, Formal Epistemology Workshop (April 2020)

University of Toronto (February 2020)

University of Washington (February 2020)

University of Stirling and Edinburgh, Varieties of Risk Project (November 2021)

“Algorithmic Discrimination and Epistemic Risk”

London School of Economics (February 2019)

INSEAD (February 2019)

California Institute of Technology (January 2019)

King’s College London (July 2021)

“Moral Obligation and Epistemic Risk”

Arizona Workshop in Normative Ethics (January 2019)

“A Challenge for Approximate Coherentism”

University of Colorado, Boulder, 34th Conf. on Chance and Probability (October 2018)

“Testing for Discrimination and the Risk of Error”

The Australian National University (July 2018)

“Dynamic Epistemic Risk”

University of California, Irvine (February 2018)

California Institute of Technology (January 2018)

“Generalized Entropy and Epistemic Risk”

University of Michigan, Philosophy of Science Colloquium (February 2018)

London School of Economics, Philosophy of Probability Conference (June 2017)

University of Chicago, Graduate Conference (April 2016)

“Frequency Encoding Credences”

London School of Economics, Decisions, Games and Logic Workshop (June 2015)

“Degrees of Belief, Moral Judgment, and Legal Responsibility”

Harvard Legal Philosophy Colloquium (November 2014)

## Fellowships & Awards (Selected)

From Outcome Disparity to Data Inequality, Insight Grant (Sole PI, \$76,500)	2021-2025
<b>Social Sciences and Humanities Research Council of Canada</b>	
Faculty Fellowship (\$25,000)	2021-2025
<b>Schwartz Reisman Institute</b>	
Faculty Fellowship (\$25,000)	2021-2025
<b>Connaught New Faculty Research Prize</b>	
Reconceiving Procedural Fairness, Insight D1pt Grant (Collaborator, \$64,584)	2021-2025
<b>Social Sciences and Humanities Research Council of Canada</b>	
Institutional Grant (Sole PI, \$2,500)	2021-2022
<b>Social Sciences and Humanities Research Council of Canada</b>	
Fair Machine Learning, Research Grant (\$7,500)	2020
<b>The Desmarais Fund for Research in AI</b>	
Doctoral Fellowship (\$60,000)	2015-2018
<b>Social Sciences and Humanities Research Council of Canada</b>	
Rackham Dissertation Fellowship (\$10,200)	2017
<b>University of Michigan, Ann Arbor</b>	
Rackham Research Grant (\$3,000)	2017
<b>University of Michigan, Ann Arbor</b>	
Mellon Recruitment Fellowship (\$4,000)	April 2013
<b>University of Michigan, Ann Arbor</b>	
Rhodes Scholarship Finalist	December 2009
<b>Ontario</b>	

Public Interest Law Fellowship (\$5,000)  
**Harvard Law School**

2008

## Teaching

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Bayesian Statistics (BA) <i>University of Toronto</i>	<i>Spring 2023, Spring 2022</i>
Philosophy of Science (PhD) <i>University of Toronto</i>	<i>Spring 2022</i>
Statistics, Ethics and Law (new course) (MSc) <i>University of Toronto</i>	<i>Fall 2021</i>
Ethical Issues in Big Data (new course) (BA) <i>University of Toronto</i>	<i>Spring 2023, Fall 2021</i>
Bayesian Statistics (PhD) <i>INSEAD</i>	<i>Fall 2020, Fall 2019</i>
Management Decision Making (MBA) <i>INSEAD</i>	<i>Spring 2021, Spring 2020</i>
Data Analysis (Masters in Management) <i>INSEAD</i>	<i>Fall 2020</i>
Quantitative Methods (MBA) <i>INSEAD</i>	<i>Summer 2019, Fall 2019, Fall 2020</i>
Statistics, Ethics and Law (new course) <i>Caltech</i>	<i>Spring 2018</i>
Probability, Evidence and Belief <i>Caltech</i>	<i>Spring 2018, Fall 2018</i>
Knowledge and Reality <i>Caltech</i>	<i>Fall 2017, Spring 2019</i>
Nature of Science <i>University of Michigan</i>	<i>Fall 2016</i>
Knowledge and Reality <i>University of Michigan</i>	<i>Summer 2016</i>

## Legal Experience

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Stikeman Elliott, LLP <i>Litigation Attorney</i>	Toronto 2012–2013
Quinn, Emanuel, Urquhart & Sullivan, LLP <i>Litigation Attorney</i>	Los Angeles 2010–2012
Kirkland & Ellis, LLP <i>Summer Associate (offer extended)</i>	New York Summer 2009
Petrie-Flom Center for Health Law Policy, Biotechnology & Bioethics <i>Research Assistant</i>	Cambridge, MA 2009–2010

## Professional Service

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Reviewer for the following publications:

*Philosophy of Science, Mind, BJPS, Theory & Decision, PPR, Ergo, Synthese, PPQ, APQ, Philosophical Studies*

ACM Transactions on Probabilistic Machine Learning <i>Associate Editor</i>	2023-
ACM Conference on Fairness, Accountability, and Transparency (ACM FAccT) <i>Program Committee</i>	June 2022
AAAI/ACM Conference on AI, Ethics and Society <i>Program Committee</i>	May 2021
10th Workshop in Decisions, Games and Logic <i>Organizer (Co-), \$10,000+ grant funding</i>	June 2019
Philosopher's Annual <i>Editor (Volumes 35 and 36)</i>	2017, 2016
Foundations of Belief and Decision Making Workshop <i>Coordinator (and Co-founder), \$11,000+ grant funding</i>	2015-2017
9th Workshop in Decisions, Games and Logic <i>Organizer (Co-), \$4,000 grant funding</i>	July 2015
Law & Philosophy Working Group <i>Coordinator (Co-), \$12,000 grant funding</i>	2013-2015
Harvard Journal of Law and Technology <i>Editor</i>	2007-2009

## Computer Skills

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R, Python, SAS, JAGS, Stan

## Memberships & Affiliations

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State Bar of California, Provincial Bar of Ontario

## References

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### Research.....

#### James Joyce

C. H. Langford Collegiate  
Professor of Philosophy,  
University of Michigan,  
Ann Arbor  
office. 734. 763. 2120  
cell. 734. 330. 6849  
jjoyce@umich.edu

#### Christopher Hitchcock

J. O. and Juliette Koepfli  
Professor of Philosophy,  
California Institute of  
Technology  
office. 626. 395. 3602  
cricky@caltech.edu

#### Simon Huttegger

Professor,  
Logic and Philosophy  
of Science,  
University of California, Irvine  
office. 949. 824. 3220  
shuttegg@uci.edu

#### Peter Railton

Gregory S. Kavka  
Distinguished University  
Professor,  
University of Michigan,  
Ann Arbor  
office. 734. 763. 2122  
cell. 734. 395. 1350  
prailton@umich.edu

#### Brian Weatherson

Marshall M. Weinberg  
Professor of Philosophy,  
University of Michigan,  
Ann Arbor  
office. 734.764.6285  
weath@umich.edu

#### Jonathan Weisberg

Associate Professor  
of Philosophy,  
University of Toronto  
jonathan.weisberg@utoronto.ca

### Teaching.....

#### Elizabeth Anderson

John Dewey  
Distinguished University Professor,  
University of Michigan,  
Ann Arbor  
office. 734. 763. 2118  
eandersn@umich.edu