

Mario Günther

RESEARCH PROFILE

AOS: Epistemology, Logic, Metaphysics

AOC: Decision Theory, Ethics, Philosophy of Science, Philosophy of AI

POSITIONS

22- **Assistant Professor**

Munich Center for Mathematical Philosophy, LMU Munich

19-21 **Research Fellow**

“Humanising Machine Intelligence”
Australian National University

Academic Visitor 2021

London School of Economics & Political Science

18-19 **Research Fellow**

“Reasoning with Conditionals” (DFG Project)
University of Regensburg

EDUCATION

2019 **PhD in Philosophy**

“Learning, Conditionals, Causation”
Munich Center for Mathematical Philosophy & Graduate School of Systemic Neurosciences, LMU Munich
HANNES LEITGEB, STEPHAN HARTMANN

2015 **Master in Logic and Philosophy of Science**

“Non-Monotonic Logics, Artificial Neural Networks, and Complexity Considerations in the Horn Case”
Munich Center for Mathematical Philosophy, LMU Munich

2012 **Bachelor in Philosophy and Cognitive Science**

“The Methodology of Scientific Research Programmes as Modification of Popper’s Falsificationism”
Albert Ludwig University Freiburg

Erasmus Year 2011-12

Université Paris-Sorbonne (Paris IV)

PEER-REVIEWED PUBLICATIONS

2022 “Difference-Making Causation” (with Holger Andreas)
Journal of Philosophy (forthcoming)

🏠	80796 Munich, Zittelstr. 1
📞	+49 163 7299 541
✉	Mario.Guenther111188@gmail.com
@	mario-guenther.com
🗣	English, German, French, Ancient Greek

- 2022 “Ramsey’s Conditionals” (with Caterina Sisti)
Synthese (forthcoming)
- 2022 “Epistemic Sensitivity and Evidence”
Inquiry (forthcoming)
- 2021 “Counterfactuals for Causal Responsibility in Legal Contexts” (with Holger Andreas and Matthias Armgardt)
Artificial Intelligence and Law (forthcoming)
- 2021 “Regularity and Inferential Theories of Causation” (with Holger Andreas)
The Stanford Encyclopedia of Philosophy
- 2021 “Algorithmic and Human Decision Making: For a Double Standard of Transparency” (with Atoosa Kasirzadeh)
AI & Society
- 2021 “A Ramsey Test Analysis of Causation for Causal Models” (with Holger Andreas)
British Journal for the Philosophy of Science 72(2): 587-615.
- 2020 “Causation in Terms of Production” (with Holger Andreas)
Philosophical Studies 177(6): 1565-1591.
- 2019 “On the Ramsey Test Analysis of ‘Because’” (with Holger Andreas)
Erkenntnis 84 (6):1229-1262.
- 2019 “Defining Selection Functions” (with Holger Andreas)
The Logica Yearbook 2018, 1-13.
- 2018 “Learning Conditional Information by Jeffrey Imaging on Stalnaker Conditionals”
Journal of Philosophical Logic 47 (5):851-876.
- 2017 “Learning Conditional and Causal Information by Jeffrey Imaging on Stalnaker Conditionals”
Organon F, 24 (4):456-486.
- 2017 “Disjunctive Antecedents for Causal Models”
Proceedings of the 21st Amsterdam Colloquium, 25-34.

2014 “Logical Symbolicism vs. Dynamicist Connectionism: Is there a Difference in Computational Power?”
Incipiens, 2(1):5-28.

2018 “Ethics of AI” (English)
FIORELLA BATTAGLIA & ATOOSA KASIRZADEH

2018 “Versions of Realism” (English)
JULIAN NIDA-RÜMELIN

OUTREACH

2020 “Large-scale facial recognition is incompatible with a free society” (with Seth Lazar and Claire Benn)
The Conversation.

2017/18 “Logic I” (German)
HANNES LEITGEB

2020 “Was wird die Künstliche Intelligenz für Versicherungsunternehmen bedeuten?” (German)
prae|faktisch.

2017 “Epistemology and Ethics” (English)
JULIAN NIDA-RÜMELIN

2018 “What’s Hot in Mathematical Philosophy?”
The Reasoner, 12 (11): 90-91.

2017 “Introduction to Philosophy of Science” (German)
ALEXANDER REUTLINGER

2016 “Introduction to Philosophy of Science” (German)
ALEXANDER REUTLINGER

TEACHING POSITIONS

2021 “Philosophy, AI, and Society”
Co-Lecturer with PAMELA ROBINSON and SARITA ROSENSTOCK (English)
AUSTRALIAN NATIONAL UNIVERSITY

2016 “The Foundation of the Philosophy of Morals with Kant” (German)
FIORELLA BATTAGLIA

2020 “Conditionals”
Co-Lecturer with ALAN HÁJEK (English)
AUSTRALIAN NATIONAL UNIVERSITY

2015/16 “Human Liberty vs. Freedom of Will” (German)
FIORELLA BATTAGLIA

2020 “Fair Machine Learning”
Lecturer (English)
UNIVERSITY OF BAYREUTH

2015 “Responsibility in the Sciences and Technology”
FIORELLA BATTAGLIA (German)

2019 “Decisions, Fairness, and Machine Learning”
Lecturer (English)
UNIVERSITY OF BAYREUTH

2015 “Philosophy of Mind” (English)
STEPHAN SELLMAIER

2018 “Decisions and Machines” (English)
Lecturer
UNIVERSITY OF BAYREUTH

2014/15 “Life-form and Science” (German)
FIORELLA BATTAGLIA

2017 “Philosophy of AI” (English)
Lecturer
UNIVERSITY OF BAYREUTH

2014/15 “Metaethics: Constructivism and Realism”
FIORELLA BATTAGLIA (German)

2017 “Bayesian Philosophy of Science” (English)
Guest Lecturer on Bayesian Networks
STEPHAN HARTMANN, LMU MUNICH

2014 “Metaethical Foundation of Moral Reasoning”
FIORELLA BATTAGLIA (German)

Teaching Assistant

2020 “Logic & Critical Thinking” (English)
COLIN KLEIN

2013/14 “Robotisation of Warfare. Risk, Ethics and Politics” (German)
FIORELLA BATTAGLIA

2019 “The Moral and Political Philosophy of AI”
SETH LAZAR (English)

2010/11 “Cognitive Science II” (German)
GERHARD STRUBE

2010/11 “Logic I” (German)
MARKUS JUNKER

ORGANISATION OF EVENTS

- 2021 Seminar “Humanising Machine Intelligence” (led by Seth Lazar)
AUSTRALIAN NATIONAL UNIVERSITY
Convener
- 2020 Reading Group on “Conditionals” (with Frank Jackson, Alan Hájek, and Brian Hedden)
AUSTRALIAN NATIONAL UNIVERSITY
Organizer
- 2019 Workshop “Decision Theory & the Future of Artificial Intelligence”
AUSTRALIAN NATIONAL UNIVERSITY
Co-organizer
- 2019 Workshop “Knowledge of Knowledge”
UNIVERSITY OF REGENSBURG
Co-organizer
- 2018 Seminar “The Ethics of Artificial Intelligence”
VENICE INTERNATIONAL UNIVERSITY, SAN SERVOLO, ITALY
Co-organizer
- 2018 Seminar “Versions of Realism”
VENICE INTERNATIONAL UNIVERSITY, SAN SERVOLO, ITALY
Co-organizer
- 2017 International Workshop “Democracy as a Form of Life”
PARMENIDES FOUNDATION, GERMANY
Co-organizer
- 2017 ECAP9 Symposium on “Current Trends in Neurophilosophy”
LMU MUNICH, GERMANY
Organizer at the 9th European Congress of Analytic Philosophy
- 2017 Conference “Causation, Explanation, Conditionals”
EV. AKADEMIE, TUTZING (LAKE STARNBERG) AND LMU MUNICH, GERMANY
Main organizer of an international conference supported by the Graduate School of Systemic Neuroscience, the Bernstein Center for Computational Neuroscience, and the Munich Center for Mathematical Philosophy
- 2017 Seminar “Epistemology and Ethics”
VENICE INTERNATIONAL UNIVERSITY, SAN SERVOLO, ITALY
Co-organizer

- 2015 Conference “Predictive Brain”
VENICE INTERNATIONAL UNIVERSITY, SAN SERVOLO, ITALY
Co-Organizer

HONORS, AWARDS, GRANTS

- 2019-22 Postdoctoral Research Fellow
ANU GRAND CHALLENGE ‘HUMANISING MACHINE INTELLIGENCE’
- 2020 Payment, as well as Travel and Accommodation Grant for lecturing my own course
UNIVERSITY OF BAYREUTH
- 2019 Payment, as well as Travel and Accommodation Grant for lecturing my own course
UNIVERSITY OF BAYREUTH
- 2018-20 Postdoctoral Research Fellow
DEUTSCHE FORSCHUNGSGEMEINSCHAFT (DFG)
- 2018 PSA Travel and Accommodation Grant
PHILOSOPHY OF SCIENCE ASSOCIATION
- 2018 Payment, as well as Travel and Accommodation Grant for lecturing my own course
UNIVERSITY OF BAYREUTH
- 2018 Travel and Accommodation Grant for the Jerusalem-Munich Workshop
- 2017 Travel and Accommodation Grant for the 21st Amsterdam Colloquium
UNIVERSITY OF AMSTERDAM (ILLC)
- 2017 Payment, as well as Travel and Accommodation Grant for lecturing my own course
UNIVERSITY OF BAYREUTH
- 2017 Travel and Accommodation Grant for a research stay at U of T and UBC, Canada
GRADUATE SCHOOL OF SYSTEMIC NEUROSCIENCE
- 2016 Travel and Accommodation Grant for IRSI 2016
VOLKSWAGEN STIFTUNG
- 2016 Travel and Accommodation Grant for the inaugural conference of the EENPS 2016
GRADUATE SCHOOL OF SYSTEMIC NEUROSCIENCE
- 2015 Travel and Accommodation Grant for ESSLLI 2015
GRADUATE SCHOOL OF SYSTEMIC NEUROSCIENCE
- 2015-19 Doctoral Fellowship Grant
GRADUATE SCHOOL OF SYSTEMIC NEUROSCIENCE

- 2014-18 8 Travel and Accommodation Grants for various events
VENICE INTERNATIONAL UNIVERSITY
GRADUATE SCHOOL OF SYSTEMIC NEUROSCIENCE,
LMU MUNICH
- 2014 Top 10% of the master students of the Munich Center for Mathematical Philosophy (refund of study fees).
- 2011-12 Grant for independent studies
UNIVERSITÉ PARIS-SORBONNE (*Paris IV*)
- 2009/10 Top 5% in the Cognitive Science II exam
ALBERT LUDWIG UNIVERSITY FREIBURG
- 2008 Top 10% in the Formal Logic I exam
ALBERT LUDWIG UNIVERSITY FREIBURG

- 2021 “Laws of Nature as Patterns in the Vast Mosaic of Data Points” (invited)
Humanising Machine Intelligence Retreat
AUSTRALIAN NATIONAL UNIVERSITY
- 2021 “Probabilities of Conditionals and Imaged Probabilities” (invited)
School of Philosophy and Social Development
SHANDONG UNIVERSITY, CHINA
- 2021 “Probability of Guilt” (invited)
Humanising Machine Intelligence Seminar
AUSTRALIAN NATIONAL UNIVERSITY
- 2020 “Moral Reasons for Decision-Making Algorithms and their Complexity” (invited)
Humanising Machine Intelligence Retreat
AUSTRALIAN NATIONAL UNIVERSITY

- 2020 “A Theory of Conditionals” (invited)
“If ifs and ands were pots and pans ...”: Qualitative and Quantitative Approaches to Reasoning and Conditionals
UNIVERSITY OF REGENSBURG, GERMANY

- 2020 “An Analysis of Actual Causation” (with Holger Andreas) (refereed)
Bayesian Epistemology: Perspectives and Challenges
MUNICH CENTER FOR MATHEMATICAL PHILOSOPHY

- 2020 “Bayesian’s Still Don’t Learn from Conditionals” (with Borut Trpin) (refereed)
Bayesian Epistemology: Perspectives and Challenges
MUNICH CENTER FOR MATHEMATICAL PHILOSOPHY

- 2020 “Algorithmic Recommendations for Judicial Sentences” (with Katie Steele) (refereed)
Ethics of Data Science Conference
UNIVERSITY OF SYDNEY, AUSTRALIA

- 2020 “Algorithmic and Human Decision Making: Three Arguments for a Double Standard of Transparency” (with Atoosa Kasirzadeh) (refereed)
Ethics of Data Science Conference
UNIVERSITY OF SYDNEY, AUSTRALIA

- 2020 “A ‘Rawlsian’ Constraint on Insurance Pricing in the Age of ML” (invited)
AI and Insurance Workshop
GRADIENT INSTITUTE, SYDNEY

- 2019 “An Analysis of Actual Causation” (refereed)
New Zealand Association of Philosophers - Annual Conference
UNIVERSITY OF AUCKLAND, NEW ZEALAND

SELECTED TALKS

- 2022 “Actual Causation” (invited)
The LSE Choice Group
LONDON SCHOOL OF ECONOMICS & POLITICAL SCIENCE

- 2021 “How to Attribute Beliefs to AI Systems?”
Workshop “Philosophy of Science Meets Machine Learning” (refereed)
UNIVERSITY OF TÜBINGEN

- 2021 “An Analysis of Actual Causation” (refereed)
XXV. Kongress der Deutschen Gesellschaft für Philosophie
UNIVERSITY OF ERLANGEN

- 2021 “Difference-Making Causation” (invited)
Philosophy Seminar
UNIVERSITY OF SYDNEY

- 2021 “Difference-Making Causation” (refereed)
Difference-Making and Explanatory Relevance: An International Conference
UNIVERSITY OF HAMBURG

- 2021 “Probabilities of Conditionals” (refereed)
Conference of the Australasian Association for Logic
UNIVERSITIES OF QUEENSLAND AND MELBOURNE

- 2021 “Probabilities of Conditionals and Imaged Probabilities” (invited)
Philosophy Departmental Seminars
AUSTRALIAN NATIONAL UNIVERSITY

- 2019 “On Causal Bayes Nets” (invited)
Retreat of Computational Media Lab
AUSTRALIAN NATIONAL UNIVERSITY, KIOLOA,
AUSTRALIA
- 2019 “An Analysis of Actual Causation” (invited)
Philosophy Departmental Seminars
AUSTRALIAN NATIONAL UNIVERSITY, CANBERRA,
AUSTRALIA
- 2019 “Learning Subjunctive Conditional Information” (refereed)
16th CLMPST
CZECH TECHNICAL UNIVERSITY, PRAGUE, CZECH
REPUBLIC
- 2019 “A Strengthened Ramsey Test for Causal Explanations” (refereed)
ExLog2019 - Explaining with Logic
UCLouvain, LOUVAIN-LA-NEUVE, BELGIUM
- 2019 “A Strengthened Ramsey Test Semantics for Missing-Link Conditionals” (invited)
Conditional Logics and Conditional Reasoning: New Joint Perspectives
SCHLOSS DAGSTUHL, LEIBNIZ CENTER FOR INFORMATICS, GERMANY
- 2018 “A Non-Bayesian Resolution to the Judy Benjamin Problem ” (invited)
UNIVERSITY OF REGENSBURG, GERMANY
- 2018 “Interventionist Mental Causation and the Methods of Cognitive Neuroscience” (refereed)
26th Biennial Meeting of the Philosophy of Science Association
SEATTLE, USA
- 2018 “Interventionist Mental Causation and the Methods of Cognitive Neuroscience” (refereed)
The 2nd Conference of the East European Network for Philosophy of Science
UNIVERSITY OF BRATISLAVA, SLOVAKIA
- 2018 “Explanatory Conditionals” (refereed)
11th MuST Conference in Philosophy of Science: Models of Explanation
UNIVERSITY OF TURIN, ITALY
- 2018 “Interventionist Mental Causation and the Methods of Cognitive Neuroscience: The Explanatory Merit of Functional Reduction” (invited)
Jerusalem-Munich Workshop
EDELSTEIN CENTER FOR PHILOSOPHY OF SCIENCE,
ISRAEL
- 2018 “Interventionist Mental Causation and the Methods of Cognitive Neuroscience” (invited)
UNIVERSITY OF BRITISH COLUMBIA, CANADA
- 2017 “Disjunctive Antecedents for Causal Models” (invited)
Amsterdam Colloquium Workshop on Causality and Semantics
INSTITUTE OF LOGIC, LANGUAGE, AND COMPUTATION, NETHERLANDS
- 2017 “Disjunctive Antecedents for Causal Models” (invited)
Munich Center for Mathematical Philosophy
LMU MUNICH, GERMANY
- 2017 “Interventionist Mental Causation based on Neuroscientific Methods” (invited)
ECAP9 Symposium on “Current Trends in Neurophilosophy”
LMU MUNICH, GERMANY
- 2017 “Learning Conditional & Causal Information by Jeffrey Imaging on Stalnaker Conditionals” (invited)
UNIVERSITY OF BRITISH COLUMBIA, CANADA
- 2017 “Learning Conditional & Causal Information by Jeffrey Imaging on Stalnaker Conditionals” (invited)
UNIVERSITY OF BAYREUTH, GERMANY
- 2017 “Causation as Production” (invited)
LMU MUNICH, GERMANY
- 2017 “Learning Conditional Information by Jeffrey Imaging on Stalnaker Conditionals” (invited)
CAS Workshop “Learning Conditionals”
LMU MUNICH, GERMANY
- 2016 “The Predictive Role and Content of Memory in Friston’s Free Energy Framework” (refereed)
Workshop on Memory Consolidation
VENICE INTERNATIONAL UNIVERSITY, ITALY
- 2016 “Learning Conditional Information by Jeffrey Imaging on Stalnaker Conditionals” (refereed)
International Rationality Summer Institute
JUSTUS LIEBIG UNIVERSITY, GERMANY
- 2016 “Learning Conditional Information by Jeffrey Imaging on Stalnaker Conditionals” (refereed)
The Inaugural Conference of the East European Network for Philosophy of Science
NEW BULGARIAN UNIVERSITY, BULGARIA

- 2016 “A Ramsey Test Analysis of ‘Because’” (refereed)
2nd Munich Graduate Workshop in Mathematical Philosophy: Formal Epistemology
 MUNICH CENTER FOR MATHEMATICAL PHILOSOPHY, LMU MUNICH, GERMANY
- 2015 “Formal Intro to the Free Energy Principle and Bayesian Inference” (invited)
Opening lecture for the Predictive Brain Conference at Venice International University
 SAN SERVOLO, ITALY
- 2015 “Intro to Non-Monotonic Logics, Artificial Neural Networks, and Complexity Considerations in the Horn Case” (invited)
 TU MUNICH, GERMANY
- 2013 “A Reconstruction of Descartes’s Dream Argument” (refereed)
Presentation for the DGL (Decisions, Games, Logic)
 ROYAL INSTITUTE OF TECHNOLOGY (KTH), STOCKHOLM, SWEDEN

SERVICE

- 2022 Referee for *Synthese* (3x).
- 2021 Referee for *Minds and Machines*, *Kriterion*, *Philosophical Studies* (2x), *Analysis* (2x), *Synthese* (2x), *Australasian Journal of Philosophy*, *Erkenntnis*.
- 2020 “Data, AI and Society Seminar Series”
 AUSTRALIAN NATIONAL UNIVERSITY
 Permanent Panelist for the public online seminar series
- 2020 Referee for *Erkenntnis*, *Philosophy of Science*, *Review of Symbolic Logic*, *Synthese*(2x).
- 2020 “Ethics of data science conference 2020”
 UNIVERSITY OF SYDNEY
 Program committee member
- 2019 Referee for *Journal of Philosophical Logic*, *Episteme*, *Philosophy of Science*, *Synthese*(2x)
- 2019 “Conditional Logics and Conditional Reasoning: New Joint Perspectives”
 SCHLOSS DAGSTUHL, LEIBNIZ CENTER FOR INFORMATICS
 Collector for the [Dagstuhl report](#)
- 2017 “Causation, Explanation, Conditionals”
 GRADUATE SCHOOL OF SYSTEMIC NEUROSCIENCE, BERNSTEIN CENTER FOR COMPUTATIONAL NEUROSCIENCE, MUNICH CENTER FOR MATHEMATICAL PHILOSOPHY, LMU MUNICH

Program chair

- 2016 “2nd Munich Graduate Workshop in Mathematical Philosophy: Formal Epistemology”
 MUNICH CENTER FOR MATHEMATICAL PHILOSOPHY, LMU MUNICH
 Program committee member for the Munich Center for Mathematical Philosophy

RESEARCH STAYS

- 2018 “International Rationality Summer Institute 2018”
 LMU MUNICH, IRSEE
- 2017 Research Stay
 UNIVERSITY OF BRITISH COLUMBIA, KELOWNA
- 2016 “International Rationality Summer Institute 2016”
 JUSTUS LIEBIG UNIVERSITY, AURICH
- 2015 “European Summer School of Logic, Language and Computation”
 UNIVERSITY POMPEU FABRA, BARCELONA
- 2011-12 “Studies in Philosophy and Cognitive Science”
 UNIVERSITY PARIS-SORBONNE (PARIS IV), PARIS

SUPERVISION

- 2020 “Sleeping Beauty and Belief Updating” (Independent Study with Honours Student)
 HUON PORTEOUS
Australian National University
- 2019 “An Ethical Governor for Reinforcement Learning Agents” (MA Thesis)
 TORBEN SWOBODA
University of Bayreuth

REFERENCES

PROF. DDR. HANNES LEITGEB
 Chair of Logic and Philosophy of Language
Head of the Munich Center for Mathematical Philosophy
 LMU MUNICH
 ✉Hannes.Leitgeb@lmu.de

PROF. DR. STEPHAN HARTMANN
 Chair of Philosophy of Science
Head of the Munich Center for Mathematical Philosophy
 LMU MUNICH
 ✉S.Hartmann@lmu.de

PROF. DR. ALAN HÁJEK
Research Professor
School of Philosophy
AUSTRALIAN NATIONAL UNIVERSITY
✉Alan.Hajek@anu.edu.au

PROF. DR. IGOR DOUVEN
Research Professor
Sciences, Normes, Décision
CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE
UNIVERSITÉ PARIS IV – LA SORBONNE
✉Igor.Douven@sorbonne-universite.fr

PROF. DR. KATIE STEELE
Professor of Philosophy
School of Philosophy
AUSTRALIAN NATIONAL UNIVERSITY
✉Katie.Steele@anu.edu.au

PROF. DR. GREGORY WHEELER
Professor of Theoretical Philosophy & Computer
Science
Director of the Centre for Human and Machine Intelligence
FRANKFURT SCHOOL OF FINANCE AND MANAGEMENT
✉G.Wheeler@fs.de

PROF. DR. OLIVIER ROY
Chair of Philosophy I
Department Chair of Philosophy
UNIVERSITY OF BAYREUTH
✉Olivier.Roy@uni-bayreuth.de

PROF. DR. DR. HC. JULIAN NIDA-RÜMELIN, FORMER
MINISTER OF STATE
Former Chair of Philosophy and Political Theory
LMU MUNICH
✉Julian.Nida-Ruemelin@lrz.uni-muenchen.de