

# Mario Günther

## RESEARCH PROFILE

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I apply logical and mathematical tools to philosophical problems in Epistemology, Metaphysics, and the Philosophies of Science, Language, Law, and AI.

## EMPLOYMENT

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### 22- Assistant Professor

*Munich Center for Mathematical Philosophy*

LMU MUNICH

**Academic Visitor** 2022

UNIVERSITY OF EDINBURGH

### 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

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### 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)

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@ [mario-guenther.com](http://mario-guenther.com)  
🗣 English, German, French, Ancient Greek

## JOURNAL ARTICLES

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- 2024 “A Lewisian Regularity Theory” (with Holger  
Andreas)  
*Philosophical Studies* (forthcoming)
- “Actual Causation” (with Holger Andreas)  
*dialectica* (forthcoming)
- “A Regularity Theory of Causation” (with Holger  
Andreas)  
*Pacific Philosophical Quarterly* 105(1): 2-32.
- “Epistemic Sensitivity and Evidence”  
*Inquiry* (forthcoming)
- 2023 “Counterfactuals for Causal Responsibility in  
Legal Contexts” (with Holger Andreas and  
Matthias Armgardt)  
*Artificial Intelligence and Law* 31(1): 115-132.
- “Bayesians Still Don’t Learn from Conditionals”  
(with Borut Trpin)  
*Acta Analytica* 38(3): 439-451.
- 2022 “Causal and Evidential Conditionals”  
*Minds and Machines* 32(4): 613-626.
- “Ramsey’s Conditionals” (with Caterina Sisti)  
*Synthese* 200(165): 1-31.
- “A Connexive Conditional”  
*Logos and Episteme* 13(1): 55-63.
- “Algorithmic and Human Decision Making: For a  
Double Standard of Transparency” (with Atoosa  
Kasirzadeh)  
*AI & Society* 37(1): 375-381.
- 2021 “Difference-Making Causation” (with Holger  
Andreas)  
*Journal of Philosophy* 118(12): 680-701.
- “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.
- 2018 “Learning Conditional Information by Jeffrey Imaging on Stalnaker Conditionals”  
*Journal of Philosophical Logic* 47 (5): 851-876.  
**Wolfgang Stegmüller Award 2022**
- 2017 “Learning Conditional and Causal Information by Jeffrey Imaging on Stalnaker Conditionals”  
*Organon F*, 24(4): 456-486.

## ENCYCLOPEDIA ENTRIES

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- 2021 “Regularity and Inferential Theories of Causation” (with Holger Andreas)  
*The Stanford Encyclopedia of Philosophy*

## CONFERENCE PROCEEDINGS

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- 2019 “Defining Selection Functions” (with Holger Andreas)  
*The Logica Yearbook 2018*, 1-13.
- 2017 “Disjunctive Antecedents for Causal Models”  
*Proceedings of the 21<sup>st</sup> Amsterdam Colloquium*, 25-34.

## OTHER PUBLICATIONS

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- 2023 “Kann Europas KI Gesetz eine lebenswerte Zukunft bewahren?” (with William D’Alessandro)  
*prae/faktisch* (German)
- 2020 “Large-scale facial recognition is incompatible with a free society” (with Seth Lazar and Claire Benn)  
*The Conversation*
- “Was wird die Künstliche Intelligenz für Versicherungsunternehmen bedeuten?” (German)  
*prae/faktisch*
- 2018 “What’s Hot in Mathematical Philosophy?”  
*The Reasoner*, 12 (11): 90-91.
- 2014 “Logical Symbolicism vs. Dynamicist Connectionism: Is there a Difference in Computational Power?”  
*Incipiens*, 2(1): 5-28.

## AWARDS & GRANTS

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- 24-25 LMUexcellent Grant 49,630€  
*Junior Research Fund*  
LMU MUNICH
- 23/24 Researcher in Residence ≈30,000€  
*Center for Advanced Studies*  
LMU MUNICH
- 2023 Grant for Teaching “Democracy & AI” 16,620€  
*Venice International University*  
LMU MUNICH
- 2022 Wolfgang Stegmüller Award 4,000€  
“Learning Conditional Information by Jeffrey Imaging on Stalnaker Conditionals”  
GERMAN SOCIETY FOR ANALYTIC PHILOSOPHY
- “A Unifying Theory of Conditionals”  
*Walter Benjamin Grant* (declined)  
DEUTSCHE FORSCHUNGSGEMEINSCHAFT (DFG)
- 19-22 Postdoctoral Research Fellow  
*Grand Challenge Humanising Machine Intelligence*  
AUSTRALIAN NATIONAL UNIVERSITY
- 18-19 Postdoctoral Research Fellow  
DEUTSCHE FORSCHUNGSGEMEINSCHAFT (DFG)
- 15-19 Doctoral Fellowship Grant  
GRADUATE SCHOOL OF SYSTEMIC NEUROSCIENCE
- 2014 Top 10% of the master students of the Munich Center for Mathematical Philosophy (refund of study fees)
- 11-12 Grant for independent studies  
UNIVERSITÉ PARIS-SORBONNE (PARIS IV)
- 09/10 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

## TEACHING EXPERIENCE

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### Instructor at LMU MUNICH

- 2023 “Knowledge, Belief, and Degrees of Belief”  
“Democracy & AI” (*Venice International University*)
- 22/23 “Introduction to Decision Theory” (German)  
“Introduction to Scientific Working” (German)

2022 “Introduction to Decision Theory” (German)  
“Causation”

**Instructor at AUSTRALIAN NATIONAL UNIVERSITY**

2021 “Philosophy, AI, and Society”  
with Pamela Robinson and Sarita Rosenstock

2020 “Conditionals” (Seminar for PhD students)  
with Alan Hájek

**Instructor at UNIVERSITY OF BAYREUTH**

2020 “Fair Machine Learning”

2019 “Decisions, Fairness, and Machine Learning”

2018 “Decisions and Machines”

2017 “Philosophy of AI”

**Teaching Assistant**

2020 “Logic & Critical Thinking”  
Colin Klein, ANU

2019 “The Moral and Political Philosophy of AI”  
Seth Lazar, ANU

2018 “Ethics of AI”  
Fiorella Battaglia & Atoosa Kasirzadeh, LMU

“Versions of Realism”  
Julian Nida-Rümelin, LMU

17/18 “Logic I” (German)  
Hannes Leitgeb, LMU

2017 “Epistemology and Ethics”  
Julian Nida-Rümelin, LMU

“Intro to Philosophy of Science” (German)  
Alexander Reutlinger, LMU

2016 “Intro to Philosophy of Science” (German)  
Alexander Reutlinger, LMU

“The Foundation of the Philosophy of Morals  
with Kant” (German)  
Fiorella Battaglia, LMU

15/16 “Human Liberty vs. Freedom of Will” (German)  
Fiorella Battaglia, LMU

2015 “Responsibility in the Sciences and Technology”  
Fiorella Battaglia, LMU (German)

“Philosophy of Mind”  
Stephan Sellmaier, LMU

14/15 “Life-form and Science” (German)  
Fiorella Battaglia, LMU

“Metaethics: Constructivism and Realism”  
Fiorella Battaglia, LMU (German)

2014 “Metaethical Foundation of Moral Reasoning”  
Fiorella Battaglia, LMU (German)

13/14 “Robotisation of Warfare. Risk, Ethics and  
Politics” (German)  
Fiorella Battaglia, LMU

10/11 “Cognitive Science II” (German)  
Gerhard Strube  
ALBERT LUDWIG UNIVERSITY FREIBURG

“Logic I” (German)  
Markus Junker  
ALBERT LUDWIG UNIVERSITY FREIBURG

**ORGANISATION OF EVENTS**

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2023 Seminar “Democracy & AI”  
VENICE INTERNATIONAL UNIVERSITY, SAN  
SERVOLO, ITALY  
Organizer

2022 Workshop “Responsibility & AI”  
UNIVERSITY OF VIENNA  
Co-organizer

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

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

ECAP9 Symposium on “Current Trends in  
Neurophilosophy”  
LMU MUNICH, GERMANY  
Organizer at the 9<sup>th</sup> European Congress of  
Analytic Philosophy

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

Seminar “Epistemology and Ethics”  
VENICE INTERNATIONAL UNIVERSITY, SAN  
SERVOLO, ITALY  
Co-organizer

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

## RECENT TALKS

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2023 “A Theory of Responsibility for Artificial Agents”  
(invited)

*Workshop on Reasoning about Responsible Agency in AI*  
INSTITUTE FOR LOGIC, LANGUAGE, AND  
COMPUTATION, UNIVERSITY OF AMSTERDAM

“Legal Proof is Rational Belief of Guilt” (refereed)  
*Central APA 2023*  
DENVER

2022 “Probability of Guilt” (refereed)  
*GAP.11*  
HUMBOLDT UNIVERSITY OF BERLIN

“Legal Proof is Rational Belief of Guilt” (refereed)  
*96th Joint Session of the Aristotelian Society and the  
Mind Association*  
UNIVERSITY OF ST ANDREWS

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

## SERVICE

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2024 “Essay Award of the Society for Analytic  
Philosophy and *Grazer Philosophische Studien*”  
Jury member

2023 “ACM Conference on Fairness, Accountability,  
and Transparency”  
Chicago, USA  
Program committee member

2022 “ACM Conference on Fairness, Accountability,  
and Transparency”  
Seoul, South Korea  
Program committee member

2020 “Data, AI and Society Seminar Series”  
AUSTRALIAN NATIONAL UNIVERSITY  
Permanent Panelist for the public online seminar  
series

“Ethics of data science conference 2020”  
UNIVERSITY OF SYDNEY  
Program committee member

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

## JOURNAL REVIEWING

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*Synthese* (15x), *Journal of Philosophical Logic* (5x), *Philosophical  
Studies* (5x), *Analysis* (3x), *Mind & Language* (3x), *Erkenntnis*  
(2x), *Philosophy of Science* (2x), *Minds and Machines*  
(2x), *Theoria* (2x), *Artificial Intelligence* (2x), *British Journal  
for the Philosophy of Science* (2x), *Mind*, *Noûs*, *Australasian  
Journal of Philosophy*, *Philosophical Quarterly*, *Canadian  
Journal of Philosophy*, *AI and Ethics*, *Kriterion*, *Philosophia*,  
*Episteme*, *European Journal for Philosophy of Science*, *The  
Australasian Journal of Logic*, *Review of Symbolic Logic*.

## RESEARCH STAYS

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- 2022 “Academic Visitor”  
UNIVERSITY OF EDINBURGH
- 2021 “Academic Visitor”  
LONDON SCHOOL OF ECONOMICS & POLITICAL  
SCIENCE
- 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
- 11-12 “Studies in Philosophy and Cognitive Science”  
UNIVERSITY PARIS-SORBONNE (PARIS IV), PARIS

## SUPERVISION

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- 2023 “The Limits of Technocracy”  
MA Thesis of Victor Karl Magnússon  
LMU MUNICH
- “The Distance Minimization Approach to the  
Learning of Conditionals”  
MA Thesis of Zahra Moghimkhan  
LMU MUNICH
- “Climate Justice and Game Theory: An  
Investigation of the Significance of Cooperation  
and CO<sub>2</sub> Reductions in International Climate  
Negotiations”  
BA Thesis of Clara Goetz  
LMU MUNICH
- 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 of Torben Swoboda  
UNIVERSITY OF BAYREUTH

## REFERENCES

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- 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](mailto: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](mailto:S.Hartmann@lmu.de)
- PROF. DR. ALAN HÁJEK  
Research Professor  
*School of Philosophy*  
AUSTRALIAN NATIONAL UNIVERSITY  
✉ [Alan.Hajek@anu.edu.au](mailto: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](mailto:Igor.Douven@sorbonne-universite.fr)
- PROF. DR. KATIE STEELE  
Professor of Philosophy  
*School of Philosophy*  
AUSTRALIAN NATIONAL UNIVERSITY  
✉ [Katie.Steele@anu.edu.au](mailto: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](mailto:G.Wheeler@fs.de)
- PROF. DR. OLIVIER ROY  
Chair of Philosophy I  
*Department Chair of Philosophy*  
UNIVERSITY OF BAYREUTH  
✉ [Olivier.Roy@uni-bayreuth.de](mailto: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](mailto:Julian.Nida-Ruemelin@lrz.uni-muenchen.de)