

## Sander Beckers

### *Curriculum Vitae*

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## Research Areas

**Areas of Specialization:** Causality, Philosophy of AI, Philosophy of Science

**Areas of Competence:** Formal Epistemology, Ethics, Wittgenstein

## Employment

- 2019-current Humboldt postdoctoral fellow (supervisor: Stephan Hartmann)  
Munich Center for Mathematical Philosophy, LMU
- 2020 Fall NIAS-Lorentz Theme-group fellow on Explainable AI in medicine,  
Netherlands Institute for Advanced Studies, Amsterdam
- 2019 January Visiting scholar (host: Frederick Eberhardt)  
Division of the Humanities and Social Sciences, Caltech
- 2018-2019 Postdoctoral scholar (supervisor: Jan Broersen)  
Reins project: <https://responsibleintelligentsystems.sites.uu.nl>  
Department of Philosophy and Religious Studies, Utrecht University
- 2017 Fall Visiting postdoctoral scholar (supervisor: James Conant)  
Institute of Philosophy, Leipzig University
- 2016-2017 Visiting B.A.E.F. Fellow (supervisor: Joe Halpern)  
Department of Computer Science, Cornell University
- 2012-2016 Ph.D. in Computer Science, October 2016  
KULeuven - University of Leuven, Belgium  
*Dissertation: Actual Causation: Definitions and Principles*  
*Supervisors: Hendrik Blockeel and Joost Vennekens*
- 2013 Fall Visiting doctoral researcher (host: Stephan Hartmann)  
Munich Center for Mathematical Philosophy, LMU
- 2010-2011 Researcher at University of Leuven, EAVISE research group  
*Project: S.O.S. OpenCL: Multicore Cooking*
- 2008-2009 (part-time) internship as actuary  
Aon Benfield Belgium and BNP Paribas Belgium, Employee Benefits

## Grants and Fellowships

- 2020 Fall NIAS-Lorentz Theme Group
- 2019-2021 Humboldt Research Fellowship for Postdoctoral Researchers
- 2016-2017 Research Fellowship, Belgian American Educational Foundation
- 2012-2015 Ph.D. Grant for Fundamental Research, Flanders Innovation & Entrepreneurship

## Education

- 2011 Master in Mathematics, University of Leuven (distinction)  
*Dissertation: Deductive Reasoning in Guarded FO(ID)*  
*Supervisor: Marc Denecker*
- 2008 Bridge program in Mathematics, University of Leuven
- 2011 Master in Philosophy, University of Leuven (distinction)  
*Dissertation: Wittgenstein en het Ethische*  
*Supervisor: Arnold Burms*
- 2004 Bachelor in Philosophy, University of Antwerp (distinction)

## Refereeing

AAAI Conference on Artificial Intelligence (Program Committee 2017, 2020, 2021), Erkenntnis, Ethics and Information Technology, European Journal for Philosophy of Science, Information, International Joint Conference on Artificial Intelligence (Program Committee 2020), Journal of Philosophical Logic, Journal of Social Philosophy, Philosophy and Theory of Artificial Intelligence, Synthese, The Philosophical Review

## Research

### Talks

#### Conferences

- 2019 'Formalizing Mental Causation', EPSA conference, Geneva, Switzerland
- 2019 'Approximate Causal Abstraction', UAI conference, Tel Aviv, Israel
- 2019 'Abstracting Causal Models', DIEP Conference, Amsterdam, the Netherlands
- 2019 'Formalizing the Causal Conditions for Moral Responsibility', REINS closing conference, Utrecht University, the Netherlands
- 2019 'Abstracting Causal Models', AAAI Conference on Artificial Intelligence, Honolulu, United States
- 2018 'Formalizing Mental Causation', OZSW conference, Enschede, the Netherlands
- 2018 'Causation and the Principle of Alternative Possibilities', Causes, Norms, and Decisions Workshop, Hannover, Germany
- 2017 'A Formal Approach to Frankfurt-style Cases', OZSW conference, Doorn, the Netherlands
- 2017 'AAAI: an Argument Against Artificial Intelligence', Philosophy and Theory of Artificial Intelligence, Leeds, UK
- 2017 'AAAI: an Argument Against Artificial Intelligence', European Conference for Analytic Philosophy, Munich, Germany
- 2017 'AAAI: an Argument Against Artificial Intelligence', AAAI Workshop on AI, Ethics and Society, San Francisco

2016 ‘The Transitivity and Asymmetry of Actual Causation’, Philosophy of Science in a Forest, Doorn, the Netherlands

2015 ‘A Principled Approach to Defining Actual Causation’, Conference of Logic, Methodology and Philosophy of Science, Helsinki, Finland

2015 ‘Combining Probabilistic, Causal, and Normative Reasoning using CP-logic’, AAAI Spring Symposium: Commonsense Reasoning, Stanford University

2013 ‘Dual Inheritance Theory as an Integration of Biology and the Humanities’, Reduction and Emergence in the Sciences conference, Munich Center for Mathematical Philosophy

2013 ‘A Pragmatic Approach to Causality’, OZSW conference, University of Rotterdam

2013 ‘Actual Causation in Cases of Preemption: the CP-logic Approach’, Graduate Conference in Theoretical Philosophy, University of Groningen, the Netherlands

2012 ‘Actual Causation in Cases of Preemption: the CP-logic Approach’, Great Plains Graduate Conference in Philosophy, Kansas University

2012 ‘Counterfactual Dependency and Actual Causation in CP-logic and Structural Models: a Comparison’, STAIRS conference, Montpellier, France

2012 ‘Parallel hybrid SAT solving using OpenCL’, BNAIC, Maastricht University, the Netherlands

2011 ‘Parallel SAT-solving with OpenCL’, IADIS, Rio de Janeiro, Brazil

### **Invited Talks and Colloquia**

2020 ‘Formalizing Non-Reductive Supervenience using Causal Models with Constraints’, Invited speaker, Symposium on Interventionism and Causal Exclusion, Nijmegen, the Netherlands

2019 ‘Causation and the Principle of Alternative Possibilities’, Invited speaker, Free Will and Causality conference, Dusseldorf, Germany

2018 ‘Applying Causal Modeling to Philosophical Issues’, Invited talk, Logic and Metaphysics Workshop, CUNY

2017 ‘Formal Ethics’, Invited talk, Center for Human-Compatible AI, UC Berkeley

2015 ‘A Principled Approach to Defining Actual Causation’, Invited talk, Tilburg Center for Logic, Ethics, and Philosophy of Science, the Netherlands

2015 ‘The Problem of Actual Causation’, Epistemology Reading Group, Department of Linguistics and Philosophy, MIT

2014 ‘Actual Causation using CP-logic’, Declarative Languages and AI seminar, University of Leuven, Belgium

2013 ‘Actual Causation using CP-logic’, colloquium, Munich Center for Mathematical Philosophy

2013 ‘Actual Causation: the CP-logic Approach’, Invited talk, INRIA, Grenoble, France

2013 ‘Actual Causation in Cases of Preemption: the CP-logic Approach’, Center for Logic and Analytic Philosophy colloquium, University of Leuven, Belgium

2012 ‘Parallel hybrid SAT solving using OpenCL’, Declarative Languages and AI seminar, University of Leuven, Belgium

## Teaching

Utrecht University

Undergraduate program Philosophy, tutorials:

2018-2019: Logic for philosophers

2018-2019: Epistemology and Philosophy of Science

2019: Philosophical Reflection on Scientific Models of Man

Undergraduate program in Artificial Intelligence, lectures:

2018: Introduction to Statistics

Master in Artificial Intelligence:

2018: Philosophy of AI, tutorials

2018-2019: Philosophy of AI, two guest lectures

University of Leuven

Undergraduate program Civil Engineering, exercise classes:

2014-2015 Introduction to Programming: Python

2012-2013 Introduction to Programming: Java

Undergraduate program Industrial Engineering, exercise classes:

2015: Introduction to the IDP knowledge base system

2014-2015 Introduction to Programming: Python

2010-2013 Introduction to Programming: C

## References

Frederick Eberhardt

Professor of Philosophy, California Institute of Technology

fde@caltech.edu

Joe Halpern

Professor at the Department of Computer Science, Cornell University

halpern@cs.cornell.edu

Joost Vennekens

Professor at the Faculty of Engineering Technology, University of Leuven

joost.vennekens@cs.kuleuven.be

Stephan Hartmann

Professor at the Munich Center for Mathematical Philosophy, Ludwig Maximilian University

S.Hartmann@lmu.de