

RESUME

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Dustin Lazarovici

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ACADEMIC DEGREES

Université de Lausanne	Lausanne, Switzerland
PH.D. PHILOSOPHY “Typicality as a Way of Reasoning in Physics and Metaphysics”, under the supervision of Prof. Michael Esfeld.	Sep. 2017 - Jun. 2020
Ludwig-Maximilians-Universität	Munich, Germany
DR. RER. NAT. MATHEMATICS, SUMMA CUM LAUDE “Mean field limits for charged particles”, under the supervision of Prof. Detlef Dürr.	Jan. 2012 - Dec. 2015
Ludwig-Maximilians-Universität	Munich, Germany
DIPL. MATHEMATICS, WITH DISTINCTION	Apr. 2005 - Dec. 2011
Ludwig-Maximilians-Universität	Munich, Germany
DIPL. PHYSICS, WITH DISTINCTION	Oct. 2004 - Jan. 2011

ACADEMIC APPOINTMENTS

Technion - Israel Institute of Technology, Department of Humanities and Arts ASSISTANT PROFESSOR (SENIOR LECTURER) My main research area is Philosophy of Physics.	Haifa, Israel Mar. 2022 - present
Université de Lausanne POST-DOC / ASSISTANT DIPLOMÉ Institute de Philosophie	Lausanne, Switzerland Aug. 2021 - Feb. 2022
Université de Lausanne POST-DOCTORAL FELLOW Feodor Lynen Research Fellowship of the Alexander von Humboldt Foundation	Lausanne, Switzerland Jan. 2016 - Jul. 2017

RESEARCH INTERESTS

Philosophy of Physics (Foundations of Quantum Mechanics, Foundations of Statistical Mechanics, Arrow of Time)
Philosophy of Science (Laws of Nature, Non-causal Explanations, Epistemic Norms)

TEACHING

2023	Foundations of Quantum Mechanics , All levels, Main teacher	Technion
2022/23	Philosophy of Time and Space , All levels, Main teacher	Technion
2022-	Milestones of Mathematical Thought , All levels, Main teacher	Technion
2020-22	Philosophical perspectives on the exact sciences , TA with participation in teaching	EPFL Lausanne
2016-20	Philosophy, Epistemology and History of Science , TA with participation in teaching	EPFL Lausanne
2019	Weltbilder der Quantenmechanik , Summer Academy (2 weeks), Co-instructor	Studienstiftung
2018	Foundations of Mathematics for Philosophers , Extracurricular Seminar	UNIL Lausanne

TECHNION, DEPARTMENTAL AND OTHER ACTIVITIES

- 2022- **Member of the Graduate Committee**, Humanities and Arts, Technion
- 2022- **Member of the Teaching Committee**, Humanities and Arts, Technion

ACADEMIC PROFESSIONAL ACTIVITIES

Journal Referee, Acta Analytica, The British Journal for the Philosophy of Science, Canadian Journal of Physics, Communication in Mathematical Physics, Critica-Revista Hispanoamericana de Filosofia, Entropy, Erkenntnis, European Journal for Philosophy of Science, European Journal of Physics, The European Physical Journal, Europhysics Letters, Fluctuation and Noise Letters, Foundations of Physics, Frontiers in Psychology, Frontiers in Psychology, IEEE Access, IEEE Transactions on Information Theory, Journal for General Philosophy of Science, Journal of Philosophical Logic, Journal of Physics A, Journal of Statistical Physics, Physica Scripta, Philosophy of Science, Proceedings of the Royal Society A, Quantum Reports, Studies in History and Philosophy of Modern Physics, Synthese, Universe

FELLOWSHIPS, AWARDS AND HONORS

2022-24 **Women's Division Career Advancement Chair**, Technion
2019 - **Fellow of the John Bell Institute for the Foundations of Physics**, JBI
2021 **Prix Arnold Reymond**, Dissertation Award of the UNIL
2021 **Paul Bernays Award**, Dissertation Award, Swiss Society for Logic and Philosophy of Science
2012-15 **PhD Scholarship**, Studienstiftung des deutschen Volkes
2011-12 **Young Researcher Scholarship**, Parmenides Foundation
2005-11 **Studienstiftung des deutschen Volkes**, German Academic Scholarship Foundation

STUDENT SUPERVISION

Post-docs

2022 - **Dr. Yoav Beirach**, Joint supervision with Prof. Ohad Nachtomy *PostDoc*

GRANTS

2019 **Volkswagen Foundation "Symposia and Summer Schools"**, Co-applicant
2019 **Swiss National Science Foundation: Doc.Mobility Fellowship**,
2016-17 **Feodor Lynen Research Fellowship**, Humboldt Foundation

CONFERENCES

Invited talks:

2022 **What do Bell tests actually test?**, Quantum Center Retreat Day *Technion*
2022 **Typicality as a Way of Reasoning**, Laws of Nature Lecture Series *Online*
2020 **Typicality and the Arrow of Time**, Oberseminar Mathematische Physik LMU *Online*
2019 **Typicality of Worlds and the Metaphysics of Laws**, MAPS *NYU, New York*
2019 **Typicality vs. Humean Probability**, Advanced Topics in Philosophy of Physics *Rutgers University*
2018 **The wave function in a relativistic world**, Workshop: Multi-Time Wave Functions *Rutgers University*

Contributed talks:

2022 **Why Everett Solved the Probability Problem**, ISF research workshop: The Many-Worlds Interpretation of Quantum Mechanics *Tel Aviv, IL*
2019 **Why field theories are not theories of fields**, Symposium: Particles, Fields, or both?, CLMPST *Prague, CZ*
2018 **Super-Humeanism: A starving ontology**, SMS 4th Annual Conference *Milano, IT*
2017 **Arrows of Time without a Past Hypothesis**, Conference: The Second Law *Munich, GER*
2017 **Against Fields**, EPSA 17 *Exeter, UK*
2017 **Against Fields**, BSPS Annual Meeting *Edinburgh, UK*
2017 **Spacetime is One Whole – Priority Monism meets Structural Realism**, SMS 3rd Annual Conference *New York, US*
2017 **Relativity, Nonlocality, and the Consequences**, SILFS – Triennial International Conference *Bologna, IT*

Conference organization:

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| 2022 | Laws of Nature (in memory of Detlef Dürr) , Conference | <i>Munich, GER</i> |
| 2022 | The Nature of Entropy II: Arrow of Time , Summer School | <i>Kochel, GER</i> |
| 2021 | Shape Dynamics: Achievements & Perspectives in Relational Physics , Workshop | <i>Online</i> |
| 2019 | The Nature of Entropy I: From thermodynamics to black holes , Summer School | <i>Saig, GER</i> |
| 2018 | New Topics in Quantum Foundations , Workshop | <i>Lausanne, CH</i> |

Refereed papers in professional journals:

- [J1] Michael Esfeld, **Dustin Lazarovici**, Mario Hubert, and Detlef Dürr. *The ontology of Bohmian mechanics*, The British Journal for the Philosophy of Science 65(4). 2014
- [J2] **Dustin Lazarovici**. *A relativistic retrocausal model violating Bell's inequality*, Proceedings of the Royal Society A 471. 2015
- [J3] **Dustin Lazarovici** and Paula Reichert. *Typicality, Irreversibility and the Status of Macroscopic Laws*, Erkenntnis 80. 2015
- [J4] Andrea Oldofredi, **Dustin Lazarovici**, Dirk-André Deckert, and Michael Esfeld. *From the universe to subsystems: Why quantum mechanics appears more stochastic than classical mechanics*, Fluctuations and Noise Letters 15:03. 2016
- [J5] **Dustin Lazarovici**. *The Vlasov-Poisson dynamics as the mean-field limit of extended charges*, Communications in Mathematical Physics 347(1). 2016
- [J6] **Dustin Lazarovici** and Peter Pickl. *A mean-field limit for the Vlasov-Poisson system*, Archive for Rational Mechanics and Analysis 225(3). 2017
- [J7] Michael Esfeld, **Dustin Lazarovici**, Vincent Lam, and Mario Hubert. *The Physics and Metaphysics of Primitive Stuff*, British Journal for the Philosophy of Science 68. 2017
- [J8] **Dustin Lazarovici**. *Against Fields*, European Journal for Philosophy of Science 8(2). 2018
- [J9] **Dustin Lazarovici**, Andrea Oldofredi, and Michael Esfeld. *Observables and unobservables in quantum mechanics: How the no-hidden-variables theorems support the Bohmian particle ontology*, Entropy 20(5). 2018
- [J10] **Dustin Lazarovici**. *Super-Humeanism: A starving ontology*, Studies in History and Philosophy of Science Part B: Studies in History and Philosophy of Modern Physics 64. 2018
- [J11] **Dustin Lazarovici** and Mario Hubert. *How Quantum Mechanics can consistently describe the use of itself*, Scientific Reports 9:470. 2019
- [J12] **Dustin Lazarovici**. *On Boltzmann vs. Gibbs and the Equilibrium in Statistical Mechanics*, Philosophy of Science 86:4. 2019
- [J13] **Dustin Lazarovici**. *Position Measurements and the Empirical Status of Particles in Bohmian Mechanics*, Philosophy of Science 87:3. 2020
- [J14] **Dustin Lazarovici** and Paula Reichert. *The Point of Primitive Ontology*, Foundations of Physics 52. 2022
- [J15] **Dustin Lazarovici**. *How Everett Solved the Probability Problem in Everettian Quantum Mechanics*, Quantum Reports 5(2), 407-417. 2023

Books:

- [B1] Detlef Dürr and **Dustin Lazarovici**. *Verständliche Quantenmechanik. Drei mögliche Weltbilder der Quantenphysik*, Springer-Spektrum, 229 pages. 2018
- [B2] Detlef Dürr and **Dustin Lazarovici**. *Understanding Quantum Mechanics. The World According to Modern Quantum Foundations*, Springer International Publishing, 239 pages. 2020

Book chapters:

- [b1] Detlef Dürr and **Dustin Lazarovici**. *Quantenphysik ohne Quantenphilosophie*, in: M. Esfeld (ed.), Philosophie der Physik. Suhrkamp. 2012
- [b2] **Dustin Lazarovici**. *Relativistic Interactions and the Structure of Time*, in: A. von Müller, T. Filk (eds.), Re-Thinking Time at the Interface of Physics and Philosophy, On thinking Vol. 4, Springer. 2015
- [b3] Contributions to: Michael Esfeld and Dirk-André Deckert with **Dustin Lazarovici**, Andrea Oldofredi, and Antonio Vassallo. *A minimalist ontology of the natural world*, Routledge. 2018
- [b4] **Dustin Lazarovici** and Paula Reichert. *Arrow(s) of Time without a Past Hypothesis*, in: V. Allori (ed.), Statistical Mechanics and Scientific Explanation: Determinism, Indeterminism, and Laws of Nature. World Scientific. 2020
- [b5] **Dustin Lazarovici**. *Typicality versus Humean Probabilities as the Foundation of Statistical Mechanics*, in: B. Loewer, E. Winsberg, and B. Weslake (eds.), The Probability Map of the Universe: Essays on David Albert's *Time and Chance*. Harvard University Press. 2023

Conference proceedings:

- [T1] Detlef Dürr and **Dustin Lazarovici**. *Der Dialog des Demokrit*, in: J. Nida-Rümelin and E. Özmen (eds.), *Welt der Gründe. Proceedings des XXII. Deutschen Kongresses für Philosophie*, Meiner. 2012
- [T2] **Dustin Lazarovici**. *Lost in Translation: A Comment on 'Noncommutative Causality in Algebraic Quantum Field Theory*, in: Galavotti et al. (eds.), *New Directions in the Philosophy of Science. The Philosophy of Science in a European Perspective*, Vol. 5, Springer. 2014

Book reviews:

- [T3] **Dustin Lazarovici**. *Review of Shan Gao: The Meaning of the Wave Function: In Search of the Ontology of Quantum Mechanics*, *International Studies in the Philosophy of Science* 31:3. 2017

Accepted publications:

- [R1] **Dustin Lazarovici**. *Typicality as a Way of Reasoning in Probability, Physics, and Metaphysics*, Monograph to be published by Palgrave Macmillan.

Work in progress:

- [W1]
- [W2] **Dustin Lazarovici**. *Why the book of nature is written in the language of mathematics*. Invited book contribution.
- [W3] **Dustin Lazarovici** and Paula Reichert. *Typicality Measures in Shape Dynamics*. 1st draft