



Curriculum Vitae

Balázs Gyenis

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Employment

2018-'20 Fellow in Philosophy of Physics

Department of Philosophy, Logic, and Scientific Method, London School of Economics.

2015- Research Fellow, Institute of Philosophy

Hungarian Academy of Sciences, Research Centre for the Humanities.

2014 Visiting Lecturer, Department of Philosophy

University of Illinois, UC, USA.

2012-'15 Assistant Research Fellow, Institute of Philosophy

Hungarian Academy of Sciences, Research Centre for the Humanities.

Specialization

AOS philosophy of physics, philosophy of science, probabilistic causality

AOC metaphysics, logic, formal epistemology, phil. of economics, phil. of mathematics

Education

PhD History and Philosophy of Science, *University of Pittsburgh* (2013)

Dissertation: “Well posedness and physical possibility”

Committee: John Earman (co-advisor), John Norton (co-advisor), Gordon Belot, Anil Gupta

MA History and Philosophy of Science, *University of Pittsburgh* (2011)

MSc Physics, *University of Pittsburgh* (2008)

MA Philosophy, *University of Pittsburgh* (2005)

MSc Theoretical Economics, *Corvinus University* (five year combined B.Sc. and M.Sc. program) (2003)
with a minor in Stochastic Processes

Peer reviewed publications

- “A dynamical systems approach to causation” (2021) (with: P. Fazekas, G. Hofer-Szabó, G. Kertész), *Synthese* **198**:11, 6068–6087.
- “Causation: a dynamical systems approach” (2021) (with: P. Fazekas, G. Hofer-Szabó, G. Kertész), *Hungarian Philosophical Review* **2021/1**, 26–45.
- “Determinism, physical possibility, and laws of nature” (2020), *Foundations of Physics* **50**, 568–581. DOI: 10.1007/s10701-020-00320-0
- “Maxwell and the normal distribution: a colored story of probability, independence, and tendency toward equilibrium” (2017) *Studies in History and Philosophy of Modern Physics* **57**, 53–65.
- “Is it the Principal Principle that implies the Principle of Indifference?” (2017) (with L. Wroński), in: Wroński, L., G. Hofer-Szabó (eds.): *Making it formally explicit: Probability, Causality and Indeterminism*, Springer, New York.
- “How do macrostates come about?” (2017) (with M. Gömöri and G. Hofer-Szabó), in: Wroński, L., G. Hofer-Szabó (szerk.): *Making it formally explicit: Probability, Causality and Indeterminism*, Springer, New York.
- “Who explained first tendency towards equilibrium?” (2017) *Fizikai Szemle*, **LXVII / 6 (750)** (in Hungarian).
- “Determinism and interpretation” (2013) *Hungarian Philosophical Review* **2013/2** (in Hungarian).
- “Causal completeness of probability theories – results and open problems” (2011) (with M. Rédei) in: Illari, M. P., J. Williamson, and F. Russo (eds.): *Causality in the Sciences*, Oxford University Press, Oxford.
- “Causal explanation of correlations” (2010) (with Z. Gyenis, G. Hofer-Szabó, M. Rédei, L. E. Szabó), *Hungarian Philosophical Review* **2010/3** (in Hungarian).
- “Causal completeness in general probability theories” (2010) (with M. Rédei) in: Suárez, Mauricio (Ed.): *Probabilities, Causes and Propensities in Physics*, Synthese Library **347**, Kluwer.

- “When can Statistical Theories be Causally Closed?” (with M. Rédei), *Foundations of Physics* **34**, Issue 9.

Manuscripts

“Maxwell’s H theorem” (available)

“Bayes rules all: on the equivalence of various forms of learning in a probabilistic setting” (available)

Recent Awards

2019 Excellence in Education Award of the London School of Economics.

2016 ‘Best lecturer of ELTECON in 2016’ Award.

Talks

2021 “Physicalism,” Research seminar of the Institute of Philosophy, ELKH.

2020 “Whatever Happened to Efficient Causes in Physics?,” Research seminar of the Institute of Philosophy, ELKH (invited reflections on a talk by Gyula Klima).

2020 “A dynamical systems approach to causation,” Causation and Reduction: From Metaphysics to the Sciences, UIUC (invited talk, Zoom).

2019 “On On Why Functionalism is a Form of ‘Token-dualism’,” Physicalism and Reduction, Budapest (invited comment).

2019 “A dynamical systems approach to causation,” Cambridge Philosophy of Physics Research Seminar, UK (invited talk).

2019 “A proof of tendency towards equilibrium”, Sigma Club Lecture Series, Centre for Philosophy of Natural and Social Science, London School of Economics (invited talk).

2019 “Slowing clocks, shrinking rods, and curved spacetimes,” Johannes Kepler University, Linz (invited talk).

2018 “Towards new notion(s) of physical possibility”, Popper Seminar, LSE (invited talk).

2018 “Determinism, Physical Possibility, and Laws of Nature”, Philosophy of Science Association conference 2018, Seattle.

2018 “What powers inductive inference”, The Material Theory of Induction and Beyond, Pittsburgh (invited conference seminar).

- 2018 “Towards new notion(s) of physical possibility”, Modality in physics, Krakow (invited talk).
- 2018 “Do ideal gases have color?”, Science Studies Workshop, MTA-CEU (invited talk).
- 2018 “Physical possibility for actualists,” Theoretical Philosophy Forum, ELTE.
- 2017 “Approach towards equilibrium and the interpretation of probability,” MTA Wigner FK RMI (invited talk, repeated in SZTE TTIK Theoretical Physics Department Seminar in 2018).
- 2017 “Results in Bayesian learning theory – In the footsteps of Miklos Redei”, Quantum Investigations, LSE (with Zalán Gyenis).
- 2017 “Humean supervenience and objective modality”, Modally rich metaphysical landscapes, Krakow (invited conference talk).
- 2016 “The Free Will Problem in the light of the Dynamical Systems approach to causation,” The Fifth Workshop of the Budapest-Krakow Research Group on Probability, Causality, and Determinism.
- 2016 “Freedom and laws of nature” (“Szabadság és természeti törvények”), Ütközéspontok 3 (co-refereeing, in Hungarian).
- 2015 “Is time fundamental? What makes time special?”, Physics Meets Philosophy: In Time.
- 2015 “Can a Bayesian learn a new probability?,” Entia et Nomina 2015 (invited talk).
- 2015 “On the emergence of macrostates,” The Fourth Workshop of the Budapest-Krakow Research Group on Probability, Causality, and Determinism (together with G. Hofer-Szabo (presenter) and M. Gomori).
- 2015 “The first good bad proof of tendency towards equilibrium,” The Third Workshop of the Budapest-Krakow Research Group on Probability, Causality, and Determinism.
- 2015 “Bayes rules all,” invited talk, Department of Philosophy, Logic, and Scientific Method, LSE.
- 2014 “On the equivalence of various forms of learning in a probabilistic setting,” The Second Workshop of the Budapest-Krakow Research Group on Probability, Causality, and Determinism.
- 2014 “A guidance for the mathematization of semi-formally presented dynamical physical theories,” invited talk, Department of Philosophy, UIUC. (Also at: Mathematizing Science: Limits and Perspectives 2, University of East Anglia, Norwich.)
- 2014 “Causation: A Dynamical System approach,” (with P. Fazekas, G. Hofer-Szabo, G. Kertész), Theoretical Philosophy Forum, ELTE. (Also at: Department of Philosophy, Logic,

- and Scientific Method, LSE; The First Workshop of the Budapest-Krakow Research Group on Probability, Causality, and Determinism.)
- 2013 “Determinism, natural laws, and physical possibility,” invited talk, Department of Philosophy, University of Belgrade.
- 2013 “Determinism and interpretation,” invited talk, Department of Philosophy, Jagellonian University, Krakow.
- 2013 “Determinizmus és interpretáció,” invited talk, Hungarian Academy of Sciences (in Hungarian).
- 2013 “The birth of statistical mechanics: a coloured vision,” Theoretical Philosophy Forum, ELTE.
- 2012 “Propagator equations as laws: reconciling Humean and anti-reductionist intuitions,” Theoretical Philosophy Forum, ELTE.
- 2012 “What is physically possible?” First International Conference on Logic and Relativity, Budapest.
- 2012 “On different conceptions of physical possibility,” Theoretical Philosophy Forum, ELTE.
- 2011 “Induction and the received view of physical possibility,” Theoretical Philosophy Forum, ELTE.
- 2010 “Classical Population Genetics and the Semantic Approach to Scientific Theories” (with P. Gildenhuys), IHPST: Models and Simulations 4.
- 2009 “On Humean laws of Nature,” Pittsburgh WIP Seminar Series.
- 2009 “Exact Descriptions and Well-posedness,” Philosophy of Physics 36th Annual Meeting, Inter-University Centre, Dubrovnik.
- 2008 “Algebraic Quantum Field Theory and the Concentration Point Principle,” Probabilistic Causality Summer School, Central European University.
- 2007 “How Mathematical Models of Complex Phenomena Explain?” 13th IUHPS Division of Logic, Methodology and Philosophy of Science Conference, Beijing.
- 2007 “Supertasks: Gödel Strikes Back,” invited talk, ELTE.
- 2006 “Maxwell and the normal distribution,” invited talk, ELTE HPS Colloquium.
- 2003 “On causal closedness of statistical theories,” 12th IUHPS Division of Logic, Methodology and Philosophy of Science Conference, Oviedo.

Teaching

London School of Economics teaching experience

2019/20 (spr) “Physics and the City,” Instructor.

2019/20 (fall) “Einstein for Everyone,” Instructor.

2018/19 (spr): “Physics and the City,” Instructor.

2018/19 (fall) “Einstein for Everyone,” Instructor.

Szent István Szakkollégium (SZISZ) teaching experience

2017/18 (spr) “Philosophy of Science problems in the Social Sciences,” Instructor.

Eötvös University (ELTE) teaching experience

2020/21 (fall) “Scientific method,” Instructor.

2019/20 (fall) “Scientific method,” Instructor.

2018/19 (fall) “Scientific method,” Instructor.

2017/18 (fall) “Scientific method,” Instructor.

2016/17 (fall) “Scientific method,” Instructor.

University of Illinois, UC teaching experience

2013/14 (spr) “Logic and Reasoning,” Instructor.

2013/14 (spr) “Symbolic logic,” Instructor.

2013/14 (spr) “Formal logic and philosophy,” Instructor.

University of Pittsburgh teaching experience

2010/11 (sum) “Problem Solving - How Science Works?,” Instructor.

2010/11 (spr) “Magic, Medicine and Science,” Teaching Assistant of Peter Machamer.

2010/11 (fall) “Philosophy of 20th Century Physics,” Instructor.

2009/10 (sum) “Problem Solving - How Science Works?,” Instructor.

2009/10 (spr) “Philosophy of 20th Century Physics,” Instructor.

2009/10 (fall) “Problem Solving - How Science Works?,” Instructor.

2007/08 (spr) “Problem Solving - How Science Works?,” Instructor.

- 2007/08 (fall) “Magic, Medicine and Science,” Instructor.
- 2006/07 (spr) “Magic, Medicine and Science,” Instructor.
- 2006/07 (fall) “Myth and Science,” Instructor.
- 2005/06 (spr) “Myth and Science,” Instructor.
- 2005/06 (fall) “Principles of Scientific Reasoning,” Instructor.
- 2004/05 (spr) “Explanations of Humans and Society,” Teaching Assistant of Peter Machamer.
- 2004/05 (fall) “Thinking about the Environment,” Teaching Assistant of John Earman.

Related academic activities

- I have been tasked with various administrative, logistical, strategic planning etc. duties by the Research Centre of the Humanities of the Hungarian Academy of Sciences since 2015, including being its Integrity Risk Coordinator since 2017.
- Member of the Strategic Advisory Committee of the Institute of Philosophy of the Hungarian Academy of Sciences (2013-2016).
- Member and organizer of the Budapest-Krakow Research Group on Probability, Causality, and Determinism workshops (2014-2016).
- Technical Editor of Working Papers in Philosophy (series of the Institute of Philosophy of RCH HAS) (2014-2020).
- President of the Free Variables Association and the founding editor-in-chief of the analytic philosophy journal Szabad Vátozók (2005-2017).
- Referee service: Philosophy of Science, British Journal for the Philosophy of Science, Pacific Philosophical Quarterly, Synthese, Erkenntnis, Oxford University Press, Journal of Symbolic Logic, Hungarian Philosophical Review, and for the 7th, 9th, 10th, 11th and 12th Annual CMU-Pittsburgh International Graduate Philosophy Conference.
- Course Coordinator of the Probabilistic Causality Summer School, Central European University (2008).
- Organizer of the Pitt HPS Works in Progress seminar series (for four years).
- Participant of ‘Descrying the world in Physics’ summer school (2006)
Director: Barry Loewer, Faculty: Tim Maudlin, David Albert, Katalin Balog, Carl Hoefer and David Papineau.
- Member of the Graduate Council to the Dean, Arts and Sciences, University of Pittsburgh

(2006-2008).

- Students' Council Member and Student Chair of Education Affairs at Corvinus University, Faculty of Economics (2002-2003).
- Field work for a research project run by the Organizational Behavior program, Stanford Graduate School of Business (2002).

Languages

French: Intermediate in reading, pre-intermediate in speaking and writing.

Hungarian: Native in speaking, reading, and writing.