

CURRICULUM VITAE

Wojciech Mamak

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WORK

Polish Academy of Sciences, Section for Logic and Cognitive Science
Researcher/Early-Career Scholar

Oct 2018-current

- Specialisations: Philosophy in Cognitive Science, Information Logic, Philosophy of Neuroscience, Metascience
- Duties: Devising and delivering an original research project at the intersection of philosophy, psychology and neuroscience; Grant-writing; Writing and reviewing peer-reviewed scientific papers; Analyzing and synthesizing of scientific literature; Organization of scientific events (conferences, workshops, symposia - online and in-house); Establishing and maintaining scientific partnerships with international partners; Popularization of science; Minor teaching - undergrad level

NCN OPUS Grant 'Cognitive Science in Search for Unity' (PI: prof. Marcin Miłkowski)
Student Research Assistant

Oct 2015-Sep 2018

- Specialisations: Philosophy in Cognitive Science, Information Logic, History of Science (esp. Statistics & Quantification)
- Duties: Scientific literature summaries, Grant-writing assistance, Organizational support for the Research Group and for scientific events (conferences, lectures, workshops)

Polish Academy of Sciences, Institute of History

Research Project Group 'History of Socio-Political Notions in Poland' (PI: prof. M. Janowski)
Student Research Assistant

Oct 2017 – May 2018

- Specialisations: Computational History of Ideas; Statistical Methods for Historiography
- Duties: Prepared surveys of statistical methods in cutting-edge historiographical research; Gave presentations and briefs for group members on latest literature in computational history; Participated in the construction of the Historical Dictionary of Social and Political Notions in Poland

EDUCATION

Polish Academy of Sciences, Institute of Philosophy and Sociology

Oct 2018-Sep 2023

PhD candidate, Graduate School for Social Research (GSSR, PAS); supervisor: prof. Marcin Miłkowski

- Specialisations: Philosophy in Cognitive Science, Information Logic, History of Science (esp. Statistics & Quantification)
- Dissertation title: Information-theoretic Explanations of Cognitive Systems

University of Warsaw, College of Inter-Faculty Individual Studies in the Humanities (MISH UW)

Oct 2011-Oct 2017

Bachelor & Master studies (double degree in philosophy and history)

- Specialisations: Philosophy of Cognitive Science, History of Science, Historical Epistemology

Katholieke Universiteit Leuven

Feb 2015-July 2015

Student exchange program (Erasmus+), summer semester

PUBLICATIONS

- **Mamak, W.**, Miłkowski, M. 'Meaning from Matching: How Representational Mechanisms Exploit Structural Similarity', *under review at THEORIA. An International Journal for Theory, History and Foundations of Science*
- **Mamak, W.** The Cooperative Neuron - William A. Phillips, book review for *Philosophy of Science*, [accepted, to be published in 2025]
- **Mamak, W.** 'What Does It Mean to Generate Information? Philosophy Meets Machine Learning' [*in preparation for*

Synthese]

- **Mamak, W.** On the Relation between Representing and Compressing Information, article, *submitted to Minds & Machines*.
- **Mamak, W.** „Środek dowodowy nade wszystkie inne argumenta”. *Historia kwantyfikacji w Polsce 1864-1918. Zmiany standardów racjonalności jako proces modernizacyjny*. [in Polish; translation: 'A proof above all'. The history of quantification in Poland, c. 1864-1918. Shifting standards of rationality as a modernization process.], **book**, in preparation for *Foundation for Polish Science (FNP) monograph contest*.
- Maćkiewicz, B., **Mamak, W.**, Girdwoyń, A., 'Internal and External Rule-Violations in Sports'; *submitted to 'Sports, Ethics and Philosophy' journal*
- **Mamak, W.** The Emergence of Modern Statistics as a Cognitive Shift– The Case of Poland (1878-1931) [in preparation for 'Measurement journal]
- Girdwoyń, A., Maćkiewicz, B., **Mamak, W.** Causal or Casual Experts? Differences in Causality Ascriptions Between Lawyers and Laypeople – An Empirical Study, *in progress*.
- Maćkiewicz, B., **Mamak, W.** 'Games as Moral Laboratories. Gamification of Moral Dilemmas Concerning Autonomous Vehicles. *Replay' The Polish Journal of Video Game Studies*, Issue 1(5)/2018, pp. 7-25
- **Mamak, W.** 'Forsaking the False Gods: A Philosophical Approach to Cyberpunk Literature.' In: *A Roundtable on Interdisciplinary Literary Studies*. Ed. Paweł Wojtas, Warsaw: Wydawnictwo UW, 2014.

DIPLOMAS

PhD in Philosophy (in spe)

Q1 2025

Institute of Philosophy and Sociology, Graduate School of Social Research (GSSR); Polish Academy of Sciences

- Specialisations: Philosophy of Neuroscience, Information Theory, Metascience
- Thesis: 'Informational Explanations of Cognitive Systems'
- Advisor: prof. Marcin Miłkowski

MA in History (magna cum laude; with distinction)

Oct 2017

University of Warsaw

- Specialisations: History of Science, Historical Epistemology
- Thesis: '»A Proof Above All«. Growth of Statistical Thinking as a Shift in the Standards of Rationality in the Long 19th Century' (in Polish)
- Advisor: prof. Tomasz Kizwalter

MA in Philosophy (magna cum laude)

Oct 2016

University of Warsaw

- Specialisation: Philosophy of Perception, Philosophy of Cognitive Science
- Thesis: 'How Inferential Is Seeing? Cognitive Penetrability of Perception and the Kant-Sellars Thesis' (in Polish)
- Advisor: prof. Marcin Miłkowski

BA in History (magna cum laude; with distinction)

Sep 2014

University of Warsaw

- Specialisations: Social History, Contemporary American History
- Thesis: 'John Steinbeck on RA/FSA camps in California in the Context of Migrations to the State 1936-1941' (in Polish)
- Advisor: prof. Michał Leśniewski

CONFERENCE AND SEMINAR TALKS

Measurement at the Crossroads 2020: Measuring and Modeling, 29th June - 1st July 2022, Università Cattolica del Sacro Cuore, Milan, Italy

- Talk: 'A Proof Above All'. Discovery and Deployment of Statistical Arguments in a Modernising Society: The Case of 1882-1921 Poland.

European Society For The History Of Science (ESHS) Biennial Conference, 13-14th September 2018, London, UK.

- Talk: 'Declaring Scientific Independence: Ludwik Krzywicki and the Creation of Modern Statistics in Poland, c. 1912-1926', featured in the panel 'Scientific Personae and the (Dis-)Unity of Modern Statistics in Comparative Perspective, c. 1860-1960', (eds. Jochen Mayer, Ida Stamhuis)

1st International Conference 'History of Socio-political Notions in Poland', Polish Academy of Sciences, Institute of History, Warsaw, Poland, 7-8th November 2017

- Talk: 'Is History of »Objectivity« Feasible? What Can An Historian of Science Bring to the Table?'. (in Polish)

Invented Symposium talk 'Practices Around Computation' Laboratoire d'Algorithmique, Complexité et Logique (LACL), Université Paris-Est Créteil (UPEC), Paris, 17-19th December 2024

- Talk: 'Neural Information and Computational Formats'

Study Visit Fellowship, Department of Philosophy and Religious Studies, National University of Mongolia (NMU), Ulaanbaatar, Mongolia; September-October 2024

- Open Talk: 'Are Brains Computers? And Could That Give Us Mindreading?'. 23rd September 2024
- Lecture: 'How Inferential Is Seeing. Cognitive Penetrability of Perception and role of Philosophy in CogSci', 24th September 2024

Invited seminar talk: Department of Logic, Bulgarian Academy of Sciences, Sofia, Bulgaria, 23rd November 2022

- Talk: 'Using Correspondence Theory of Semantic Information to Understand Neural Representational Similarity'

Invited seminar talk: Research Group on Social History of Poland in the 19th and 20th century (PI: Andrzej Szwarec), University of Warsaw, Institute of History, Poland, 19th March 2018

- Talk: '»Cold Calculation«. The Expansion of Quantification in Congress Poland and Galicia, c. 1864-1918.' (in Polish)

Invited seminar talk: NCBI IDEAS + Jagiellonian University TechInfo Lab Working Seminar, 30th April 2020, online,

- Talk: 'Natural Scene Statistics – A Philosophical Primer for Cognitively-inspired Neural Nets.'

10th Integrated History and Philosophy of Science, California Institute of Technology (Caltech), Pasadena, CA; USA, 27-29th March 2025 (under review)

- Talk: 'The Emergence of Modern Statistics as a Cognitive Shift– The Case of Poland (1878-1931)'

Polish-Czech Academies of Science Yearly Workshop, Czech Academy of Sciences, Institute of Philosophy, Prague, Czechia, 7-9th November 2024

- Talk: 'On Generativity of Information'

Workshop 'Cognition and Representation - with Nick Shea', Institute of Philosophy and Sociology, PAS; 8th October 2023

- Talk: 'Information and Injective Mappings'

Polish-Bulgarian Academies of Science Yearly Workshop, 12th September 2024, Institute of Philosophy and Sociology PAS,

- **Talk: 'Cognitive History As Metascience: A Short Guide to Rationality Standards'**

Workshop 'Philosophical perspectives on Neural Information'; Institute of Philosophy and Sociology, PAS; 6-8th November 2023

- Talk: 'What Does It Mean to Generate Information? Philosophy Meets Machine Learning'

6th Philosophy in Informatics Conference: 'Frontiers of Philosophy of Computing and Information', 16-17th December 2021, PAU-PAN-PW-UPJP2, Kraków-Warsaw (online)

- Talk: Using Correspondence Theory of Information of Semantic Information to Understand Neural Representational Similarity

Invited seminar talk: Cognitive Science in Search for Unity Research Grant Working Seminar, 23rd May 2020, Polish Academy of Sciences, Warsaw

- Talk: 'Perception, Information, Compression – Minimal Explanations for Early Vision'

Law and Mind 2019 Conference, November, 22-23rd November 2019, Faculty of Law, Jagiellonian University, Cracow [paper accepted, conference cancelled due to organizational reasons]

- Talk: 'Causal or Casual Experts? Differences in Causality Ascriptions Between Lawyers and Laypeople' [with A. Girdwoyń & B. Maćkiewicz]

7th Conference 'Cognitive Systems Modeling', HILL Lab UW, Mała Ciche, Poland, 18-19th October 2018

- Talk: 'Information, (Visual) Perception and (Image) Compression'

2nd Interdisciplinary Conference 'TechSpo '18: Reign of Algorithms?'. Kraków, Poland, 20-21st September, 2018

- Talk: 'Testability and Algorithmization of Moral Dilemmas. Conclusions from Work on the Ethical Roadmap for Autonomous Vehicles (AVs)' (in Polish)

6th Conference 'Cognitive Systems Modeling', HILL Lab UW, Kiry, Poland, 27-28th October 2017

- Talk: '»We may not have prayers in the public schools, but by G-d, we will have a distinction between observation and inference«. Or Do We Need an Informational Interpretation of Inferences?'. (in Polish)

4th Conference 'Computer Games Culture: Critique and Methodology', University of Łódź, Poland, 29-30th June 2017

- Talk: 'Games as Moral Laboratories. Gamification of Moral Dilemmas Concerning Autonomous Vehicles' [with B. Maćkiewicz]

RESEARCH EXPERIENCE

Polish Academy of Sciences, Institute of Philosophy and Sociology

2015 – current

Research Project Group 'Cognitive Science in Search for Unity' (PI: prof. Marcin Miłkowski)

Student assistant (2015-2018);

Section for Logic and Cognitive Science (Chair: prof. Jacek Malinowski)

PhD candidate / Early-Career Researcher (2018-current)

- Conducted own research on bridging natural and artificial cognitive systems through information-theoretic explanatory strategies within OPUS grant funded by National Science Center of Poland (NCN)
- Participated in regular internal working seminars and a series of cooperative workshops with international scholars and research groups (USA, the Netherlands, Germany, Israel, Czech Republic, Scotland).
- Prepared supplementary documentation for group's major grant proposals, including the ERC Advanced track in 2021 and 2023, NCN Maestro in 2022 and 2023 and Templeton Foundation funding scheme in 2023.
- Participated in the works of the organizational committee for major international conferences (**The International Association for Computing and Philosophy's annual; IACAP 2018**) and **European Society for Philosophy and Psychology Conference (ESPP 2025)**; both hosted in Warsaw.
- Participated in the organization of significant academic events, such as lectures of distinguished scholars, e.g. Daniel Dennett's lecture in Polish Academy of Sciences in October 2017.
- Devised and organized a new series of international online seminars 'The Reading Group' for young researchers in the field of philosophy of neuroscience, which gathered practitioners from both theoretical and empirical branches of cognitive science for in-depth roundtable discussion with leading scholars on their soon-to-be-published papers.

Polish Academy of Sciences, Institute of History

Research Project Group 'History of Socio-Political Notions in Poland' (PI: prof. M. Janowski) Oct 2017 – May 2018

Student assistant

- Prepared a grant proposal outline on the perspectives of utilising digital techniques in intellectual history, ranging from source digitalisation (OCR) and subsequent information-processing to statistical analyses on the text corpora.
- Worked on methodological issues of computational processing of historical data.
- Conducted own original research project on the origins of quantification and the mechanisms of knowledge-making through statistical procedures in 20th century Poland. I presented my results during both an internal seminar and an international conference in the Polish Academy of Sciences' Institute of History.

WORKSHOPS

- Polish-Czech Workshop 'Naturalistic Approaches to Content & Consciousness', Polish Academy of Sciences, Institute of Philosophy and Sociology, Warsaw, Poland, 22nd May 2017
- Polish-Romanian Workshop: 'Model-based Explanation and Understanding in Cognitive Science', Polish Academy of Sciences, Institute of Philosophy and Sociology, Warsaw, Poland, 11th October 2017
- 2nd Workshop 'New Approaches to History of Science: Between Specialisation and Citizen Science (org. Jan Surman)', Polish Academy of Sciences, Institute of History of Science, Warsaw, Poland, 20th December 2017, (in Polish)
- Interdisciplinary Workshop 'Predictive Coding: Possibilities and Limitations' (org. Michał Piekarski, Paweł Gładziejewski), UKSW, Warsaw, Poland, 6th March 2018 (in Polish)

- Workshop 'Conscious and Unconscious Inference' with Paul Boghossian [NYU] (org. Bence Nanay), University of Antwerp, Belgium, 11th June 2018
- Workshop 'Opacity, Deep Opacity and Data Ethics' with Vincent C. Müller [TU Eindhoven], Polish Academy of Sciences, Institute of Philosophy and Sociology, Warsaw, Poland, 18-20th September 2018
- Workshop 'Indeterminacy of Computation' with Nir Fresco [Ben Gurion University] (org. Marcin Miłkowski), Polish Academy of Sciences, Institute of Philosophy and Sociology, Warsaw, Poland, 9th October 2018
- Joint Turin-Bochum Workshop 'New Perspectives on the Cognitive Penetrability of Perception' (org. Peter Brossel, Filippo Vindrola), University of Turin, Italy, 10th - 11th December 2018
- Workshop, 'Dynamical Modelling in Cognitive Science' with Carlos Zednik [TU Madgeburg], Polish Academy of Sciences, Institute of Philosophy and Sociology, Warsaw, Poland, 20th January 2020
- Workshop 'Quantitative Concepts in Philosophy' with Alistair Isaac and J.E. Wolffe [University of Edinburgh], July 2020, Polish Academy of Sciences, Institute of Philosophy and Sociology, Warsaw, Poland, July 2020
- Workshop A Model of Compatibility for Predictive Processing and Embodied Cognition with Luke Kersten [Ruhr-Universität Bochum], Polish Academy of Sciences, Institute of Philosophy and Sociology, Warsaw, Poland, 27th October, 2022
- Workshop 'Perspectives on Neural Information' with Charles Rathkopf [The Institute of Neuroscience and Medicine, Jülich]; 6-8th November 2023
- Workshop 'Information-Theory and Mental Representations with Manolo Martinez [University of Barcelona]; Warsaw, Poland, 28-30th November 2023'
- History and Philosophy of Computing (HaPoC 2023) Pre-Conference Workshop on Analog Computation with Corey Maley [Purdue], Warsaw, Poland, 16-17th December 2023
- Workshop 'Information-Representation Relations' with Nicholas Shea [University of London]; 7-8th October 2024.

SUMMER SCHOOLS

- **School of Ideas in Neuroscience 2023**, organizers: Nencki Institute of Experimental Biology (PAS), NERF KU Leuven, European Brain and Behavior Society; Warsaw, Poland, 28th June - 5th July

PEER-REVIEW EXPERIENCE & ORGANIZATIONAL DUTIES

- **Scientific Editor** for *Filozofia Nauki* [Philosophy of Science] - a top Polish journal in the field [since Fall '22]
 - I also served as a reviewer for *Philosophy of Science*, *Avant. Journal of Philosophical-Interdisciplinary Vanguard* and *The Balkan Journal of Philosophy*.
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- Participated in the works of the organizational committee for major international conferences (**The International Association for Computing and Philosophy's annual; IACAP 2018**) and was a member of the Organizing Committee for **European Society for Philosophy and Psychology Conference (ESPP 2025)**
 - **Founded and hosted 'The Reading Group' - a series of online seminars on philosophy of/in neuroscience with leading international scholars in the field (with D. Piecka and M. Miłkowski; 2023 - onwards)**

SCIENTIFIC SOCIETIES MEMBERSHIPS

- **The Society for the Study of Measurement** (2022-onwards)
- International Society for the Philosophy of the Sciences of the Mind (2023-onwards)
- The Society for Philosophy and Neuroscience (SPAN) (2024-onwards)
- **European Society for the History of Science (ESHS)**; (2018-2020)

POPULAR SCIENCE WRITING

- *'Kto wygrał derby teorii świadomości?' [Who Won the Consciousness Theory Derby?]* [in Polish] - to be published in *Tygodnik Powszechny* (national weekly) in 2024

SCHOLARLY ACHIEVEMENTS

- President of Polish Academy of Science's Scholarship for Outstanding Students – Institute of Philosophy and Sociology's nominee *Oct 2021*
- National English Olympiad for High Schools – finalist *May 2011*
- National Philosophical Olympiad for High Schools – finalist *May 2009*

TEACHING EXPERIENCE

Teaching Assistant, Introduction to Cognitive Science, University of Warsaw

2018/19 (Summer)

Undergraduate level course, part of Cognitive Science program, (principal instructor: prof. M. Miłkowski)

NON-ACADEMIC EXPERIENCE

Formacja TV

June 2013– August 2013

Internship

Polish Television, Channel 1 (*Telewizja Polska, TVP1*), 'Tele-express' Newsroom

June 2010– July 2010

Internship

LANGUAGES

- English – fluent
- French – good
- Russian – intermediate
- Latin – good (passive)
- Polish – native

LANGUAGE CERTIFICATE

English: IELTS (Total Score: 8)

OTHER SKILLS

- Programming language R / RStudio – intermediate
- NEURON (Neural activity modelling software) using hoc and nmodl languages - intermediate
- Driver's license (cat. B)