

PERSONAL INFORMATION

Davide Coraci

Nationality Italian

EDUCATION AND TRAINING

2019–2024 PhD in Cognitive and Cultural Systems

IMT School Lucca, Italy

Track: Cognitive, Computational and Social Neuroscience

Supervisor: Professor Gustavo Cevolani

Thesis: The problem of reverse inference (Excellent)

Jan-Jun 2022 Visiting Period

University Paris 1 Panthéon-Sorbonne, Paris, France

Institut d'histoire et de philosophie des sciences et des techniques

Supervisor: Professor Igor Douven

2016–2018 M.A. in Philosophy

University of Genoa, Italy

Curriculum: Cognition and Epistemology

Thesis: The representation of ad hoc concepts in cognitive sciences (110/110 cum laude)

2013–2016 B.A. in Philosophy

University of Genoa, Italy

Final mark: 110/110 cum laude

2008–2013 High School

Scientific studies

Liceo G. D. Cassini, Genoa, Italy

FURTHER EDUCATION

2017 Course in Digital Innovation in Humanities and Cultural Heritage

University of Genoa, Italy

CONTRACTS, GRANTS, AND
TEACHING**Apr 2025–Mar 2026 Research Fellow**

Project: Newborn screening in Friuli-Venezia Giulia: Development and integration of a new platform (CUP: C93C24000300005 - 5MILL22R)

IRCCS Burlo Garofolo Trieste, Italy

Mar 2024–Feb 2025 Research Collaborator

PRIN Project 2022: Reasoning with hypotheses: Integrating logical, probabilistic, and experimental perspectives

IMT School for Advanced Studies Lucca, Italy

Feb 2025– Mar 2025 Teaching

Course: Elements of Biology and Neuroscience

Department of Philosophy – University of Pisa, Pisa

Feb 2024–June 2024 Teaching assistant

Course: Critical Thinking, held by Hernán Felipe Bobadilla Rodriguez

Department of Mathematics – Politecnico di Milano, Italy

2020–2021 Erasmus+ Traineeship Grants

Talent at Work Mobility Consortium

PUBLICATIONS (ENGLISH, PEER-REVIEWED)

- 2025 Extended cognition, mutual manipulability, and the relevance of scientific evidence: A reformulation of the matching criterion, *Synthese*. DOI:10.1007/s11229 – 025 – 05067 – 7.
- 2024 Engineering disputed concepts and the meeting of minds, *Topoi*. DOI:10.1007/s11245 – 024 – 10115 – x, co-author: Avitabile, P.
- 2024 Inference to the Best Neuroscientific Explanation, *Studies in History and Philosophy of Science*. DOI:10.1016/j.shpsa.2024.06.009, co-authors: Douven, I., Cevolani, G.
- 2024 Realism, Underdetermination, and Inference in Cognitive Neuroscience, *Proceedings Post-graduate Conference on Logic and Philosophy of Science 2022*, co-authors: Cevolani, G.
- 2023 Reverse Inference, Abduction, and Probability in Cognitive Neuroscience, In: *Handbook of Abductive Cognition*, Magnani, L. (ed). DOI:10.1007/978 – 3 – 031 – 10135 – 9_60, co-authors: Calzavarini, F., Cevolani, G.
- 2023 Understanding and Communicating Risk: The Case of COVID-19, In: *Ergonomics and Nudging for Health, Safety and Happiness*, Bellandi, T., Albolino, S., Bilancini, E. (eds). DOI:10.1007/978 – 3 – 031 – 28390 – 1_11, co-authors: Demichelis, A., Cevolani, G.
- 2022 A unified model of ad hoc concepts in conceptual spaces, *Minds & Machines* 32(2), pp. 289–309. DOI:10.1007/s11023 – 021 – 09586 – 3
- 2022 Representations and processes: What role for multivariate methods in cognitive neuroscience?, *Rivista internazionale di Filosofia e Psicologia* 13(3), pp. 187-199. DOI:10.4453/rifp.2022.0018
- 2021 Neuroimaging. How to Question Scientific Images and Their Artistic Value, *The Journal for the Philosophy of Language, Mind and the Arts* 2(1), pp. 147-170. DOI:10.30687/Jolma/2723 – 9640/2021/01/009, co-authors: Carlenzi, E., Pigoni, A.

PUBLICATIONS (ITALIAN, PEER-REVIEWED)

- 2024 Inferenza e spiegazione nelle neuroscienze cognitive, *Sistemi Intelligenti*, co-authors: Cevolani, G., Douven, I.
- 2023 Fare i conti con l'incertezza: le frequenze naturali, *Sistemi Intelligenti* 35(1), pp. 83-103. DOI:10.1422/106988, co-authors: Demichelis, A.
- 2023 L'analisi bayesiana dell'inferenza inversa in neuroscienza: una critica, *Sistemi intelligenti* 34(2), pp. 209-234. DOI:10.1422/105037, co-authors: Cevolani, G.
- 2020 Un approccio unitario allo studio dei concetti ad hoc nelle scienze cognitive, *Sistemi Intelligenti*. 32(2), pp. 400-423. DOI:10.1422/96333.

OTHER PUBLICATIONS

- 2022 Disaccordo, esperti scientifici e decisioni pubbliche, In: Bistagnino, G. (ed.) *Il disaccordo: nella scienza e nella politica*, Pisa University Press, co-authors: Cevolani, G.

PAPERS (UNDER REVIEW)

Truthlikeness and the inclusion fallacy

Conceptual spaces, data incompatibility, and second-order isomorphism.

Neurofunctional correlates of Emotional Dysregulation (ED): systematic review and ALE meta-analysis

CONFERENCES AND TALKS

- 29 Sep 2024 Truth approximation, calibration and bias in human judgment, Annual Conference of the Italian Association of Cognitive Science (AISC) 2024, University of Rome La Sapienza – Italy, co-author: Cevolani, G.
- 30 Aug 2024 Abductive and Probabilistic Approaches to Reverse Inference in Neuroscience, Conference: Probabilistic Reasoning in the Sciences, Marche Polytechnic University, Ancona – Italy.
- 15 Dec 2023 NeuroSynth: A systematic review, Annual Conference of the Italian Association of Cognitive Science 2023, University of Genoa, Genoa - Italy, co-authors: Bucci, E., Chinaia, A. A., Lettieri, G., Giannakopoulou, A., Karabulut, A., Pigoni, A., Radecki, M., Ruzzante, F., Sampaolo, E., Sesso, G., Teresi, L., Vannucci, C., Calzavarini, F., Cevolani, G., Handjaras, G., Cecchetti, L.
- 15 Dec 2023 Second-order isomorphism: Why cognitive (neuro)scientists should care more about it, Annual Conference of the Italian Association of Cognitive Science 2023, University of Genoa, Genoa – Italy.
- 20 Sep 2023 Inferring to the Best Explanation in Cognitive Neuroscience, European Philosophy of Science Association Conference 2023, Belgrade – Serbia, co-authors: Cevolani, G., Douven, I.
- 7 Jun 2023 Inferring to the Best Explanation in Cognitive Neuroscience, Model-Based Reasoning, Abductive Cognition, Creativity Conference 2023, University La Sapienza Rome – Italy, co-authors: Cevolani, G., Douven, I.
- 15 Dec 2022 Inference to the Best Neuroscientific Explanation, Annual Conference of the Italian Association of Cognitive Science 2022, University of Trento/CIMeC, Rovereto – Italy, co-authors: Douven, I., Cevolani, G. (Finalist Vittorio Grotto Prize, Best Paper AISC 2022)
- 8 July 2022 Probability, Confirmation, and Reverse Inference in Cognitive Neuroscience, British Society for the Philosophy of Science Annual Conference 2022 (online), co-authors: Cevolani, G.
- 22 Jun 2022 How neuroscientists decode the brain: a systematic review and assessment of NeuroSynth, Midterm Conference of the Italian Association of Cognitive Science 2022, University of Parma, Parma – Italy, co-authors: Cevolani, G., Calzavarini, F., Handjaras, G., Cecchetti, L.
- 13 Jun 2022 Reverse Inference, Probability, and Confirmation in Neuroscience, Postgraduate Conference on Logic and Philosophy of Science 2022, University of Milano-Bicocca, Milan – Italy, co-authors: Cevolani, G.
- 2–4 May 2022 Understanding and Communicating Risk: The Case of COVID-19, Società Italiana di Ergonomia e Fattori Umani Conference 2022, IMT School Lucca – Italy, co-authors: Demichelis, A., Cevolani, G.
- 14 Dec 2021 Confirming Neuroscientific Hypotheses: the Case of Reverse Inference, Annual Conference of the Italian Association of Cognitive Science 2021, Noto – Italy, co-authors: Cevolani, G. (Winner Vittorio Grotto Prize, Best Paper AISC 2021)
- 24 Sep 2021 Reverse Inference and Bayesian Confirmation in Cognitive Neuroscience, Conference of the Italian Society of Analytic Philosophy 2021 (online), co-authors: Cevolani, G.
- 1 Sep 2021 Reverse Inference and Bayesian Confirmation in Cognitive Neuroscience, Symposium: From Brain Structures to Cognitive Functions: Philosophical and Neuroscientific Perspectives on Reverse Inference, European Society for Philosophy and Psychology Conference 2021 (online), co-authors: Cevolani, G.
- 9 Jul 2021 Reverse Inference and Bayesian Confirmation in Cognitive Neuroscience, British Society for the Philosophy of Science Annual Conference 2021 (online), co-authors: Cevolani, G.
- 13 May 2021 Reverse Inference and Bayesian Confirmation in Cognitive Neuroscience, Italian Society for Neuroethics and the International Neuroethics Society Conference (online), co-authors: Cevolani, G.
- 6 Mar 2021 Reverse Inference and Bayesian Confirmation in Cognitive Neuroscience, Symposium: From Brain Structures to Cognitive Functions: Philosophical and Neuroscientific Perspectives on Reverse Inference Joint Conference 2021 (online), co-authors: Cevolani, G.
- 6 Mar 2021 Theories of ad hoc categories: bridging the gap, European Congress of Analytic Philosophy Conference 2020 (online).
- 13 Dec 2019 An integrated theory on the construction of ad hoc concepts, Annual Conference of the Italian Association of Cognitive Science 2019, University Roma Tre, Rome - Italy.

24 May 2019 Ad Hoc Concepts in Conceptual Space, Midterm Conference of the Italian Association of Cognitive Science 2019, IMT School for Advanced Studies Lucca, Lucca – Italy.

PRESENTATIONS AND TALKS (INVITED)

20 Nov 2024 Inferenze e spiegazioni in neuroscienze, Filosofia Teoretica (mod. B), held by Marco Viola, University Roma Tre, Rome – Italy.

22 Nov 2023 L'inferenza inversa in neuroscienze cognitive, Filosofia Teoretica (mod. B), held by Marco Viola, University Roma Tre, Rome – Italy.

CONFERENCES – POSTERS

10 Nov 2023 NeuroSynth: A systematic review, Congresso nazionale Società Italiana di Psicofisiologia e Neuroscienze Cognitive, Siena, co-authors: Bucci, E., A. Chinaia, A. A., Lettieri, G., Gianakopoulou, A. Karabulut, A., Piloni, A., Radecki, M., Ruzzante, F., Sampaolo, E., Sesso, G., Teresi, T., Vannucci, C., Calzavarini, F., Cevolani, G., Handjaras, G., Cecchetti, L.

19-23 Jun 2022 Neuroimaging-based Taxonomy of Cognitive Concepts Reveals 19 Topics and Relative Brain Maps, Organization Human Brain Mapping 2022 Annual Meeting, Glasgow, co-authors: Cevolani, G., Handjaras, G., Cecchetti, L.

22-23 Oct 2020 Reverse Inference, Bayesian Confirmation, and the Neuroscience of Moral Reasoning, International Neuroethics Society Conference (online), co-authors: Cevolani, G.

2 Sep 2019 Modelling Ad Hoc Concepts in Conceptual Spaces: An Introduction, EuroCogSci Conference 2019 Conference, RUHR University Bochum, Bochum.

OTHER PRESENTATIONS (LOCAL WORKSHOPS, SEMINARS)

24 Oct 2023 Mente e cervello sono la stessa cosa?, Unidel– Università dell'età libera di Lucca, Lucca – Italy.

21 Jun 2023 The RevNS project: A systematic review of NeuroSynth, Research Seminar MoMiLab, IMT School for Advanced Studies Lucca, Lucca – Italy.

2 Mar 2023 Inferring Cognitive Processes from Neuroimaging Data, Workshop: Network for Statistical and Causal Inference, IMT School for Advanced Studies Lucca, Lucca – Italy.

21 Sep 2021 Reverse Inference in Neuroscience: Methodological and Philosophical Issues, Research Seminar MoMiLab, IMT School for Advanced Studies Lucca, Lucca – Italy.

8 Jul 2021 Reverse Inference, Bayesian Confirmation, and Prediction in Cognitive Neuroscience, Workshop: Scientific Models and Scientific Inference, Varese – Italy.

13 Jul 2021 Reverse Inference(s) and Bayesian Confirmation, Workshop: Inference, dimensionality, and representation in cognitive and affective neuroscience, IMT School Lucca, Lucca – Italy.

REVIEWER

Topoi [paper]

Studies in History and Philosophy of Science [paper]

Argumenta – Journal of Analytic Philosophy [paper].

Annual Conference of the Italian Association of Cognitive Science 2022/2023 [abstract]

Cognitive Science Society 2023 annual meeting [abstract]

International Society for the Philosophy of the Sciences of the Mind Conference 2023 [abstract]

ORGANIZATION

2024–Present Local Committee: Annual Conference of the Italian Association of Cognitive Science (AISC) 2025 – Lucca.

Nov–Dec 2023 International Society for the Philosophy of the Sciences of the Mind 2023, online conference, co-organized: Calzavarini, F., Facchin, M., Viola, M.

- 1 Sep 2021 Symposium: From Brain Structures to Cognitive Functions: Philosophical and Neuroscientific Perspectives on Reverse Inference, European Society for Philosophy and Psychology Conference 2021 (online), co-organizers: Calzavarini, F., Cevolani, G.
- 13–14 Jul 2021 Workshop: Inference, dimensionality, and representation in cognitive and affective neuroscience, IMT School for Advanced Studies Lucca, co-organizers: Cevolani, G.
- 6 Mar 2021 Symposium: From Brain Structures to Cognitive Functions: Philosophical and Neuroscientific Perspectives on Reverse Inference, ANPOSS/ENPOSS/POSS-RT Joint Conference 2021 (online), co-organizers: Calzavarini, F., Cevolani, G.

ORGANIZATION OTHER

- 2021–Present Neural Mechanism Online webinar series, <https://www.neuralmechanisms.org>
- 2023–Present BrainHack Lucca 2023, <https://brainhacklucca.github.io>
- 2020–2022 Brain Awareness Week, IMT School for Advanced Studies Lucca, Lucca – Italy
- 2019–2022 Bright Night – Notte del Ricercatore, IMT School for Advanced Studies Lucca, Lucca – Italy

WORK EXPERIENCE

- Jan–Oct 2019 Voluntary service, ARCI Servizio Civile, Genoa, Italy.
- 2018–2019 Tutoring and teaching activities for students, Centro Didattico Indaco, Genoa - Italy
- 2017–2018 Tutor, University of Genoa - Italy

PERSONAL SKILLS

Mother tongue Italian

Other languages

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1

Levels: A1 and A2: Basic user – B1 and B2: Independent user – C1 and C2: Proficient user
[Common European Framework of Reference for Languages](#)

Digital competences

SELF-ASSESSMENT				
Information Processing	Communication	Content creation	Safety	Problem solving
Proficient user	Proficient user	Proficient user	Proficient user	Proficient user

[Digital competences - Self-assessment grid](#)

- Computer skills – Proficient user: Microsoft Office; Wordpress; LATEX; Python
 – Independent user: MATLAB; AFNI
 – Basic user: R; BASH; FSL; HTML; PHP; Julia

Driving licence B

CURRICULUM AI FINI DELLA DIFFUSIONE ONLINE.