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Department of Electronics,
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Areas of Specialisation

Philosophy of Science; Philosophy of Medicine; Philosophy of Data and Information

Areas of Competence

Philosophy of the Life Sciences; Science and Technology Studies; Philosophy of Technology

Academic Appointments

2021- **Postdoc**

Department of Electronics, Information and Bioengineering ([website](#)), META unit on philosophy & sociology of science and technology ([website](#)), Politecnico di Milano.

2020 **Postdoc**

Institute of Philosophy ([website](#)), Leibniz Universität Hannover.

2016-2019 **Graduate Researcher**

Graduate research group “Integrating Ethics and Epistemology of Scientific Research” ([website](#)), Leibniz Universität Hannover.

Education

2016-2019 **PhD in Philosophy of Science**

DFG-funded research group “Integrating Ethics and Epistemology of Scientific Research” ([website](#)), Leibniz Universität Hannover.

Dissertation: “Data Between Environment and Health: An Epistemological Study of the Exposome”.

Supervisors: Thomas Reydon (Leibniz Universität Hannover), Sabina Leonelli (University of Exeter). External examiner: Federica Russo (Universiteit van Amsterdam).

Visiting positions

January 2017

EXPOsOMICS project ([website](#)), Department of Epidemiology and Biostatistics, Imperial College London.

September-October 2016

Egenis centre for the study of life sciences ([website](#)) & Data Studies research group ([website](#)), Department of Sociology, Philosophy and Anthropology, University of Exeter.

2014–2015 **MSc in Science, Technology and Society**

Department of Science and Technology Studies ([website](#)), University College London.

Dissertation: “Big Data, Epistemology and Causality: Knowledge In and Knowledge Out in EXPOsOMICS”. Supervisor: Phyllis Illari.

2011–2014 **BA in Philosophy**

Department of Philosophy ([website](#)), University of Milan.

Dissertation: "Towards an Infrastructural Perspective on Technology". Supervisors: Giulio Giorello, Luca Guzzardi.

Publications

Journal
Articles

Saana Jukola & Canali, S. (2021) On evidence fiascos and judgments in COVID-19 policy. *History and Philosophy of the Life Sciences*, 43 (61). ([Open Access DOI](#))

Canali, S. (2021). COVID-19: dati e qualità. *in* *Trasformazione – Rivista di Storia delle Idee* [not refereed], 10(1), 12-20. ([Open Access DOI](#))

Canali, S. & Saana Jukola. (2020). Näyttöön perustuvan pandemiapolitiikan haaste (The Challenges of Evidence-Based Pandemic Policy). *Tiede & edistys* 3/2020, 212-227. ([Open Access DOI](#))

Canali, S. (2020). Towards a Contextual Approach to Data Quality. *Data* 5(4), 90 - Special Issue "Data Quality and Data Access for Research". ([Open Access DOI](#))

Canali, S. (2020). What is New about the Exposome? Exploring Scientific Change in Contemporary Epidemiology. *International Journal of Environmental Research and Public Health*, 17(8), 2879 - Special Issue "The Exposome: State-of-the-Art and Future Perspectives". ([Open Access DOI](#))

Canali, S. (2020). Making evidential claims in epidemiology: Three strategies for the study of the exposome. *Studies in History and Philosophy of Biological and Biomedical Sciences*, 82, 101248. ([Open Access DOI](#))

Canali, S. (2019). Evaluating evidential pluralism in epidemiology: mechanistic evidence in exposome research. *History and Philosophy of the Life Sciences*, 41(4). ([Open Access DOI](#))

Kelly, M., Clarke, B., Ghiara, V., Russo, F., Bockting, C., Boniolo, G., Canali, S., et al. (2019). Time to care: why the humanities and the social sciences belong in the science of health. *BMJ Open*. ([Open Access DOI item](#))

Canali, S. (2016). Big Data, epistemology and causality: Knowledge in and knowledge out in EXPOSOMICS. *Big Data & Society*, 3(2). ([Open Access DOI](#))

Edited
Special
Issue

"The philosophy, ethics, and politics of epidemiology today" (with Corrado Piroddi, 2021) *MEFISTO* ([webpage](#)).

In
Preparation

Canali, S. (under review) Scientific Change, Biomedicine, and Data: a Pragmatic Model.

Canali, S. & Sabina Leonelli (under review) Reframing the Environment in Data-Intensive Health Sciences.

Simon Lohse & Canali, S. (under review). Follow *the* science? On the (marginal) role of the social sciences in the COVID-19 pandemic.

Canali, Viola Schiaffonati, Andrea Aliverti (in preparation). Wearable Technology for Health: Epistemic Issues and Socio-Ethical Dimensions.

- Reviews
- Canali. (2015). Book review of *Come comprendiamo le parole. Introduzione alla semantica lessicale* by Claudio Faschilli, *Rivista Italiana di Filosofia Analitica – Junior*, 6(2), 71-75 ([Open Access DOI item](#)).
- Canali. (2014). Book review of *Le tribolazioni del filosofare. Comedia meta-physica, ne la quale si tratta de li errori e de le pene de l'Infero* by Achille C. Varzi and Claudio Calosi, *Rivista Italiana di Filosofia Analitica – Junior*, 5(2), 96-100 ([Open Access DOI item](#)).
- Canali. (2013). Book review of *La Rivoluzione dell'Informazione* by Luciano Floridi, *Rivista Italiana di Filosofia Analitica – Junior*, 4(1), 61-65 ([Open Access DOI item](#)).
- Interviews
- Canali. (2016). “Philosophy of Science Today. An Interview with Federica Russo”, *Rivista Italiana di Filosofia Analitica – Junior*, 7(1), 13-20 ([Open Access DOI item](#)).
- Canali. (2015). “EXPOsOMICS from a Big Data perspective: Interview with Paolo Vineis”, *EXPOsOMICS website*.
- Leda Berio and Canali. (2014). Interview with Matteo Mameli (King's College London), *Rivista Italiana di Filosofia Analitica – Junior*, 5(1), 1-3 ([Open Access DOI item](#)).
- Conference Proceedings
- Canali. (2015). “Seventh Workshop on the Philosophy of Information. Conceptual Challenges of Data in Science and Technology”, *Rivista Italiana di Filosofia Analitica – Junior*, 6(1), 64-86 ([Open Access DOI item](#)).
- Canali. (2013). “Pragmatic Representations Versus Motor Representations (Versus Intentions)” by Bance Nanay, *Rivista Italiana di Filosofia Analitica – Junior*, 4(2), 48-51 ([Open Access DOI item](#)).

Presentations

- Upcoming
- Scientific Evidence and Expertise in the COVID-19 Pandemic and Beyond (symposium co-organised with Simon Lohse), *8th biennial meeting of the European Philosophy of Science Association (EPSA)*, 15-18 September ([webpage](#))
- 2021
- [invited] “Open science, data sharing and solidarity: who benefits?”, *ISHPSSB Biennial +Meeting 2021*, 13-20 July ([webpage](#))
- The exposome as a postgenomic repertoire: Exploring scientific change in contemporary epidemiology. *VIII STS Italia Conference “Dis/entangling Technoscience”*, June 2021 ([webpage](#)).
- [invited] What Is New about the Exposome? Exploring Scientific Change in Contemporary Epidemiology. *Epistemological and practical issues of integrative approaches in environmental health* ([webpage](#)).
- 2020
- [invited] Interdisciplinary Knowledge Integration in Public Health Policy (with Simon Lohse). *Lunch-Talks, Leibniz Center for Science and Society* ([webpage](#)).
- [invited] The challenges of evidence-based pandemic policy (with Saana Jukola). *Covid Pandemics: Theoretical and Practical Issues* ([webpage](#)).
- [invited] Scientific knowledge in a data-centric world. *4th Workshop on Open Research Knowledge Graph* ([webpage](#)).

- [invited] Epistemological aspects of evidence-based health policy: the case of COVID-19 (with Simon Lohse). *Doing science in times of crisis: Science studies perspectives on COVID-19* ([webpage](#)).
- 2019 [invited] Data and Big Data in the Sciences. *Research Seminar Series on the Digitization of Research and Education* ([Open Access DOI video](#)).
- The Exposome as a Postgenomic Repertoire: Exploring Scientific Change in Contemporary Epidemiology. *7th biennial meeting of the European Philosophy of Science Association (EPSA), University of Geneva* ([webpage](#)).
- The Exposome as a Postgenomic Repertoire: Exploring Scientific Change in Contemporary Epidemiology. *2019 Meeting of the International Society For The History, Philosophy And Social Studies Of Biology (Ishpssb), University of Oslo* ([webpage](#)).
- The Exposome as a Postgenomic Repertoire: Exploring Scientific Change in Contemporary Epidemiology. *8th Philosophy of Medicine Roundtable, University of Paris I Pantheon-Sorbonne* ([webpage](#)).
- [invited] Why Data-Centric Philosophy of Science? Scientific Data as an Epistemically-Salient Artefact. *Colloquium series of the Institute of Philosophy (Philosophisches Kolloquium), Universität Bremen* ([webpage](#)).
- 2018 [poster] Epidemiology at the Interface of Environment and Health: Three Strategies for Evidential Claims on the Exposome. *26th biennial meeting of the Philosophy of Science Association, PSA2018* ([webpage](#)).
- [invited] My Idea of Healthy People is... *Healthy People: How the Medical Humanities and the Health Sciences Study the Complexity of Health, Lorentz Center* ([webpage](#)).
- Exposome Research in Epidemiology: Interdisciplinarity in Action. *Fifth European Advanced Seminar in the Philosophy of the Life Sciences: Interdisciplinarity in the Life Sciences and their Philosophy, Konrad Lorenz Institute for Evolution and Cognition Research* ([webpage](#)).
- Molecular Data and Shifting Notions in Epidemiology. Talk in an organised symposium on “Data Practices in Personalized and Precision Medicine: How Big Data Microscopes Reconfigure Health and Disease” at the 7th biennial conference of the *Society for Philosophy of Science in Practice (SPSP), Ghent University* ([webpage](#)).
- Molecular Data and Shifting Notions in Epidemiology. *Philosophy of Medicine Meets Social Epistemology, Leibniz Universität Hannover* ([webpage](#)).
- (popular audience; invited) Data and Big Data in Science. Project week organised by students association of the Hannover Medical School (MHH).
- 2017 Heterogeneity in Epidemiology: Data, Evidence and Integration. Talk in organised workshop *Making Sense of Data in the Sciences: Philosophical Perspectives on the Methodology, Epistemology and Practices of Data-Intensive Science, Leibniz Universität Hannover* ([webpage](#)).
- Integrating Data in Molecular Epidemiology: The Case of Exposome Research. Talk in an organised symposium on “Challenges and Opportunities of Data Integration” at the *2017 Meeting of the International Society For The History, Philosophy And Social Studies Of Biology (Ishpssb), University of São Paulo* ([webpage](#)).

Methodological Novelties and Causal Inference in Epidemiology. *Big Data in the Social Sciences*, University of Kent ([webpage](#)).

Methodological Novelties and Causal Inference in Epidemiology. *Triennial International Conference of the Italian Society for Logic and Philosophy of Science*, University of Bologna ([webpage](#)).

2016 (popular audience; invited) What is This Thing Called Big Data? Science Slam organised by the international office of Leibniz Project week organised by Leibniz Universität Hannover.

Is Data Exploration Exploratory Experimentation? Making Sense of Data Exploration in Big Data Research. *Second London Philosophy of Science Graduate Conference*, University College London ([webpage](#)).

Making Big Data Useful in Biomedical Sciences. *Eighth Workshop on the Philosophy of Information: "The role of data in biomedical sciences"*, University of Ferrara ([webpage](#)).

The Role of Technology Today and the Value of Philosophical Questions. *OZSW Graduate Conference in Theoretical Philosophy: "How Philosophy Meets the World"*, University of Twente ([webpage](#)).

2015 Models and Data Curation. *International Conference on Modelling and Representation: "How to make world(s) with symbols"*, University of the Basque Country ([webpage](#)).

Big Data and Causality. *Our Digital Society*, Oxford Internet Institute, University of Oxford ([webpage](#)).

2014 Connected Life = Disclosed Life: privacy and the right to be forgotten (with Luciano Floridi). *Connected Life*, Oxford Internet Institute, University of Oxford ([webpage](#)).

Funding & Awards

2020 Wissenschaftspreis Hannover.

- awarded by the *Leibniz Universitätsgesellschaft* ([website](#))
- awarded to outstanding dissertations by young researchers every two years
- approximately €4,000

2019 Conference travel grant: EPSA2019.

- awarded by the Graduate Academy of Leibniz Universität Hannover ([website](#))
- awarded for EPSA2019 (7th biennial meeting of the European Philosophy of Science Association)
- approximately €400

2018 Conference travel grant: PSA2018.

- awarded by the German Academic Exchange Service ([DAAD](#))
- awarded for the PSA2018 (26th Biennial Meeting of the Philosophy of Science Association)
- approximately €1,600

Funding for event organisation: *Ninth Workshop on the Philosophy of Information*.

- Contact Forum funding, awarded by the Royal Flemish Academy of Belgium for Science and Arts ([KVAB](#)), approximately €900
- additional funding from the Centre for Logic and Philosophy of Science of Vrije Universiteit Brussel ([CLPS](#)), approximately €200

2017 Funding for event organisation: *Making Sense of Data in the Sciences*.

- DFG international scientific events funding, awarded by the German Research Foundation ([DFG](#)), approximately €9,200
- GAP catering and advertisement funding, awarded by the German Society for Analytic Philosophy ([GAP](#)), approximately €400

Conference travel grant: ISHPSSB2017.

- awarded by the German Academic Exchange Service ([DAAD](#))
- awarded for the 2017 Meeting of the International Society for History, Philosophy and Social Studies of Biology (ISHPSSB)
- approximately €1,500

Graduate student travel bursary: BSPS2017.

- awarded by the British Society for the Philosophy of Science ([BSPS](#))
- awarded for the 2017 BSPS Conference in Edinburgh
- withdrew to take the DAAD grant (see above)

Event Organisation

2021 Reading group of the META at Politecnico di Milano (with Chris Hesselbein and Fabio Fossa)

- selection and discussion of recent publications in philosophy of science, science and technology studies, ethics
- www.meta.polimi.it

2020 Reading group for practical philosophy of science and philosophy of scientific practice (with David Hopf), Leibniz Universität Hannover

- readings on ethical and political aspects of scientific practice
- webpage: HannoverPPOSP.wordpress.com

2018 Ninth Workshop on the Philosophy of Information (with Patrick Allo). Royal Flemish Academy of Belgium for Science and Arts, Brussels

- designed topic, call for papers and programme
- secured funding
- webpage: socphilinfo.github.io/workshops/wpi9/

2018-2019 Reading group in the philosophy of scientific practice (with Simon Lohse and David Hopf), Leibniz Universität Hannover.

- readings on scientific practice, with a particular focus on the life and social sciences
- webpage: HannoverPSP.wordpress.com

2017 Making Sense of Data in the Sciences: Philosophical Perspectives on the Methodology, Epistemology and Practices of Data-Intensive Science (with Mathias Frisch and Thomas Reydon), Dr.Buhmann Schule, Hannover.

- designed topic, call for papers and programme
- secured funding from the DFG and GAP (see below)
- [webpage: DataIntensiveScience.wordpress.com](http://webpage:DataIntensiveScience.wordpress.com)

Teaching

2020-2021 *Ethics for Technology* (Teaching Assistant to Fabio Fossa)

- Teaching assistant, part of several master's programmes in engineering at Politecnico di Milano
- Format: lectures and seminars.

The Philosophy of Scientific Change (Main Lecturer)

- Instructor, part of the Philosophy, Political Science, Sociology bachelor programmes at Leibniz Universität Hannover
- Format: close reading and group discussions in synchronous online classes
- Syllabus available [here](#)

2020 *Philosophy of Medicine* (Main Lecturer)

- Instructor, part of the Philosophy of Science master programme at Leibniz Universität Hannover
- Format: video recordings of lectures and asynchronous activities including writing assignments, forum discussions and group work
- Syllabus available [here](#)

2019-2020 *Models in the Life and Social Sciences* (Co-lecturer with Simon Lohse)

- Part of the Philosophy of Science master programme at Leibniz Universität Hannover
- Format: group discussion of readings led by individual students
- Syllabus available [here](#)

2017 *Philosophy of Information* (Main Lecturer)

- Part of the Philosophy, Political Science, Sociology bachelor programmes at Leibniz Universität Hannover
- Format: short lectures and readings discussions
- Syllabus available [here](#)

Professional Services

2016- Referee

[History and Philosophy of the Life Sciences](#) (2020, 2021), [Perspectives on Science](#) (2020), [Studies in History and Philosophy of Biological and Biomedical Sciences](#) (2020), [European Journal for Philosophy of Science](#) (2020), [Synthese](#) (2019, 2020), [IACAP Proceedings](#) (2020), [Manuscrito](#) (2020), [Philosophy of Science](#) (2018, 2019), [Big Data & Society](#) (2016, 2017), [Filozofia nauki](#) (2018), [THEORIA](#) (2018), [Current Bioinformatics](#) (2018).

2018- Assistant Editor

Springer Series "[Human Perspectives in Health Sciences and Technology](#)", edited by Marta Bertolaso.

2013-2018 Associate Editor

[Italian Journal of Analytic Philosophy - Junior](#): peer-review editor; contributor for book reviews, conference reports, interviews, and editorial letters.