



MICHELE LOI

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<https://www.researchgate.net/profile/Michele-Loi-2>

<https://scholar.google.com/citations?user=gpySUmsAAAAJ&hl=en>

ACADEMIC QUALIFICATIONS

1997-2003:

Degree: "Laurea quadriennale" (MA) in Philosophy

Grade: 110/110 with laude

Institution: Facoltà di Filosofia, Università di Cagliari, Italy

Supervisors: Vanna Gessa-Kurotschka

2004-2007:

Degree: Ph.D. in Political Theory/teoria politica

Completion Date: July 11, 2007

Institution: Libera Università degli Studi Sociali Guido Carli, Rome, Italy

Dissertation Title: "Well-being: an Investigation into its Natural Boundaries"

Supervisors: Sebastiano Maffettone and Gianfranco Pellegrino (LUISS University)

5.04.2018:

Achievement: Abilitazione scientifica nazionale per la II fascia (national habilitation associate professor)

Details: art. 16 della Legge 240/2010, per il settore concorsuale_11 C3.
(Sector of moral philosophy)

RESEARCH POSITIONS AND PROJECTS

September 2023 – Now:

Position: Senior Scientific Manager, Algorithmwatch.org

Location: Milano, Berlin

Project: “Auditing Algorithms for Systemic Risks”

September 2021 – August 2023:

Position: Marie-Sklodowska-Curie Individual Fellow

Location: Department of Mathematics, Politecnico di Milano

Projects:

“Fair Predictions in Health”

Principal Investigator in “Socially acceptable AI and fairness trade-offs in predictive analytics”

January 2021 – March 2023:

Role: Principal Investigator

Project: “Fair algorithms”

Location: University of Zurich, Institute of Biomedical Ethics and the History of Medicine

From June 2020:

Role: Principal Investigator

Project: “Socially acceptable AI and fairness trade-offs in predictive analytics”

Location: University of Zurich, Institute of Biomedical Ethics and the History of Medicine

July 2018 – August 2021:

Position: Senior Researcher

Location: Digital Society Initiative, Institute of Biomedical Ethics and the History of Medicine, University of Zurich

Mar 2017 – August 2020:

Position: Postdoctoral researcher

Location: University of Zurich

Jan 2016 – Dec 2016:

Position: Post-doctoral research fellow in biomedical information ethics

Location: ETH Zurich

Oct 2015 – Jun 2016:

Role: Consultant

Projects:

Harmonizing expert guidance on “Managing Ethical Issues in Infectious Disease Outbreaks”

“Ethics of Public Health Surveillance”

Location: World Health Organisation, Global Health Ethics Unit, Geneva

Apr 2013 – Sep 2015:

Position: Post-Doc

Location: Universidade do Minho, Institute of Art and Humanities, Braga

Jul 2012 – Mar 2013:

Position: Post-Doc

Location: San Raffaele Biomedical Science Park, Milan

Sep 2008 – Feb 2012:

Position: Post-Doc

Location: Università Vita-Salute San Raffaele, Milan

PROFESSIONAL HIGHLIGHTS AND RECOGNITION

INTERNATIONAL SPEAKER

2023

- Normative Political Theory and Empirical Research: Approaches, Methods and Challenges Monash University Prato Centre (Tuscany, Italy), 1-2 February 2024
- Epistemic Rights in AI Policy: Invited to present at the Eindhoven University of Technology, 8-10th November.
- Workshop on Algorithmic Decision-making and Discrimination: Invited to present at Aarhus University in Denmark, 23-24 November.
- Causality for Ethics and Society in München, Germany, 24-25 July:
 - "Algorithmic Unfairness and Group Level Causation." (Single author)
 - "Classification Parity, Causal Equal Protection and Algorithmic Fairness." (With co-authors),
 - "How I Would Have Been Differently Treated. Discrimination Through the Lens of Counterfactual Fairness." (With co-authors)
- European Workshop on Algorithmic Fairness (EWAf '23), June 7-9: Organized and Presented **two** full papers in Winterthur, Switzerland (international peer review).

2022

- ACM FAccT 2022 in Seoul, Korea, 21-24 July:
 - with Christoph Heitz "Is Calibration a Fairness Requirement? An Argument from the Point of View of Moral Philosophy and Decision Theory."
 - Collaborated with Andrea Ferrario "How Explainability Contributes to Trust in AI."
 - Alongside Eleonora Viganó, Corinna Hertweck, and Christoph Heitz, "People are not Coins: Morally Distinct Types of Predictions Necessitate Different Fairness Constraints."

EARLIER

- Featured as an invited panelist on various topics, from "Cybersecurity, AI, and Ethics" at the Leuven AI Law & Ethics Conference (LAILEC) in 2021 to discussions on the ethics of nudging privacy at the IFIP Summer School on Privacy and Identity Management in 2019.

- Gave keynote speeches, such as the one titled "From the Ethics of Data to the Politics of Algorithms" at the Symposium: Ethical Issues in Big Data Research in Basel in 2018.
- Invited lecturer to summer schools (e.g. IFIP Summer School on Privacy and Identity Management) and winter schools (e.g., Winter School on Inequality and Social Welfare Theory, Alba di Canazei, TN, Italy.)

PUBLICATIONS

Dr. Loi's extensive body of work in the domain of ethics, technology, and data science establishes him as a pioneering thinker in these interdisciplinary fields. His research delves deep into the intersections of philosophy, economics, and technology, providing valuable insights into the ethical implications of digital advancements.

ARTICLES:

1. Loi, M., Herlitz, A., & Heidari, H. (2023). **Fair Equality Of Chances For Prediction-Based Decisions**. *Economics & Philosophy*, 1–24.
2. Hoch, Holly, Corinna Hertweck, Michele Loi, and Aurelia Tamò-Larrieux. 2024. "Discrimination for the Sake of Fairness by Design and Its Legal Framework." *Computer Law & Security Review* 52:105916. doi: [10.1016/j.clsr.2023.105916](https://doi.org/10.1016/j.clsr.2023.105916).
3. Loi, M., Ferrario, A., & Viganò, E. (2023). How Much Do You Trust Me? A Logico-Mathematical Analysis Of The Concept Of The Intensity Of Trust. *Synthese*, 201(6), 186.
4. Loi, M., Nappo, F., & Viganò, E. (2023). How I Would Have Been Differently Treated. Discrimination Through The Lens Of Counterfactual Fairness. *Res Publica*, 29(2), 185–211.
5. Baumann, J., & Loi, M. (2023). Fairness And Risk: An Ethical Argument For A Group Fairness Definition Insurers Can Use. *Philosophy & Technology*, 36(3), 45.
6. Castro, C., & Loi, M. (2023). The Fair Chances In Algorithmic Fairness: A Response To Holm. *Res Publica*, 29(2), 331–337.
7. Loi, M., Dehay, P.-O., & Hafen, E. (2023). Towards Rawlsian 'Property-Owning Democracy' Through Personal Data Platform Cooperatives. *Critical Review Of International Social And Political Philosophy*, 26(6), 769–787.
8. Loi, M., Hauser, C., & Christen, M. (2022). Highway To (Digital) Surveillance: When Are Clients Coerced To Share Their Data With Insurers? *Journal Of Business Ethics*, 175(1), 7–19.

9. Ferrario, A., & Loi, M. (2022). The Robustness Of Counterfactual Explanations Over Time. *IEEE Access*, 10, 82736–82750.
10. Loi, M. (2021). How To Fairly Incentivise Digital Contact Tracing. *Journal Of Medical Ethics*, 47(12), E76–E76.
11. Loi, M., Ferrario, A., & Viganò, E. (2021). Transparency As Design Publicity: Explaining And Justifying Inscrutable Algorithms. *Ethics And Information Technology*, 23(3), 253–263.
12. Loi, M., & Christen, M. (2021). Choosing How To Discriminate: Navigating Ethical Trade-Offs In Fair Algorithmic Design For The Insurance Sector. *Philosophy & Technology*, 34(4), 967–992.
13. Ferrario, A., Loi, M., & Viganò, E. (2020a). In AI We Trust Incrementally: A Multi-Layer Model Of Trust To Analyze Human-Artificial Intelligence Interactions. *Philosophy & Technology*, 33(3), 523–539.
14. Ferrario, A., Loi, M., & Viganò, E. (2020b). Trust Does Not Need To Be Human: It Is Possible To Trust Medical AI. *Journal Of Medical Ethics*.
15. Loi, M. (2019). The Digital Phenotype: A Philosophical And Ethical Exploration. *Philosophy & Technology*, 32(1), 155–171
16. Loi, M., Christen, M., Kleine, N., & Weber, K. (2019). Cybersecurity In Health – Disentangling Value Tensions. *Journal Of Information, Communication And Ethics In Society*, 17(2), 229–245.
17. Loi, M. (2018). Nobody's DNA But Mine. *Journal Of Medical Ethics*, 44(11), 790–790.
18. Weber, K., Loi, M., Christen, M., & Kleine, N. (2018). Digital Medicine, Cybersecurity And Ethics: An Uneasy Relationship. *American Journal Of Bioethics*, 18(9), 52–53.
19. Loi, M., & Dehay, P.-O. (2017). If Data Is The New Oil, When Is The Extraction Of Value From Data Unjust. *Philosophy And Public Issues*, 7(2), 138–178.
20. Riso, B., Tupasela, A., Vears, D. F., Felzmann, H., Cockbain, J., Loi, M., Kongsholm, N. C. H., Zullo, S., & Rakic, V. (2017). Ethical Sharing Of Health Data In Online Platforms – Which Values Should Be Considered? *Life Sciences, Society And Policy*, 13(1), 12.
21. Feeney, O., Borry, P., Felzmann, H., Galvagni, L., Haukkala, A., Loi, M., Nordal, S., Rakic, V., Riso, B., Sterckx, S., & Vears, D. (2017). Genuine Participation In Participant-Centred Research Initiatives: The Rhetoric And The Potential Reality. *Journal Of Community Genetics*, 9, 133–142

22. Loi, M. (2016a). Direct To Consumer Genetic Testing And The Libertarian Right To Test. *Journal Of Medical Ethics*, 42(9), 574–577.
23. Kollar, E., & Loi, M. (2015). Prenatal Equality Of Opportunity. *Journal Of Applied Philosophy*, 32(1), 35–49.
24. Loi, M. (2015). Technological Unemployment And Human Disenhancement. *Ethics And Information Technology*, 17(65), 1–10.
25. Del Savio, L., Loi, M., & Stupka, E. (2015). Epigenetics And Future Generations. *Bioethics*, 29(8), 580–587.
26. Loi, M. (2014a). Food Labels, Genetic Information, And The Right Not To Know. *Kennedy Institute Of Ethics Journal*, 24(4), 323–344.
27. Loi, M. (2014b). Why Postnatal Abortion Throws The Baby Out With The Bath Water. *Monash Bioethics Review*, 31(2), 60–82.
28. Loi, M., Del Savio, L., & Stupka, E. (2013). Social Epigenetics And Equality Of Opportunity. *Public Health Ethics*, 6(2), 142–153.
29. Loi, M. (2013a). Normal Functioning And Public Reason. *Cambridge Quarterly Of Healthcare Ethics*, 22(02), 136–145.
30. Loi, M. (2013b). You Cannot Have Your Normal Functioning Cake And Eat It Too. *Journal Of Medical Ethics*, 39(12), 748–751.
31. Loi, M. (2012a). Germ-Line Enhancements And Rough Equality. *Ethical Perspectives*, 19(1), 55–82.
32. Loi, M. (2012b). Introduction: Genetics And Justice. *Ethical Perspectives*, 19(1), 1–10.
33. Loi, M. (2012c). On The Very Idea Of Genetic Justice. *Cambridge Quarterly Of Healthcare Ethics*, 21(01), 64–77.

CONFERENCE PROCEEDINGS:

1. Ferrario, A., & Loi, M. (2022). How Explainability Contributes To Trust In AI. 2022 ACM Conference On Fairness, Accountability, And Transparency, 1457–1466.
2. Viganò, E., Hertweck, C., Heitz, C., & Loi, M. (2022). People Are Not Coins: Morally Distinct Types Of Predictions Necessitate Different Fairness Constraints. 2022 ACM Conference On Fairness, Accountability, And Transparency, 2293–2301.
3. Loi, M., & Heitz, C. (2022). Is Calibration A Fairness Requirement?: An Argument From The Point Of View Of Moral Philosophy And Decision Theory. 2022 ACM Conference On Fairness, Accountability, And Transparency, 2026–2034.
4. Loi, M., & Spielkamp, M. (2021). Towards Accountability In The Use Of Artificial Intelligence For Public Administrations.

- Proceedings Of The 2021 AAAI/ACM Conference On AI, Ethics, And Society, 757–766.
5. Hertweck, C., Heitz, C., & Loi, M. (2021). On The Moral Justification Of Statistical Parity. Proceedings Of The 2021 ACM Conference On Fairness, Accountability, And Transparency, 747–757.
 6. Loi, M., Heitz, C., & Christen, M. (2020). A Comparative Assessment And Synthesis Of Twenty Ethics Codes On AI And Big Data. 2020 7th Swiss Conference On Data Science (SDS), 41–46.
 7. Heidari, H., Loi, M., Gummadi, K. P., & Krause, A. (2019). A Moral Framework For Understanding Fair ML Through Economic Models Of Equality Of Opportunity. Proceedings Of The Conference On Fairness, Accountability, And Transparency, 181–190.
 8. Loi, M., Heitz, C., Ferrario, A., Schmid, A., & Christen, M. (2019). Towards An Ethical Code For Data-Based Business. 2019 6th Swiss Conference On Data Science (SDS), 6–12.
 9. Loi, M., Ferrario, A., & Viganò, E. (2019, May 28). Transparency As Design Publicity: Explaining And Justifying Inscrutable Algorithms. CEPE (Computer Ethics—Philosophical Enquiry).

BOOKS:

1. Christen, M., Gordijn, B., & Loi, M. (Eds.). (2020). The Ethics Of Cybersecurity. Springer International Publishing.
2. Loi, M., & Mordacci, R. (2012). Etica E Genetica. Storia, Concetti, Pratiche. Mondadori Bruno.
3. Loi, M. (2011). Giustizia E Genetica. Bruno Mondadori.

BOOK CHAPTERS:

1. Loi, M. (2020). What Contribution Can Philosophy Provide To Studies Of Digital Well-Being. In C. Burr & L. Floridi (Eds.), Ethics Of Digital Well-Being: A Multidisciplinary Approach (Pp. 101–118). Springer International Publishing.
2. Viganò, E., Loi, M., & Yaghmaei, E. (2019). Cybersecurity Of Critical Infrastructure. In M. Christen, G. Bert, & M. Loi (Eds.), The Ethics Of Cybersecurity. Springer International Publishing
3. Jaquet-Chiffelle, D.-O., & Loi, M. (2019). Ethical And Unethical Hacking. In M. Christen, B. Gordijn, & M. Loi (Eds.), The Ethics Of Cybersecurity. Springer International Publishing

4. Loi, M., & Christen, M. (2019). Ethical Frameworks For Cybersecurity. In M. Christen, B. Gordijn, & M. Loi (Eds.), *The Ethics Of Cybersecurity*. Springer International Publishing
5. Loi, M. (2016). Food Ethics In An Intergenerational Perspective: Vol. *The Routledge Guide To Food Ethics* (P. N.a.). Routledge & Kegan Paul.
6. Loi, M., & Nobile, M. (2016). The Moral And Legal Relevance Of DOHaD Effects For Pregnant Mothers. In C. S. Rosenfeld (Ed.), *The Epigenome And Developmental Origins Of Health And Disease* (Pp. 463–480). Elsevier Science Ltd.
7. Loi, M. (2011). Singolarità Nanotecnologiche E Problemi Di Giustizia Distributiva. In *Forme Di Responsabilità, Regolazione E Nanotecnologie* (Pp. 551–573). Il Mulino.

BUSINESS REPORTS AND WORKING PAPERS:

1. Loi, M. (2023). How To Define Platforms' Systemic Risks To Democracy. Algorithmwatch.
2. Hertweck, C., Baumann, J., Loi, M., Viganò, E., & Heitz, C. (2022). A Justice-Based Framework For The Analysis Of Algorithmic Fairness-Utility Trade-Offs (ArXiv:2206.02891). ArXiv.
3. Baumann, J., Hertweck, C., Loi, M., & Heitz, C. (2022). Distributive Justice As The Foundational Premise Of Fair ML: Unification, Extension, And Interpretation Of Group Fairness Metrics (ArXiv:2206.02897). ArXiv.
4. Loi, M. (2021). Automated Decision-Making Systems In The Public Sector – An Impact Assessment Tool For Public Authorities. Algorithmwatch.
5. Loi, M. (2020). People Analytics Must Benefit The People. An Ethical Analysis Of Data-Driven Algorithmic Systems In Human Resources Management. Algorithmwatch.
6. Loi, M., Viganò, E., & Van Der Plas, L. (2020, September 11). The Societal And Ethical Relevance Of Computational Creativity.
7. Loi, M., Christen, M., Heitz, C., & Kleiber, T. (2020). Code Of Ethics For Data-Based Value Creation—Basics. Data Innovation Alliance.
8. Yaghmaei, E., Van De Poel, I., Christen, M., Gordijn, B., Kleine, N., Loi, M., Morgan, G., & Weber, K. (2017). Canvas White Paper 1 – Cybersecurity And Ethics (SSRN Scholarly Paper ID 3091909). Social Science Research Network.
9. World Health Organization (2016), Guidance For Managing Ethical Issues In Infectious Disease Outbreaks.

LEADERSHIP

SCIENTIFIC PROJECTS

SOCIALLY ACCEPTABLE AND FAIR ALGORITHMS

JUNE 2020 – MAY 2024

Role: Principal Investigator (head of unit) and the main author of the grant proposal.

Funding: CHF 619'808

Institution: Initially University of Zurich, Institute of Biomedical Ethics and the History of Medicine (moved to Politecnico di Milano, grant retained in Zurich)

Funder: Swiss National Science Foundation

Description: Development of a methodology focused on fairness for machine-learning applications. The project integrates philosophical, empirical, and developmental research. This ambitious interdisciplinary project ropes in three units from three distinct universities. Although prof. Christoph Heitz is the formal coordinator, Dr. Loi shares an equal status in terms of decision-making. He is one of the two co-Principal Investigators, primarily overseeing the ethical and philosophical components of the initiative.

FAIR ALGORITHMS

JANUARY 2021 – MARCH 2023

Role: Principal Investigator, co-applicant, and co-writer of the proposal.

Funding: CHF 544'467.96 plus an additional CHF 561'658.00 from industry matching funds.

Institution: University of Zurich, Institute of Biomedical Ethics and the History of Medicine

Funder: Swiss Innovation Agency

Description: Engaging two units from three different universities along with several industry partners, this project seeks to control and mitigate algorithmic biases in data-driven decision-making. While prof. Christoph Heitz leads the coordination, Dr. Loi, as co-Principal Investigator, predominantly manages the ethical and philosophical aspects of the undertaking.

ONE STOP SHOP ETHICS REVIEW

JUNE 2018 – AUGUST 2020

Role: Project Manager

Institution: University of Zurich, Digital Society Initiative

Funder: University of Zurich

AUDITING OF AUTOMATED DECISION-MAKING SYSTEMS

OCTOBER 2020 – DECEMBER 2020

Role: Researcher, lead for scientific methodology development

Institution: University of Zurich, Digital Society Initiative

Funder: Algorithmwatch

ELSI TASK FORCE

MARCH 2017 – MAY 2020

Role: Project Manager

Institution: University of Zurich, Digital Society Initiative

Funder: Swiss National Science Foundation

WRITING A CODE OF ETHICS FOR DATA-BASED VALUE CREATION

JANUARY 2019 – OCTOBER 2020

Role: Lead editor of the code

Institution: University of Zurich, Digital Society Initiative

Funder: Swiss Innovation Agency

DATA-DRIVEN APPROACHES IN HR MANAGEMENT REPORT

SEPTEMBER 2019 – DECEMBER 2020

Role: Lead methodology development and main author of the report

Institution: University of Zurich, Digital Society Initiative

Funder: Algorithmwatch

CONSORTIUM FOR VALUE-DRIVEN CYBERSECURITY

MARCH 2017 – OCTOBER 2019

Role: Scientific Assistant to the Project Coordinator (Dr. Markus Christen) and a contributor to the project's early proposal drafts.

Funding: €1,000,000.00 from the European Union.

Institution: University of Zurich, Digital Society Initiative

Funder: European Union, H2020 programme

MANAGING ETHICAL ISSUES IN INFECTIOUS DISEASE OUTBREAKS

OCTOBER 2015 – JUNE 2016

Role: Process coordinator

Institution: World Health Organisation, Global Health Ethics Unit

COST ACTION “CHIP ME”

APRIL 2013 – SEPTEMBER 2015

Role: Vice-Chair, Grant Holder (for the first half of the project, see <http://chipme.eu/eng/about-us.aspx>)

Institution: University of Minho

Description: From September 11, 2013, to October 1, 2015, Dr. Loi was deeply involved in the CHIP ME COST Action, which focused on public-private partnerships in genetic testing and genomics biobanking. The funding for this significant endeavor was provided by 36 countries. Dr. Loi penned the research project that secured the funds and held the position of Vice-Chair from November 2013 to September 2015. The University of Minho acknowledged his commitment by designating him as the grant holder.

WORKSHOPS AND CONFERENCES:

General Co-Chair: Dr. Loi took on the leadership role for the 1st and 2nd European Workshop on Algorithmic Fairness (EWAF'23). These sessions witnessed participation from over 100 international attendees. Details about the event can be found at [EWAF'23](#). Michele Loi continues to be part of the board of the European Association for Algorithmic Fairness, overseeing the next editions of EWAF.

EXPERT ADVISORY ROLES:

Dr. Loi's expertise has been sought after by several renowned national and international institutions. His contributions to these institutions include:

- OECD: Contributed insights on the "Ethics of AI in the Workplace."
- Centre for Data Ethics and Innovation (CDEI): Played a pivotal role in the "Data Reform Workshop."
- Digital Economy Secretariat
- European Commission Joint Research Centre: Participated in a "Peer-learning workshop on the use and impact of AI in the public sector."
- European Medical Agency: Assisted in the "Data Anonymisation Workshop."

EDITORIAL AND REVIEWER ROLES:

Scientific Committee Member: Dr. Loi was part of the scientific committee for FAccT '23 (ACM)

Ad Hoc Reviewer: Dr. Loi has rendered his reviewing services for several journals and publications, including but not limited to:

- Synthese
- Philosophical Studies

- Ethics and Information Technology
- Philosophy and Technology
- FAccT '23
- EWAF '23
- Journal of Medical Ethics
- European Journal of Human Genetics
- Oxford University Press
- American Philosophical Quarterly
- Res Publica

MENTORSHIP:

In his academic journey, Dr. Loi has consistently emphasized the importance of mentorship, fostering young talent and guiding them through their research endeavors. While the number might not reflect quantity, the depth of his mentorship truly exemplifies the quality and focus he brings to his mentees.

Undergraduate Mentorship: Dr. Loi has taken under his wing a budding philosopher at the BA level, nurturing their analytical and critical thinking capabilities. This has given the student a robust foundation in philosophy and set them on the path to further academic pursuits.

Doctoral Supervision: Venturing into the field of informatics, Dr. Loi co-supervised two Ph.D. student candidates. His interdisciplinary approach has been instrumental in bridging the gap between informatics and philosophical concerns, providing the students with a unique and enriched research perspective.

Post-Doctoral Guidance: Dr. Eleonora Viganò, a post-doctoral researcher in philosophy, has had the privilege of receiving guidance under Dr. Loi's mentorship. With his support, Dr. Viganò has been able to advance her research and deepen her philosophical inquiries.

Interdisciplinary Transition: Highlighting his versatile mentorship approach, Dr. Loi played a pivotal role in steering Dr. Andrea Ferrario's research transition. As a mathematician, Dr. Ferrario embarked on an academic shift into philosophical AI ethics, a transition facilitated and enriched by Dr. Loi's insights and expertise.

AWARDS AND HONORS

PAPERS AND CONTRIBUTIONS:

Best Student Paper: As the supervising co-author and the sole philosopher among the authors, Dr. Loi's input was instrumental in the recognition of the paper titled "On the Moral Justification of Statistical Parity", presented at the 2021 ACM Conference on Fairness, Accountability, and Transparency.

Best ELSI Contribution: Highlighting his role as the first co-author and the exclusive philosopher, the paper "A Blindspot of AI Ethics: Anti-Fragility in Statistical Prediction" co-written with Lonneke Van der Plas, was honored at the Swiss Data Science Conference 2020.

Citation Profile Summary:

Michele Loi has consistently demonstrated a robust academic impact, as reflected in his increasing citation counts and indexes. As of 2023, his work has amassed a total of 1,219 citations. This cumulative citation count underscores his significant contributions to his field and the lasting impact of his research.

The substantial growth in annual citations in recent years further underlines his rising prominence. Since 2016, his yearly citations have shown a consistent upward trajectory, moving from 32 citations in 2016 to an impressive 342 in 2022. Even though 2023 is not yet complete, he has already garnered 308 citations, suggesting another strong year.

Furthermore, his H-index stands at 20, which indicates that at least 20 of his publications have each been cited at least 20 times. This metric showcases not just the volume of his scholarly contributions but also their quality and influence. Complementing this is his i10 index of 31, suggesting that at least 31 of his works have been cited 10 times or more.

Some of his highest cited works include:

- "A moral framework for understanding fair ML through economic models of equality of opportunity", co-authored with Hoda Heidari, KP Gummadi, and A Krause. Although Michele Loi is the second author, he stands out as the sole philosopher contributing to the piece. The paper has received 134 citations and is seminal in the debate on algorithmic fairness.
- "Social epigenetics and equality of opportunity", written in collaboration with Matteo del Savio and Elia Stupka. Michele Loi is the first author of this work. It has accumulated 133 citations and has become a cornerstone in the interdisciplinary debate in

sociology, ethics, and science and technology studies on social epigenetics.

- "In AI we trust incrementally: A multi-layer model of trust to analyze human-artificial intelligence interactions". Co-authored with Andrea Ferrario (first author) and Eleonora Viganò, this paper has garnered 114 citations. It stands as one of the highest-impact publications on trust in AI, and notably integrates technical knowledge of AI from Andrea Ferrario, marking his inaugural contribution to philosophy.

INTERNATIONAL COMPETITIVE FELLOWSHIPS:

- **Marie Curie Individual Fellowship:** Awarded the prestigious H2020 MSCA IF 2019 with an exceptional score of 100/100. Hosted by the renowned Politecnico di Milano.
- **Harvard/Brocher Summer School:** Granted a partial scholarship amounting to 1500 CHF.
- **Brocher Summer Academy in Global Population Health:** Recognized for his contribution and chosen to attend the summer academy in June 2014.
- **Hoover Fellowship:** Awarded 1500 € for his outstanding work, hosted by Université Catholique de Louvain, Louvain-la-Neuve, Belgium in March 2012.
- **Brocher Fellowship:** An esteemed fellowship valued at approximately 6000 CHF at Fondation Brocher, Hermance, Switzerland from April to June 2010. Additionally, he received a scholarship from the Scuola di Alta Formazione Filosofica, Centro Studi Filosofico Religiosi Luigi Pareyson, Torino.
- **Summer School in Analytic Philosophy:** Recognized early in his career as a BA student, Dr. Loi was invited by Prof. Marco Santambrogio to attend the summer school in Bertinoro, Italy in 1999.

SKILLS AND EXPERTISE

Interdisciplinary Agility: Proficient in weaving together threads from diverse academic disciplines to create a coherent and insightful tapestry of understanding.

Adaptive Learning: Displays an ability to quickly assimilate new knowledge from various sources, crucial for thriving at the intersection of multiple disciplines.

Strategic Vision: Demonstrates the capacity to see the larger picture, positioning individual research endeavors within broader academic and societal contexts.

Problem-Solving Acumen: Approaches challenges with a keen analytical mind, ensuring that problems are not just identified, but also addressed with innovative solutions.

Resilience & Persistence: Despite the challenges that come with trailblazing, demonstrates a tenacious spirit, ensuring research objectives are met with unwavering commitment.

Courageous Innovation: A fearless advocate for exploring new territories, challenging conventional wisdom, and adopting untested methodologies to address emergent questions.

Collaborative Leadership: Recognizes the strength in collective intelligence, fostering collaborative environments where diverse perspectives converge for breakthrough insights.

Effective Communication: Translates complex philosophical and interdisciplinary ideas into accessible narratives, making them comprehensible to diverse audiences.

Ethical Vigilance: Maintains a strong ethical compass, ensuring that research, especially at the boundaries of technology and philosophy, remains anchored in moral principles.

Embracing Ambiguity: Comfortable operating in areas of uncertainty, viewing them as opportunities for pioneering novel ideas and methodologies.

REFERENCES

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QUALIFICHE ACCADEMICHE

1997-2003:

Laurea: Laurea quadriennale in Filosofia

Voto: 110/110 con lode

Istituzione: Facoltà di Filosofia, Università di Cagliari, Italia

Supervisori: Vanna Gessa-Kurotschka

2004-2007:

Laurea: Dottorato di ricerca in Teoria politica/teoria politica

Data di completamento: 11 luglio 2007

Istituzione: Libera Università degli Studi Sociali Guido Carli, Roma, Italia *Titolo*

della dissertazione: "Il benessere: un'indagine sui suoi confini naturali".

Supervisori: Sebastiano Maffettone e Gianfranco Pellegrino (Università LUISS)

5.04.2018:

Risultati: Abilitazione scientifica nazionale per la II fascia (abilitazione nazionale professore associato)

Dettagli: art. 16 della Legge 240/2010, per il settore concorsuale_11 C3. (Settore di filosofia morale)

POSIZIONI E PROGETTI DI RICERCA

Settembre 2023 - Ora:

Posizione: Responsabile scientifico senior, Algorithmwatch.org *Sede:* Milano, Berlino

Progetto: "Algoritmi di controllo per i rischi sistemici".

Settembre 2021 - agosto 2023:

Posizione: Borsista individuale Marie-Sklodowska-Curie *Sede:* Dipartimento di Matematica, Politecnico di Milano *Progetti:*

"Previsioni eque in materia di salute"

Principal Investigator in "IA socialmente accettabile e compromessi di equità nell'analisi predittiva".

Gennaio 2021 - marzo 2023:

Ruolo: Ricercatore principale

Progetto: "Algoritmi equi"

Sede: Università di Zurigo, Istituto di Etica Biomedica e Storia della Medicina

Da giugno 2020:

Ruolo: Ricercatore principale

Progetto: "IA socialmente accettabile e compromessi di equità nell'analisi predittiva"

Sede: Università di Zurigo, Istituto di Etica Biomedica e Storia della Medicina

Luglio 2018 - agosto 2021:

Posizione: Ricercatore senior

Sede: Iniziativa Società Digitale, Istituto di Etica Biomedica e Storia della Medicina, Università di Zurigo

Marzo 2017 - Agosto 2020:

Posizione: Ricercatore post-dottorato

Sede: Università di Zurigo

Gennaio 2016 - Dicembre 2016:

Posizione: Borsista di ricerca post-dottorato in etica dell'informazione biomedica

Sede: Politecnico di Zurigo

Ottobre 2015 - Giugno 2016:

Ruolo: Consulente

Progetti:

Armonizzazione delle linee guida degli esperti sulla "Gestione delle questioni etiche nelle epidemie di malattie infettive".

"Etica della sorveglianza della salute pubblica".

Sede: Organizzazione Mondiale della Sanità, Unità di Etica della Salute Globale, Ginevra

Aprile 2013 - Settembre 2015:

Posizione: Post-Doc

Sede: Universidade do Minho, Istituto di Arte e Scienze Umane, Braga **Luglio 2012 -**

Marzo 2013:

Posizione: Post-Doc

Sede: Parco Scientifico Biomedico San Raffaele, Milano

PUNTI DI FORZA E RICONOSCIMENTI PROFESSIONALI

RELATORE INTERNAZIONALE

2024

- Teoria politica normativa e ricerca empirica: Approaches, Methods and Challenges Monash University Prato Centre (Toscana, Italia), 1-2 febbraio 2024

2023

- Diritti epistemici nella politica dell'IA: Università di Tecnologia di Eindhoven, 8-10 novembre, su invito.

- Workshop sul processo decisionale algoritmico e la discriminazione: Università di Aarhus in Danimarca, 23-24 novembre, su invito.
- Causalità per l'etica e la società a Monaco, Germania, 24-25 luglio:
 - "Algorithmic Unfairness and Group Level Causation". (Autore unico) - "Parità di classificazione, parità di protezione causale e correttezza algoritmica". (Con coautori),
 - "Come sarei stato trattato diversamente. La discriminazione attraverso la lente dell'equità controfattuale". (Con coautori)
- European Workshop on Algorithmic Fairness (EWAf '23), 7-9 giugno: Organizzato e presentato **due** articoli completi a Winterthur, Svizzera (revisione internazionale).

2022

- ACM FAccT 2022 a Seul, Corea, 21-24 luglio:
 - con Christoph Heitz "La calibrazione è un requisito di equità? An Argument from the Point of View of Moral Philosophy and Decision Theory".
 - Collaborazione con Andrea Ferrario "How Explainability Contributes to Trust in AI".
 - Insieme a Eleonora Viganó, Corinna Hertweck e Christoph Heitz, "People are not Coins: Morally Distinct Types of Predictions Necessitate Different Fairness Constraints".

PRIMA

- È stato invitato come relatore su vari argomenti, da "Cybersecurity, AI, and Ethics" alla Leuven AI Law & Ethics Conference (LAILEC) nel 2021 a discussioni sull'etica del nudging della privacy alla IFIP Summer School on Privacy and Identity Management nel 2019.
- Ha tenuto discorsi programmatici, come quello intitolato "Dall'etica dei dati alla politica degli algoritmi" al Simposio: Ethical Issues in Big Data Research a Basilea nel 2018.
- Docente invitato a scuole estive (ad esempio, IFIP Summer School on Privacy and Identity Management) e invernali (ad esempio, Winter School on Inequality and Social Welfare Theory, Alba di Canazei, TN, Italia).

PUBBLICAZIONI

LEADERSHIP

PROGETTI SCIENTIFICI

ALGORITMI SOCIALMENTE ACCETTABILI ED EQUI

GIUGNO 2020 - MAGGIO 2024

Ruolo: Ricercatore principale (capo unità) e autore principale della proposta di sovvenzione.

Finanziamento: CHF 619'808

Istituzione: Inizialmente Università di Zurigo, Istituto di Etica Biomedica e Storia della Medicina (trasferito al Politecnico di Milano, borsa di studio mantenuta a Zurigo)

Finanziatore: Fondazione nazionale svizzera per la scienza

Descrizione: Sviluppo di una metodologia incentrata sull'equità per le applicazioni di apprendimento automatico. Il progetto integra ricerca filosofica, empirica e di

sviluppo. Questo ambizioso progetto interdisciplinare coinvolge tre unità di tre università diverse. Sebbene il prof. Christoph Heitz sia il coordinatore formale, il dottor Loi condivide uno status paritario in termini di processo decisionale. È uno dei due co-principal investigator, che supervisiona principalmente le componenti etiche e filosofiche dell'iniziativa.

ALGORITMI EQUI

GENNAIO 2021 - MARZO 2023

Ruolo: Sperimentatore principale, co-richiedente e co-autore della proposta.

Finanziamento: CHF 544'467.96 più altri CHF 561'658.00 di fondi di compensazione dell'industria.

Istituzione: Università di Zurigo, Istituto di Etica Biomedica e Storia della Medicina

Finanziatore: Agenzia svizzera per l'innovazione

Descrizione: Coinvolgendo due unità di tre diverse università e diversi partner industriali, questo progetto cerca di controllare e mitigare le distorsioni algoritmiche nel processo decisionale guidato dai dati. Mentre il prof. Christoph Heitz guida il coordinamento, il dott. Loi, in qualità di co-Principal Investigator, gestisce prevalentemente gli aspetti etici e filosofici dell'impresa.

CONTROLLO ETICO ONE STOP

GIUGNO 2018 - AGOSTO 2020

Ruolo: Responsabile di progetto

Istituzione: Università di Zurigo, Iniziativa per la società digitale **Finanziatore:** Università di Zurigo

AUDIT DEI SISTEMI DECISIONALI AUTOMATIZZATI

OTTOBRE 2020 - DICEMBRE 2020

Ruolo: Ricercatore, responsabile dello sviluppo della metodologia scientifica

Istituzione: Università di Zurigo, Iniziativa per la società digitale **Finanziatore:** Algorithmwatch

PREMI E ONORIFICENZE

DOCUMENTI E CONTRIBUTI:

Miglior articolo studentesco: In qualità di co-autore supervisore e di unico filosofo tra gli autori, il contributo del dott. Loi è stato determinante per il riconoscimento dell'articolo intitolato "On the Moral Justification of Statistical Parity" (Sulla giustificazione morale della parità statistica), presentato alla 2021 ACM Conference on Fairness, Accountability, and Transparency.

Miglior contributo ELSI: Evidenziando il suo ruolo di primo coautore e di filosofo esclusivo, l'articolo "A Blindspot of AI Ethics: Anti-Fragility in Statistical Prediction", scritto insieme a Lonneke Van der Plas, è stato premiato alla Swiss Data Science Conference 2020.

Riassunto del profilo citazionale:

Michele Loi ha costantemente dimostrato un forte impatto accademico, come risulta dal crescente numero di citazioni e indici. Al 2023, il suo lavoro ha accumulato un totale

di 1.219 citazioni. Questo numero cumulativo di citazioni sottolinea i suoi contributi significativi al campo e l'impatto duraturo della sua ricerca.

La crescita sostanziale delle citazioni annuali negli ultimi anni sottolinea ulteriormente la sua crescente importanza. Dal 2016, le sue citazioni annuali hanno mostrato una costante traiettoria ascendente, passando da 32 citazioni nel 2016 a ben 342 nel 2022. Anche se il 2023 non è ancora terminato, ha già ottenuto 308 citazioni, il che fa pensare a un altro anno di grande successo.

Inoltre, il suo H-index è pari a 20, il che indica che almeno 20 delle sue pubblicazioni sono state citate almeno 20 volte. Questa metrica evidenzia non solo il volume dei suoi contributi scientifici, ma anche la loro qualità e influenza. A ciò si aggiunge l'indice i10, pari a 31, che indica che almeno 31 dei suoi lavori sono stati citati 10 volte o più.

Tra le sue opere più citate vi sono:

- "A moral framework for understanding fair ML through economic models of equality of opportunity", scritto insieme a Hoda Heidari, KP Gummadi e A Krause. Sebbene Michele Loi sia il secondo autore, si distingue come l'unico filosofo che ha contribuito al lavoro. L'articolo ha ricevuto 134 citazioni ed è fondamentale nel dibattito sull'equità algoritmica.
- "Epigenetica sociale e uguaglianza di opportunità", scritto in collaborazione con Matteo del Savio ed Elia Stupka. Michele Loi è il primo autore di questo lavoro. L'opera ha accumulato 133 citazioni ed è diventata una pietra miliare nel dibattito interdisciplinare in sociologia, etica e studi scientifici e tecnologici sull'epigenetica sociale.
- "Nell'IA ci fidiamo in modo incrementale: A multi-layer model of trust to analyze human-artificial intelligence interactions". Scritto in collaborazione con Andrea Ferrario (primo autore) ed Eleonora Viganò.

CAPACITÀ E COMPETENZE

Agilità interdisciplinare: Abilità nel tessere insieme i fili di diverse discipline accademiche per creare un arazzo di comprensione coerente e perspicace.

Apprendimento adattivo: Mostra una capacità di assimilare rapidamente nuove conoscenze da varie fonti, fondamentale per prosperare all'intersezione di più discipline.

Visione strategica: Dimostra la capacità di vedere il quadro generale, posizionando i singoli sforzi di ricerca all'interno di contesti accademici e sociali più ampi.

Acume per la risoluzione dei problemi: Approccia le sfide con un'acuta mente analitica, assicurando che i problemi non siano solo identificati, ma anche affrontati con soluzioni innovative.

Resilienza e persistenza: Nonostante le sfide che comporta l'essere all'avanguardia, dimostra uno spirito tenace, assicurando il raggiungimento degli obiettivi di ricerca con un impegno incrollabile.

Innovazione coraggiosa: Un impavido sostenitore dell'esplorazione di nuovi territori, della sfida alla saggezza convenzionale e dell'adozione di metodologie non testate per affrontare questioni emergenti.

Leadership collaborativa: Riconosce la forza dell'intelligenza collettiva, promuovendo ambienti collaborativi in cui convergono prospettive diverse per ottenere intuizioni rivoluzionarie.

Comunicazione efficace: Traduce idee filosofiche e interdisciplinari complesse in narrazioni accessibili, rendendole comprensibili a pubblici diversi.

Vigilanza etica: Mantiene una forte bussola etica, assicurando che la ricerca, specialmente ai confini della tecnologia e della filosofia, rimanga ancorata ai principi morali.

Abbracciare l'ambiguità: Si sente a proprio agio nell'operare in aree di incertezza, considerandole come opportunità per la creazione di idee e metodologie innovative.