

# Paolo Perrone

*Matematico e insegnante*

University of Oxford  
Dept. of Computer Science  
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## *Curriculum Vitae*

### Dati personali

Nome e cognome Paolo Perrone  
Data di nascita 10 Novembre 1989  
Luogo di nascita Bergamo (Italia)  
Nazionalità Italiana

### Posizione attuale

Istituto University of Oxford, Inghilterra (U.K.)  
Dipartimento Informatica  
Posizione Research associate  
ufficiale  
Supervisore Sam Staton

### Posizioni passate

- 2020 **Ricercatore di matematica**, *Massachusetts Institute of Technology (MIT)*,  
Cambridge, MA (U.S.A.)  
Supervisore: David Spivak. Denominazione ufficiale (in inglese): postdoctoral  
associate in Mathematics.
- 2019 **Ricercatore di matematica**, *York University*, Toronto, ON (Canada)  
Supervisore: Walter Tholen. Denominazione ufficiale (in inglese): postdoctoral  
visitor, Mathematics.
- 2019 **Ricercatore di matematica**, *Max Planck Institute for Mathematics in the  
Sciences*, Lipsia (Germania)  
Supervisore: Jürgen Jost. Denominazione ufficiale (in tedesco): Wissenschaftlis-  
cher Mitarbeiter im Fachbereich Mathematik.

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## Istruzione

- 2018 **Dottorato in Matematica**, *Max Planck Institute for Mathematics in the Sciences e Università di Lipsia*, Lipsia (Germania), *Magna cum laude*  
Relatore: Jürgen Jost. Denominazione ufficiale (in tedesco): Doktor der Naturwissenschaften (Dr. Rer. Nat.) im Fachbereich Mathematik.
- 2013 **Laurea magistrale in Fisica**, *Università degli Studi di Milano*, Milano (Italia), *110/110 e lode*  
Relatore: Guido Parravicini.
- 2012–2013 **Interscambio (programma Erasmus)**, *Fisica, KU Leuven*, Leuven (Belgio)
- 2011 **Laurea Triennale in Fisica**, *Università degli Studi di Milano-Bicocca*, Milano (Italia), *110/110 e lode*  
Relatore: Diego Noja.
- 2008 **Diploma**, *Liceo Scientifico Mascheroni*, Bergamo (Italia), *100/100*

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## Pubblicazioni

### Libri:

- 2024 **P. Perrone**, *Starting Category Theory*, World Scientific  
ISBN: 978-981-12-8600-1

### Articoli pubblicati:

- 2024 **P. Perrone**, *Markov Categories and Entropy*, IEEE Transactions of Information Theory, vol. 70, issue 3
- 2023 **C. Constantin, T. Fritz, P. Perrone, B. Shapiro**, *Weak cartesian properties of simplicial sets*, Journal of Homotopy and Related Structures
- 2023 **T. Fritz, T. Gonda, N. Gauguin Houghton-Larsen, P. Perrone and D. Stein**, *Dilations and information flow axioms in categorical probability*, Mathematical Structures in Computer Science
- 2023 **T. Fritz, F. Gadducci, P. Perrone and D. Trotta**, *Weakly Markov categories and weakly affine monads*, Proceedings of CALCO 10, LIPIcs
- 2023 **T. Fritz, T. Gonda, P. Perrone and E. F. Rischel**, *Representable Markov Categories and Comparison of Statistical Experiments in Categorical Probability*, Theoretical Computer Science, vol. 961
- 2023 **C. Constantin, T. Fritz, P. Perrone, B. Shapiro**, *Partial evaluations and the compositional structure of the bar construction*, Theory and Application of Categories, vol. 39, n. 11

- 2023 **S. Moss und P. Perrone**, *A category-theoretic proof of the ergodic decomposition theorem*, Ergodic Theory and Dynamical Systems
- 2022 **S. Moss, P. Perrone**, *Probability monads with submonads of deterministic states*, Proceedings of LICS
- 2022 **P. Perrone, W. Tholen**, *Kan extensions are partial colimits*, Applied Categorical Structures, vol. 30
- 2021 **T. Fritz, P. Perrone, S. Rezaghali**, *Probability, valuations, hyperspace: Three monads on Top and the support as a morphism*, Mathematical Structures in Computer Science, vol. 31, n. 8
- 2021 **T. Fritz, T. Gonda, P. Perrone**, *De Finetti's Theorem in Categorical Probability*, Journal of Stochastic Analysis, vol. 2, n. 4, art. 6
- 2020 **T. Fritz, P. Perrone**, *Stochastic order on metric spaces and the ordered Kantorovich monad*, Advances in Mathematics, vol. 366
- 2020 **T. Fritz, P. Perrone**, *Monads, partial evaluations, and rewriting*, Proceedings of MFPS 36, ENTCS
- 2019 **T. Fritz, P. Perrone**, *A Probability Monad as the Colimit of Spaces of Finite Samples*, Theory and Application of Categories, vol. 34, n. 7
- 2018 **T. Fritz, P. Perrone**, *Bimonoidal Structure of Probability Monads*, Proceedings of MFPS 34, ENTCS
- 2016 **P. Perrone, N. Ay**, *Hierarchical Quantification of Synergy in Channels*, Frontiers in Robotics and AI

#### Articoli inviati:

- 2024 **P. Perrone and R. Van Belle**, *Convergence of martingales via enriched dagger categories*, preprint su arXiv:2404.15191
- 2023 **N. Ensarguet and P. Perrone**, *Categorical probability spaces, ergodic decompositions, and transitions to equilibrium*, preprint su arXiv:2310.04267
- 2023 **T. Fritz, T. Gonda, A. Lorenzin, P. Perrone and D. Stein**, *Absolute continuity, supports and idempotent splitting in categorical probability*, preprint su arXiv:2308.00651
- 2021 **P. Perrone**, *Lifting couplings in Wasserstein spaces*, preprint su arXiv:2110.06591

### Tesi di dottorato:

- 2018 **P. Perrone**, *Categorical Probability and Stochastic Dominance in Metric Spaces*, Università di Lipsia, Germania, disponibile online all'indirizzo [www.paoloperrone.org/phdthesis.pdf](http://www.paoloperrone.org/phdthesis.pdf)

### Appunti, note e altro materiale:

- 2023 **P. Perrone**, *Categorical Information Geometry*, Proceedings of Geometric Science of Information (GSI 2023), Lecture Notes in Computer Science 14071
- 2019 **P. Perrone**, *Notes on Category Theory with examples from basic mathematics*, appunti di lezioni, arXiv:1912.10642
- 2018 **T. Fritz, P. Perrone**, *A Criterion for Kan Extensions of Lax Monoidal Functors*
- 2016 **P. Perrone, N. Ay**, *Iterative Scaling Algorithm for Channels*
- 2016 **P. Perrone, N. Ay**, *Decomposition of Markov Kernels*, Proceedings of WUPES 10
- 2015 **P. Perrone**, *Dual Connections and Holonomy*

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## Insegnamento e contributi alla comunità scientifica

### Corsi:

- 2024 **Mentore**, *Applied Category Theory*, summer school and e seminari online, University of Oxford (U.K.)
- 2023 **Tutor**, *Integral Transforms*, corso di laurea triennale, Mansfield College, University of Oxford (U.K.)
- 2023 **Tutor**, *Integration*, corso di laurea triennale, Mansfield College, University of Oxford (U.K.)
- 2022 **Tutor**, *Probability I*, corso di laurea triennale, Mansfield College, University of Oxford (U.K.)
- 2022 **Tutor**, *Probability II*, corso di laurea triennale, Mansfield College, University of Oxford (U.K.)
- 2022 **Tutor**, *Quantum Computing and Modelling: an Applied Category Theory Perspective*, corso pre-universitario, Cambridge Center for International Research (U.K.)
- 2022 **Tutor**, *Integral Transforms*, corso di laurea triennale, Mansfield College, University of Oxford (U.K.)
- 2022 **Tutor**, *Integration*, corso di laurea triennale, Mansfield College, University of Oxford (U.K.)

- 2022 **Tutor**, *Groups and Group Actions*, corso di laurea triennale, Mansfield College, University of Oxford (U.K.)
- 2022 **Tutor**, *Linear Algebra II*, corso di laurea triennale, Mansfield College, University of Oxford (U.K.)
- 2022 **Docente**, *Teoria delle categorie*, online, in italiano  
In collaborazione con il Progetto ItaCa.
- 2021 **Docente**, *Bayesian Statistical Probabilistic Programming*, corso di laurea magistrale, University of Oxford (U.K.)  
Insieme a Hugo Paquet e Sam Staton.
- 2021 **Tutor**, *Linear Algebra I*, corso di laurea triennale, Mansfield College, University of Oxford (U.K.)
- 2021 **Docente**, *Applied Category Theory*, corso di laurea magistrale, University of Oxford (U.K.)
- 2021 **Tutor**, *Groups and Group Actions*, corso di laurea triennale, Mansfield College, University of Oxford (U.K.)
- 2020 **Supervisore**, *Categories and gauge theory*, progetto di studio indipendente, Massachusetts Institute of Technology, Cambridge, MA (U.S.A.)
- 2019 **Docente**, *Applied Linear Algebra*, corso di laurea triennale, University of York, Toronto, ON (Canada)
- 2019 **TA**, *Applied Category Theory*, summer school and e seminari online, University of Oxford (U.K.)
- 2019 **Docente**, *Category theory and applications*, corso di laurea magistrale, Max Planck Institute, Lipsia (Germania)

#### Organizzazione e assistenza di eventi:

- 2023 **Organizzatore**, *Oxford Advanced Seminar on Informatic Structures (OASIS)*, seminario di ricerca, University of Oxford (U.K.)
- 2023 **Co-organizzatore**, *Compositional Robotics: Mathematics and Tools*, ICRA 2023 Workshop, ExCeL London (U.K.)  
(in collaborazione con Andrea Censi, Gioele Zardini et al.)
- 2022 **Co-organizzatore**, *Compositional Robotics: Mathematics and Tools*, ICRA 2022 Workshop, Philadelphia, PA (U.S.A.)  
(in collaborazione con Andrea Censi, Gioele Zardini et al.)
- 2021 **Co-organizzatore**, *Compositional Robotics: Mathematics and Tools*, ICRA 2021 Workshop, ETH, Zurigo (Svizzera) – Spostato online per via del CoViD-19  
(in collaborazione con Andrea Censi, Gioele Zardini et al.)

- 2020 **Co-organizzatore e assistente tecnico**, *MIT Categories Seminar*, seminario di ricerca e didattico, Massachusetts Institute of Technology, Cambridge, MA (U.S.A.) – Spostato online per via del CoViD-19  
(in collaborazione con Brendan Fong e David Spivak)
- 2020 **Organizzatore locale e assistente tecnico**, *Applied Category Theory (ACT)*, conferenza, Massachusetts Institute of Technology, Cambridge, MA (U.S.A.) – Spostata online per via del CoViD-19  
(altri organizzatori locali: Brendan Fong, David Myers e David Spivak)
- 2020 **Organizzatore**, *Applied Category Theory*, summer school e seminari online, Massachusetts Institute of Technology, Cambridge, MA (U.S.A.) – Spostata online per via del CoViD-19  
(in collaborazione con Carmen Constantin ed Eliana Lorch)
- 2020 **Assistente tecnico**, *Categorical Probability and Statistics*, conferenza, University of Ottawa, ON (Canada) – Spostata online per via del CoViD-19  
(organizzata da Tobias Fritz e Rory Lucyshyn-Wright)
- 2015-2018 **Co-organizzatore**, *LikBez seminar, Mathematics*, seminario didattico, Max Planck Institute, Lipsia (Germania)  
(in collaborazione con Rostislav Matveev e Sharwin Rezagholi)

#### Revisioni di articoli:

- 2024 Foundations of Software Science and Computation Structures (FoSSaCS), conferenza con pubblicazioni
- 2023 MDPI Entropy, rivista scientifica
- 2023 Compositionality, rivista scientifica
- 2023 Logical Methods in Computer Science (LMCS), rivista scientifica
- 2022 Journal of the London Mathematical Society, rivista scientifica
- 2022 Applied Category Theory (ACT), conferenza con pubblicazioni
- 2022 Theory and Applications of Categories (TAC), rivista scientifica
- 2022 Revisione di tesi magistrale per Macquarie University, Sydney (Australia)
- 2021 Compositionality, rivista scientifica
- 2020 Logic In Computer Science (LICS), conferenza con pubblicazioni
- 2020 Applied Category Theory (ACT), conferenza con pubblicazioni
- 2020 Compositionality, rivista scientifica
- 2019 Applied Category Theory (ACT), conferenza con pubblicazioni

### Altre attività:

- 2020 Ricevuto il Kaufman Teaching Certificate dall'MIT
- Attuale Membro della COST Action europea CaLISTA – Cartan geometry, Lie, Integrable Systems, quantum group Theories for Applications (CA21109)
- Attuale Comitato scientifico di ItaCa, associazione italiana di teorici delle categorie
- Attuale Corso online di ItaCa, in italiano, di teoria delle categorie
- Attuale Comitato per etica e valori della conferenza “Applied Category Theory”
- Attuale (Co-)autore di nLab, wiki di teoria delle categorie
- Attuale (Co-)moderatore dello Zulip Category Theory Community Server

## Collaborazione con l'industria

- 2022 **Consulenza**, Cavenwell AI, Ottawa (Canada)

## Ulteriori competenze

### Conoscenze linguistiche:

- Italiano madrelingua
- Inglese piena padronanza
- Tedesco fluente
- Spagnolo fluente

### Per le emergenze:

- Pronto soccorso certificato nel 2023 da St. John's Ambulance, London (UK)
- Pronto soccorso certificato nel 2023 da Sendo e Mental Health First Aid England (UK)
- di salute mentale

## Interventi a conferenze e su invito

### 2024:

- Mag. 2024 **Lezione su invito**, *Monoidal preorders and enrichment*, Applied Category Theory course, University of Oxford (U.K.)  
(Evento online.)
- Apr. 2024 **Talk su invito**, *Martingales and their convergence, categorically*, Four Decades of Probabilistic Semantics, Bellairs Research Institute (Barbados)

- Gen. 2024 **Talk su invito**, *Higher abstraction for probability and statistics*, Logic, Uncertainty, Computation and Information (LUCI) Lab, Università degli Studi di Milano (Italia)  
(Evento online.)
- [2023:](#)
- Dic. 2023 **ItaCa Live**, *Conditional expectations as split idempotents*, Università degli Studi di Torino (Italia)
- Ott. 2023 **Talk su invito**, *Probability Theory with Markov categories*, Invited talk, University College London (UCL), Londra (U.K.)
- Sett. 2023 **Talk su invito**, *Information Theory with Markov categories*, Geometry of Information Theory workshop, Universidad Carlos III, Madrid (Spagna)
- Ago. 2023 **Geometric Science of Information 2023**, *Categorical information geometry*, Saint-Malo (Francia)
- Ago. 2023 **Applied Category Theory 2023**, *Markov categories and entropy*, University of Maryland, College Park, MD (U.S.A.)
- Ago. 2023 **Applied Category Theory 2023**, *Absolute continuity, supports and idempotent splitting in Markov categories*, University of Maryland, College Park, MD (U.S.A.)  
Relatore: Tomáš Gonda (collaborazione).
- Lug. 2023 **Tutorial per ACT 2023**, *Markov categories: a tutorial*, University of Maryland, College Park, MD (U.S.A.)
- Lug. 2023 **Keynote talk, Category Theory 2023**, *Universal properties in probability theory*, Université Catholique de Louvain, Louvain-la-Neuve (Belgio)
- Giu. 2023 **CALCO 2023**, *Weakly Markov categories and weakly affine monads*, University of Indiana, Bloomington, IN (U.S.A.)  
(Evento online.)
- Mag. 2023 **Talk su invito**, *Probability, Symmetry, and Entropy with Markov Categories*, Computational Statistics and Machine Learning Seminar (OxCSML), University of Oxford (U.K.)
- Mag. 2023 **Talk su invito**, *Categorical probability and information theory*, Q-Math Seminar, Universidad Carlos III, Madrid (Spagna)
- Apr. 2023 **Evento su invito**, *Probabilistic programming: its challenges and opportunities*, Alan Turing Institute, Londra (U.K.)
- Gen. 2023 **Evento su invito**, *Research week on Markov categories*, Universität Innsbruck (Austria)



## 2022:

- Dic. 2022 **SYCO 10**, *Dilations and information flow axioms in categorical probability*, University of Edinburgh (Scozia)  
Relatore: Tomáš Gonda (collaborazione).
- Dic. 2022 **Talk su invito**, *GS-monoidal structures and thunkability in Kleisli categories*, Università di Pisa (Italia)
- Nov. 2022 **Talk su invito**, *Introduction to Markov categories*, Sheaf Talk Seminar, University of Oxford (U.K.)
- Nov. 2022 **Talk su invito**, *When measurable spaces don't have enough points*, Theoretical Computer Science Seminar, University of Birmingham (U.K.)
- Sett. 2022 **SYCO 9**, *Lifting weights: enriched lenses between transport plans*, Università dell'Insubria, Como (Italia)
- Ago. 2022 **Logic in Computer Science (LICS)**, *Probability monads with submonads of deterministic states*, Technion, Haifa (Israele)  
Relatore: Sean Moss (collaborazione).
- Lug. 2022 **Talk su invito**, *When measurable spaces don't have enough points*, Seminário de Teoria das Categorias, Universidade de Coimbra (Portogallo)  
(Evento online.)
- Lug. 2022 **Applied Category Theory 2022**, *A category-theoretic proof of the ergodic decomposition theorem*, University of Strathclyde (Scozia)
- Giu. 2022 **Lezione su invito**, *Introduction to categorical probability*, Applied Category Theory course, University of Oxford (U.K.)  
(Evento online.)

## 2021 (quasi tutti gli eventi hanno avuto luogo online):

- Nov. 2021 **Talk su invito**, *The rise of quantitative category theory*, Topos Colloquium, Topos Institute, Berkeley, CA (U.S.A.)
- Ago. 2021 **Category Theory 2021**, *Kan extensions are partial colimits*, Università degli Studi di Genova (Italia)  
(Evento in presenza.)
- Lug. 2021 **Applied Category Theory 2021**, *De Finetti's theorem in categorical probability*, University of Cambridge (U.K.)  
Relatore: Tobias Fritz (collaborazione).

- Giu. 2021 **Keynote talk, Categories and Companions 2021**, *An invitation to categorical probability and statistics with Markov categories*, Macquarie University, Sydney (Australia)  
Relatore: Tobias Fritz (collaborazione).
- Giu. 2021 **Categories and Companions 2021**, *Compositional structure of partial evaluations*, Macquarie University, Sydney (Australia)  
Relatore: Brandon Shapiro (collaborazione).
- Mag. 2021 **Seminario**, *Weighted limits in metric geometry*, Metric Geometry seminar, Max Planck Institute for Mathematics in the Sciences, Lipsia (Germania)
- Mag. 2021 **Seminario**, *Markov categories: towards a syntax for probability*, Logic and Semantics for Dummies, University of Cambridge (U.K.)
- Mag. 2021 **Talk su invito**, *The law of large numbers in categorical probability*, Topos Colloquium, Topos Institute, Berkeley, CA (U.S.A.)  
Relatore: Tobias Fritz (collaborazione).
- Apr. 2021 **Talk su invito**, *The de Finetti theorem in categorical probability*, Cohomology in algebra, geometry, physics and statistics, Institute of Mathematics, Czech Academy of Sciences (Czech Republic)  
Relatore: Tobias Fritz (collaborazione).
- Mar. 2021 **Talk su invito**, *Categorical probability, Markov categories and the de Finetti theorem*, New York City Category Theory Seminar, CUNY, New York, NY (U.S.A.)  
Relatore: Tobias Fritz (collaborazione).
- Mar. 2021 **Seminario improvvisato**, *Categorical probability, Markov categories and the de Finetti theorem*, New York City Category Theory Seminar, CUNY, New York, NY (U.S.A.)
- Feb. 2021 **Talk su invito**, *Partial evaluations: the results so far*, Seminario de categorías UNAM, Città del Messico (Messico)
- Feb. 2021 **Talk su invito**, *Partial evaluations for monads and 2-monads*, Seminário de Teoria das Categorias, Universidade de Coimbra (Portogallo)
- Feb. 2021 **Talk su invito**, *Kan extensions are partial colimits*, Masaryk University Algebra Seminar, Brno (Rep. Ceca)
- Gen. 2021 **Lezione su invito**, *An introduction to monads*, Applied Compositional Thinking for Engineers, ETH, Zurigo (Svizzera)
- Gen. 2021 **Oxford Quantum Group Workshop**, *Markov categories: randomness and information flow*, University of Oxford (U.K.)

### 2020 (tutti gli eventi hanno avuto luogo online):

- Sett. 2020 **Talk su invito**, *Colimits as algebraic operations*, ItaCa Fest III, ItaCa (Italia)
- Sett. 2020 **Talk su invito**, *Compositional structure of partial evaluations*, Massachusetts Institute of Technology (MIT), Cambridge, MA (U.S.A.)  
Relatore: Brandon Shapiro (collaborazione).
- Lug. 2020 **Applied Category Theory 2020**, *Distribution functors, second-order stochastic dominance and the Blackwell–Sherman–Stein Theorem in Categorical Probability*, Massachusetts Institute of Technology (MIT), Cambridge, MA (U.S.A.)  
Relatore: Tomáš Gonda (collaborazione).
- Lug. 2020 **Tutorial per ACT 2020**, *Monads and Comonads*, Massachusetts Institute of Technology (MIT), Cambridge, MA (U.S.A.)
- Giu. 2020 **Talk su invito**, *Monads, Partial Evaluations, and Rewriting*, POPV Seminar, University of Boston, Boston, MA (U.S.A.)
- Giu. 2020 **Talk su invito**, *Kan extensions are partial colimits*, Massachusetts Institute of Technology (MIT), Cambridge, MA (U.S.A.)
- Giu. 2020 **Workshop Categorical Probability and Statistics**, *Probability monads and stochastic dominance*, University of Ottawa, ON (Canada)
- Giu. 2020 **Tutorial per workshop CPS**, *What is a probability monad?*, University of Ottawa, ON (Canada)
- Giu. 2020 **MFPS 36**, *Monads, Partial Evaluations, and Rewriting*, Université Paris VII, Parigi (Francia)
- Mag. 2020 **Seminario**, *The support as a morphism from probability to possibility*, Tallinn Institute of Technology (TalTech), Tallinn (Estonia)  
Relatore: Sharwin Rezagholi (collaborazione).
- Apr. 2020 **Seminario**, *Stochastic orders and Kantorovich duality*, Metric Geometry seminar, Max Planck Institute for Mathematics in the Sciences, Lipsia (Germania)
- Mar. 2020 **Seminario**, *Composing partial evaluations*, Massachusetts Institute of Technology (MIT), Cambridge, MA (U.S.A.)

### 2019:

- Nov. 2019 **Talk su invito**, *The compositional structure of partial evaluations*, University of Ottawa, ON (Canada)
- Lug. 2019 **Applied Category Theory 2019**, *The support is a morphism of monads*, University of Oxford (U.K.)

- Mag. 2019 **SYCO 4**, *Categorical Probability: Results and Challenges*, Chapman University, CA (U.S.A.)  
Relatore: Tobias Fritz (collaborazione).
- Mar. 2019 **SYCO 3**, *The support is a morphism of monads*, University of Oxford (U.K.)  
Relatore: Sharwin Rezagholi (collaborazione).
- Feb. 2019 **Talk su invito**, *Towards probability theory without measure theory*, Massachusetts Institute of Technology (MIT), Cambridge, MA (U.S.A.)  
Relatore: Tobias Fritz (collaborazione).
- 2018:**
- Ott. 2018 **Talk su invito**, *Monads, Partial Evaluations, and Martingales*, Massachusetts Institute of Technology (MIT), Cambridge, MA (U.S.A.)
- Sett. 2018 **SYCO 1**, *Monads, Partial Evaluations, and Rewriting*, University of Birmingham (U.K.)
- Lug. 2018 **Category Theory 2018**, *On the Operational Meaning of the Bar Construction*, Universidade dos Açores, Ponta Delgada, Azzorre (Portogallo)
- Giu. 2018 **MFPS 34**, *Bimonoidal Structure of Probability Monads*, Dalhousie University, Halifax, NS (Canada)
- Mag.-Giu. 2018 **FMCS 26**, *A Kantorovich Monad for Ordered Spaces*, Mount Allison University, Sackville, NB (Canada)
- 2014–2017:**
- Lug. 2017 **Category Theory 2017**, *The Wasserstein Monad in Categorical Probability*, University of British Columbia, Vancouver, BC (Canada)
- Nov. 2016 **Talk su invito**, *A Conceptual Viewpoint on Information Decomposition*, Perimeter Institute for Theoretical Physics, Waterloo, ON (Canada)
- Sett. 2015 **WUPES 10**, *Decomposition of Markov Kernels*, Moníec (Rep. Ceca)
- Dic. 2014 **GSO 2014**, *Synergy as a Linear Operator*, Albert-Ludwig-Universität, Friburgo (Germania)

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Per ulteriori informazioni o materiale vi prego di contattarmi personalmente.

Ultimo aggiornamento: 2024-05-05.