

# Silvia De Toffoli

## Curriculum Vitae

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**Areas of Specialization:** Philosophy of Mathematics, Epistemology

**Areas of Competence:** Philosophy of Science

### Academic Appointments

- 2022-pres. **Scuola Superiore Universitaria IUSS Pavia**, *Department of Humanities and Life Sciences, Linguistics and Philosophy Center*, Assistant Professor of Philosophy
- 2022 **Linköping University**, *Department of Culture and Society*, Assistant Professor of Philosophy and Wallenberg Academy Fellow
- 2019–2022 **Princeton University**, *Philosophy Department*, Postdoctoral Research Associate and Lecturer
- 2013–2014 **Montana State University**, *Department of Mathematical Sciences*, Research Scholar and Lecturer

### Academic Affiliations

- 2022-pres. **Technical University of Berlin**, *Institute of History and Philosophy of Science, Technology, and Literature*, Department Affiliate
- 2022-pres. **Sphere Research Unit**, *CNRS, Paris*, Associated Researcher

### Education

- 2014–2019 **Ph.D. in Philosophy**, Stanford University  
Thesis: *Epistemic Roles of Mathematical Diagrams*, committee: Thomas Ryckman (supervisor), Michael Friedman, Krista Lawlor, Marcus Giaquinto.  
Research visits: Columbia University (fall 2016), IHPST – Institute of History and Philosophy of Sciences and Technology, Paris (spring 2017), University of Pennsylvania (fall 2017), Goethe University Frankfurt (spring 2018).
- 2019 **Ph.D. Minor in Philosophy, Literature, and the Arts**, Stanford University  
Advisor: R. Lanier Anderson.
- 2016 **M.A. in Philosophy**, GPA: 4/4, Stanford University
- 2009–2013 **Ph.D in Mathematics**, Technical University of Berlin  
Thesis: *Degrees of Essentiality for Secants of Knots*, Supervisor: John Sullivan.
- 2006–2009 **M.Sc. in Mathematics**, *Summa Cum Laude*, University of Bologna  
As visiting student: University of Paris7, France (2007-2008).

2004–2006 **B.Sc. in Mathematics**, *Summa Cum Laude*, University of Bologna  
As visiting student: University of Calgary, Canada (2004-2005).

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## Publications

### Books

under contract **How to Prove Things with Diagrams**, UK: Oxford University Press

under contract **Human Epistemology of Mathematics**, *Elements Series*, Cambridge University Press

### Articles and Book Chapters

forth **Mathematical Justification without Proof**, in: *Self Knowledge and Knowledge A Priori*, Ed.s Giacomo Melis, Giovanni Merlo, and Crispin Wright, UK: Oxford University Press

forth **The Epistemic Roles of Diagrams**, in: *Third Edition of the Blackwell Companion to Epistemology*, Ed.s Jonathan Dancy, Ernest Sosa, Matthias Steup, and Sosa Kurt Sylvan, Blackwell, Wiley

forth **Visualization and Diagrams in Mathematics**, in: *Routledge Handbook of the History and Philosophy of Science*, Ed.s Flavia Padovani and Adam Tamas Tuboly, Routledge

forth **The Philosophy of Mathematical Practice**, *Stanford Encyclopedia of Philosophy*, (with Paolo Mancosu)

2024 **PROOFS FOR A PRICE: Tomorrow’s Ultra-Rigorous Mathematical Culture**, *Bulletin of the American Mathematical Society*, 61(3), 395-410

2024 **The Epistemological Subject(s) of Mathematics**, in: *The Handbook of the History and Philosophy of Mathematical Practice*, Ed. Bharath Sriraman, Switzerland: Springer, 2879-2904

2023 **Recalcitrant Disagreement in Mathematics: An “Endless and Depressing Controversy” in the History of Italian Algebraic Geometry**, *Global Philosophy*, 33:38, 1-29 (with Claudio Fontanari)

2023 **Who’s Afraid of Mathematical Diagrams?**, *Philosophers’ Imprint*, 23:1, 1-20

2022 **Objectivity and Rigor in Classical Italian Algebraic Geometry**, *Noesis*, No. 38, 195-212 (with Claudio Fontanari)

2022 **Intersubjective Propositional Justification**, in: *Propositional and Doxastic Justification: New Essays on Their Nature and Significance*, Eds. Paul Silva Jr. & Luis Oliveira, Routledge, 241-262

2022 **What Is Mathematical Rigor?**, *Aphex*, No. 25, 1-17 (with John Burgess)

2022 **What Are Mathematical Diagrams?**, *Synthese*, 200:86, 1-29

- 2021 **Groundwork for a Fallibilist Account of Mathematics**, *The Philosophical Quarterly*, Volume 7, Number 4, 823-844
- 2021 **Reconciling Rigor and Intuition**, *Erkenntnis*, Volume 86, 1783-1802
- 2019 **Leopardi: ‘Everything is Evil’**, in: *Evil—A History*, Ed. Andrew Chignell, UK: Oxford University Press, 350-357
- 2017 **‘Chasing’ The Diagram – The Use of Visualizations in Algebraic Reasoning**, *The Review of Symbolic Logic*, Volume 10, Number 1, 158-186
- 2016 **Envisioning Transformations – the Practice of Topology**, in: *Mathematical Cultures*, Ed. Brendan Larvor, Birkhäuser, 25-50, (with Valeria Giardino)
- 2015 **An Inquiry into the Practice of Proving in Low-Dimensional Topology**, in: *From Logic to Practice*, Eds. Gabriele Lolli, Marco Panza, Giorgio Venturi, Boston Studies in the Philosophy and History of Science, Volume 308, 315-336, (with Valeria Giardino)
- 2014 **Forms and Roles of Diagrams in Knot Theory**, *Erkenntnis*, Volume 79, 829-842, (with Valeria Giardino)

### Editorial Work

- 2018 **Tools of Reason: The Practice of Scientific Diagramming from Antiquity to the Present**, *Special issue of Endeavour*, with a co-authored introduction, Volume 42 (2-3), 49–59, (with Paula Findlen and Greg Priest)
- forth **Mathematics Education meets the Philosophy of Mathematical Practice**, *Special issue of The Journal of Mathematical Behavior*, with a co-authored introduction (with Yacin Hamami, Matthew Inglis, and Juan Pablo Mejía Ramos)

### Conference Proceedings

- 2018 **Fruitful Over-Determination in Knot Diagrams**, *Proceeding of Diagrams 2018*, *Lecture Notes in Computer Science*, 10871 LNAI, 807–809
- 2012 **Meta-Vermeer: A Topological Reinterpretation of a Masterpiece**, *Proceeding of Bridges 2012: Mathematics, Music, Art, Architecture, Culture*, 499-502, (with Yasuhiro Sakamoto)

### Outreach

- 2022 **Le certezze irraggiungibili della matematica (“The Unreacheable Certainties of Mathematics”)**, *Archimede*, *La rivista per gli insegnanti e i cultori di matematiche pure e applicate*, No. 2, 60-66
- 2022 **Conversation with John P. Burgess**, *Aphex*, No. 25
- 2022 **I nodi dell’intelligenza artificiale (“The Knots of Artificial Intelligence”)**, *Maddmaths! – Matematica Divulgazione Didattica*, 2 gennaio 2022

- 2017 **Numeri. Divagazioni, calcoli, giochi** (“**Numbers. Digressions, calculations, games**”), 2<sup>nd</sup> Edition, preface by Furio Honsell, (with Dario De Toffoli and Dario Zaccariotto), Edizioni Koala (1<sup>st</sup> Edition, 2008, Stampa Alternativa, Viterbo, introduction by Stefano Bartezzaghi)

### Interviews

- 2022 **Anche la matematica è un’attività umana – intervista a Silvia De Toffoli**, *Il Tascabile*, intervista di Andrea Zanni, Jan. 3, 2022
- 2021 **Filosofia pratica della matematica, istruzioni per l’uso – intervista a Silvia De Toffoli**, *Maddmaths! – Matematica Divulgazione Didattica*, di Roberto Natalini, June 6, 2021

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### Grants & Awards

- 2023-2025 **PRIN PNRR 2022**, *IUSS Pavia*, (239, 238€), Scientific Disagreement and Its Impact on Society (co-PI with Filippo Ferrari)
- July 2024 **Erasmus +**, *Technical University of Berlin*, (3, 590€)
- 2021 **Wallenberg Academy Fellowship**, *Linköping University, Swenden*, (> 1, 000, 000€)
- 2017-2019 **Ric Weiland Graduate Fellow in the Humanities & Sciences**, *Stanford University*
- 2017 **France-Stanford Visiting Student Researcher Fellowship**, *IHPST, Institute of History and Philosophy of Sciences and Technology, Paris*
- 2014-2019 **PhD scholarship**, *Stanford University*
- 2013 **Certificate of Distinction from the Berlin Mathematical School**, for the *Ph.D. thesis* Degrees of essentiality for secants of knots
- 2009-2013 **PhD scholarship**, *Berlin Mathematical School*

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### Teaching

#### Scuola Universitaria Superiore IUSS Pavia

**Philosophy of Mathematics**, *HuME PhD Program*, graduate seminar (with Mario Piazza and Andrea Sereni), 2022-2023, 2023-2024

**Social Epistemology**, Module of a Master course, 2022-2023, 2023-2024

**Visualizzazione, dimostrazioni e rigore: temi di filosofia della pratica matematica**, upper division undergraduate class, 2022-2023, 2023-2024

#### Princeton University

- 2021-2022 **Mathematical Rigor Between Theory and Practice**, graduate seminar (with John Burgess)
- 2020-2021 **Theory of Knowledge**, upper division undergraduate class

2019-2020 **Philosophy of Mathematics**, upper division undergraduate class (with John Burgess)

### Stanford University

2017-2018 **Philosophy of Mathematics**, upper division undergraduate class

2016-2017 **Philosophy and Literature**, undergraduate class (TA, Instructors: R. Lanier Anderson and Josh Landy)

2015-2016 **Epistemology**, undergraduate class (TA, Instructor: Eli Alshanetsky)

2015-2016 **Introduction to Philosophy of Science**, undergraduate class (TA, Instructor: Helen Longino)

### Other Universities

2016-2017 **Introduction to Philosophy**, *City College New York*, undergraduate class

2013-2014 **Algebraic Topology**, *Montana State University*, graduate seminar

2010-2011 **Topology**, *Technical University of Berlin*, Master class (TA, Instructor: John Sullivan)

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## Events Organization

### Main Organizer

June 2025 **Workshop: Inference in Pavia**, *IUSS Pavia*, (with Eli Chudnoff)

Aug. 2024 **Symposium of the Association for the Philosophy of Mathematical Practice**, in: *XXV World Congress of Philosophy*, Rome

June 2024 **Conference: International Conference of the Association for the Philosophy of Mathematical Practice (APMP)**, *Conference at IUSS Pavia*, (with Ludovica Conti, Daniele Molinini, Andrea Sereni, and Luca Zanetti)

May 2024 **Workshop: Disagreement in the Exact Sciences**, *IUSS Pavia*, (with Andrea Sereni, Guido Tana, and Luca Zanetti)

May 2023 **Conference: Philosophies of Mathematics in Dialogue**, *Conference at Princeton University*, (with John Burgess)

2023-pres. **Organizer of the IUSS Philosophy Seminars: Epistemology and Mathematics Series**, *IUSS Pavia*, (with Andrea Sereni and Luca Zanetti)

April 2021 **Society Session of the Philosophy of Mathematics Association: Rigor and Intuition**, *Pacific APA*, Online, Portland

April 2020 **[CANCELED] Conference: The 'End' of Philosophy of Mathematics?**, *Conference at Princeton University*, (with John Burgess)

Aug. 2019 **Symposium of the Association for the Philosophy of Mathematical Practice**, in: *16<sup>th</sup> Congress of Logic, Methodology and Philosophy of Science and Technology*, Prague, (with Andrew Arana)

Aug. 2018 **Symposium of the Association for the Philosophy of Mathematical Practice**, in: *XXIV World Congress of Philosophy*, Beijing

- Feb. 2018 **Workshop: Mathematical Reasoning**, *Stanford University*, (with Rebecca Morris)
- Oct. 2017 **Workshop: Varieties of Visualization in Mathematics**, in: *4<sup>th</sup> International Meeting of the Association for the Philosophy of Mathematical Practice*, Salvador, Brazil
- Feb. 2017 **Conference: Tools of Reason: The Practice of Scientific Diagramming from Antiquity to the Present**, *Stanford University*, (with Paula Findlen and Greg Priest)

#### Member of Scientific or Organizing Committee

- Oct. 2024 **13<sup>th</sup> International Conference on the Theory and Application of Diagrams**, *Münster*, Workshop Chair
- Aug. 2024 **XXV World Congress of Philosophy**, *Rome*, Philosophy of Mathematics Program Chair
- Aug. 2023 **ECAP11 – 11th European Congress of Analytic Philosophy**, *Vienna*, Member of the Program Committee
- June 2023 **Bounded Rationality, Imperfect Data, and Trust: Perspectives from Social and Formal Epistemology**, *IUSS Pavia*, Member of the Organizing Committee
- Sept. 2022 **13<sup>th</sup> International Conference on the Theory and Application of Diagrams**, *Rome*, Member of the Scientific Committee of the Philosophy Track
- Sept. 2021 **12<sup>th</sup> International Conference on the Theory and Application of Diagrams**, *Online*, Member of the Scientific Committee of the Philosophy Track
- July 2021 **6<sup>th</sup> International Conference of the Association for the Philosophy of Mathematical Practice**, *Online, Chapman University*, Member of the Organizing Committee
- Aug. 2020 **11<sup>th</sup> International Conference on the Theory and Application of Diagrams**, *Tallinn*, Member of the Scientific Committee of the Philosophy Track
- Jan. 2020 **5<sup>th</sup> International Conference of the Association for the Philosophy of Mathematical Practice**, *ETH, Zurich*, Member of the Organizing Committee
- June 2018 **10<sup>th</sup> International Conference on the Theory and Application of Diagrams**, *Edinburgh*, Member of the Scientific Committee of the Philosophy Track

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#### Service to the Discipline

- 2023-pres. **Member of the Directive Committee**, *European Society for the Philosophy of Mathematics (ESPM)*
- 2023-pres. **Representative of researchers**, *IUSS Pavia*
- 2018-pres. **Member of the Directive Committee**, *Association for the Philosophy of Mathematical Practice (APMP)*

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## Editorial Service

- 2023-pres. **Member of the Editorial Board**, *Argumenta - Journal of the Italian Society for Analytic Philosophy (SIFA)*
- 2023-pres. **Managing Editor**, *Journal for the Philosophy of Mathematics (JPM)*
- 2022-2023 **Member of the International Advisory Board of *Phenomenology & Mind***
- 2021-pres. **Assistant Editor of *APhEx***, (*Analytical and Philosophical Explanations*) – Italian journal for analytic philosophy, *Open Problems* section
- 2019-pres. **PhilPapers Editor**, Categories: “Mathematical Practice,” “Visualization in Mathematics,” “Philosophy of Literature,” “Fiction,” “The Basing Relation,” “Propositional and Doxastic Justification,” and “Epistemic Fallibilism.”

## Refereeing

### Journals

*Axiomathes*, *The British Journal for the Philosophy of Science*, *Dialectica*, *Episteme*, *Erkenntnis*, *European Journal for Philosophy of Science*, *Hypatia*, *Journal for General Philosophy of Science*, *Journal of Humanistic Mathematics*, *Kriterion*, *Manuscrito*, *Mind*, *Philosophia Mathematica*, *The Philosophical Quarterly*, *Philosophical Psychology*, *Philosophical Studies*, *Philosophical Review*, *Philosophy of Science*, *Review of Analytic Philosophy*, *Spatial Cognition and Computation: An Interdisciplinary Journal*, *Synthese*, *Theoria*, *Theoria. An International Journal for Theory, History and Foundations of Science*, *Topoi*.

### Books

Oxford University Press, Cambridge University Press, Éditions de la Sorbonne.

### Grants

FWF-Austrian Science Fund, Graduate Women in Science (GWIS) National Fellowship Program, Fondecyt Program National Research and Development Agency (Chile).

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## Presentations

(\* = invited at international conference or workshop)

### Coming Up

- Nov. 2024 **Oxford’s Philosophy of Mathematics Seminar**, *Oxford University*, TBD
- Oct. 2024 **Circle-U conference on the philosophy of mathematics**, *King’s College London*, TBD
- Oct. 2024 **Séminaire d’histoire des mathématiques de l’institut Henri Poincaré**, *IHP*, *Paris*, TBD
- Aug. 2024 **XXV World Congress of Philosophy, Association for Mathematical Practice Session**, *Rome*, “Articulate Intuitions”



- Aug. 2024 **XXV World Congress of Philosophy, Experimental Epistemology Session, Rome, TBD**
- July 2024 **Workshop: Bridging between informal and formal, Hausdorff Center for Mathematics, TBD**
- June 2024 **7th International Conference of the Association for the Philosophy of Mathematical Practice, IUSS Pavia, "Trust in Mathematics"**
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- May. 2024 **\*What Do We Talk About When We Talk About (Scientific) Practices?**, (keynote) *Heinrich Heine University Düsseldorf, Germany*, "The Practice Turn in the Philosophy of Mathematics"
- May 2024 **Colloquium Series, ETH Zurich**, "Trust in Mathematics"
- May 2024 **Colloquium Series, Munich Center for Mathematical Philosophy, LMU, Munich**, "Mathematical Justification without Proof"
- April 2024 **La filosofia nella matematica del '900, Accademia dei Lincei, Roma**, "Filosofia della pratica matematica: una panoramica"
- Nov. 2023 **\*The A Priori in Miami, University of Miami**, "Mathematical Justification without Proof"
- Sept. 2023 **\*33rd Novembertagung: Interactions between the History and Philosophy of Mathematics**, (keynote) *Rijeka, Croatia, TBD*
- Sept. 2023 **SIFA 2023 – 15th Conference of the Italian Society for Analytic Philosophy, University of Eastern Piedmont, Alessandria**, "Rigor, Intuition, and Diagrams"
- June 2023 **Lezioni Enriques, University of Milan**, "Che cosa sono i diagrammi matematici?"
- June 2023 **\*Mathematics Education meets the Philosophy of Mathematical Practice, Loughborough University**, "What Mathematical Explanation Cannot Be"
- June 2023 **\*Mathematical Drawings, Helsinki University**, "Mathematical Illustrations and Diagrams"
- May 2023 **\*Understanding Mathematical Explanation, Rutgers University**, Commentator
- May 2023 **Philosophies of Mathematics in Dialogue, Princeton University**, "A Fallibilist Account of Mathematical Justification"
- April 2023 **Pacific APA, Session of the Association for Symbolic Logic, San Francisco**, "How to Do Things with Diagrams"
- Dec. 2022 **Mercoledì Filosofici del Maino, Pavia**, "Mathematical Justification: Motivations for a Fallibilist Account"
- Oct. 2022 **Uppsala University, Philosophy Department Talk**, "Mathematical Justification: Motivations for a Fallibilist Account"
- Sept. 2022 **\*Logic and Philosophy of Mathematics Conference, Scuola Normale Superiore (SNS), Pisa**, "Defending Moderate Derivationism"



- Sept. 2022 **European Summer School on the Philosophy of Mathematics**, *University of Konstanz*, 5-days tutorial on “Mathematical Knowledge”
- June 2022 **EEN (European Epistemology Network) Conference**, *University of Glasgow*, “Successful Transmission of Justification Across Fallacious Arguments”
- June 2022 **University of St Andrews**, *Arché’s research stream “Epistemology: Current Themes”*, “Mathematical Justification”
- May 2022 **University of Trento**, *Maths Bites Trento, Department of Mathematics*, “Rigore e Intuizione in Matematica”
- March 2022 **CUNY (City University of New York), Graduate Center**, *Philosophy Colloquium*, “Successful Transmission of Justification Across Fallacious Arguments”
- March 2022 **Université Paris Cité**, *SPHERE, History and Philosophy Seminar, Mathematics 19th-21st*, “Recalcitrant Disagreement in Mathematics”
- March 2022 **Université Côte d’Azur, Nice**, *Centre de Recherches en Histoire des Idées, Séminaire d’histoire et de philosophie des sciences*, “Fallibilisme en mathématiques”
- Jan. 2022 **Eastern APA**, *Session of the Philosophy of Mathematics Association, Baltimore, Online*, “Beliefs, Degrees of Beliefs, and ‘Probabilistic Proofs’”
- Dec. 2021 **\*Mathematical Collaborations 4**, *Vrije Universiteit Brussel and University of Leeds*, “Higher-Order Evidence in Mathematics”
- Oct. 2021 **FPMW13-13<sup>th</sup> French PhilMath Workshop**, *Nice*, “Diagrams and the Apriority of Mathematics”
- Sept. 2021 **SIFA 2021-14<sup>th</sup> Conference of the Italian Society for Analytic Philosophy**, *Noto, Sicily*, “Diagrams and the Apriority of Mathematics”
- Sept. 2021 **\*Workshop: Text-Driven Approaches to the Philosophy of Mathematics**, *Duisburg-Essen University, online*, “Algebraic and Graphical Languages: the Case of Monoidal Categories”
- Aug. 2021 **\*Workshop: Topic in Philosophy of Mathematical Practice**, *University of Copenhagen, online*, “Reconciling Rigor and Intuition”
- July 2021 **University of Bologna**, *Seminar in the mathematics department*, “Rigore e Intuizione in Matematica”
- July 2021 **6<sup>th</sup> International Conference of the Association for the Philosophy of Mathematical Practice**, *Chapman University, Online*, “Mathematical Practice and Analytic Epistemology”
- June 2021 **University of Trento**, *Seminar for the PopMat Laboratory*, “Cosa sono i diagrammi matematici?”
- June 2021 **Science & More Talks**, *Center for Logic, Language and Cognition (LLC), University of Turin*, “Can we form a justified belief in mathematics based on an incorrect argument?”
- June 2021 **Carl Friedrich von Weizsäcker-Colloquium**, *University of Tübingen, Online*, “What are Mathematical Diagrams?”

- Feb. 2021 **Stirling University**, *Visiting Speaker Seminar*, “A Case for the Fundamentality of Doxastic Justification”
- Jan. 2021 **\*Workshop: Logic & Philosophy of Mathematics in the Evening**, organized by *D. Kant and D. Sarikaya*, online, “Mathematical Justification”
- Jan. 2021 **Eastern APA**, online, Comments on “Nietzsche... and Possibility of Metaphysics”
- Dec. 2020 **University of Trento**, *Online seminar for the PopMat Laboratory*, “Philosophy of Mathematical Practice”
- Nov. 2020 **Canadian Society for the History and Philosophy of Mathematics**, *online seminar series*, “The Epistemological Subject of Mathematics”
- May 2020 **Texas A&M University**, *online talk for a research group on mathematical reasoning*, “Who’s Afraid of Mathematical Diagrams?”
- April 2020 [Postponed] **\*Conference: Understanding Mathematical Explanation**, *Rutgers University*, “Mathematical Explanations in Practice”
- April 2020 [Canceled] **Conference: The ‘End’ of Philosophy of Mathematics?.**, *Princeton University*, “Mathematical Justification Ain’t What it Seems”
- March 2020 [Canceled] **Conference: Dimensions of Epistemic Justification**, *University of Cologne*, commentator at large
- Jan. 2020 **5<sup>th</sup> International Conference of the Association for the Philosophy of Mathematical Practice**, *ETH, Zurich*, “A Fallibilist Account of Mathematical Justification”
- Nov. 2019 **Carnegie Mellon University**, *Philosophy Colloquium*, “Diagrammatic Notations in Mathematical Proofs”
- Nov. 2019 **Rutgers University**, *Talk at the Proof Comprehension Research Group*, “Mathematical Diagrams”
- Aug. 2019 **16<sup>th</sup> Congress of Logic, Methodology and Philosophy of Science and Technology**, *Prague*, “The Epistemic Basing Relation in Mathematics”
- June 2019 **Masterclass in the Philosophy of Mathematical Practice**, *Vrije Universiteit Brussel*, “Mathematical Justification in Practice”
- June 2019 **\*Conference: Explanatory and Heuristic Power of Mathematics**, *University of Roma La Sapienza*, “Grasping How a Proof Supports its Conclusion”
- June 2019 **Intersem Seminar Series**, *Paris 7*, organized by Mic Detlefsen, “Rigorous Diagrammatic Proofs”
- May 2019 **\*Conference: Big Proofs**, *International Center for Mathematical Sciences, Edinburgh*, “Diagrammatic Notations in Mathematical Proofs”
- April 2019 **Macalester College**, *Philosophy Colloquium*, “Mathematical Justification in Practice”
- April 2019 **Pacific APA**, *Society for Realist-Antirealist Discussion*, *Vancouver*, “Proof, Simil-Proofs, and Mathematical Justification”
- Dec 2018 **Mathematics in Action**, *Henri Poincaré Archives, Nancy*, “Mathematical Justification in Practice”

- Aug. 2018 **XXIV World Congress of Philosophy**, *Beijing*, “Fruitful Over-determination for Mathematical Notations”
- Aug. 2018 **XXIV World Congress of Philosophy, Association for Mathematical Practice Session**, *Beijing*, “What is a Mathematical Diagram”
- July 2018 **\*Proofs and Representations Workshop**, *Munich Center for Mathematical Philosophy*, “Heterogenous Notations for Mathematical Proofs”
- June 2018 **10<sup>th</sup> International Conference on the Theory and Application of Diagrams**, *Edinburgh*, “Fruitful Over-Determination in Knot Diagrams”
- March 2018 **Stanford University, Psychology Department, Jay McClelland Laboratory**, diagrams in Mathematics
- Feb. 2018 **University of British Columbia, Okanagan campus, Philosophy Colloquium**, “Diagrams in Mathematical Practice”
- Jan. 2018 **Eastern APA, Society for Realist-Antirealist Discussion, Savannah**, “Proofs and Diagrams in Mathematics”
- Oct. 2017 **4<sup>th</sup> International Conference of the Association for the Philosophy of Mathematical Practice**, *Salvador, Brazil*, “Varieties of Mathematical Diagrams”
- July 2017 **\*Conference: Visual Reasoning and Intuition in Mathematics**, *Free University of Berlin*, “Knots and Embeddings: New Tools for Incongruent Counterparts”
- June 2017 **\*Conference: Logic in Question 7**, *Sorbonne University, Paris*, “Thinking with Diagrams: The Case of Mathematics”
- June 2017 **PhilMath seminar series, IHPST, Paris**, “Varieties of Mathematical Diagrams”
- June 2017 **\*PROOFS workshop, IHPST, Paris**, “The Notion of Proof in the Practice of Mathematics”
- April 2017 **\*Workshop: Mathématiques en action**, *Archives Henri Poincaré, Nancy*, “What is a Mathematical Diagram?”
- Feb. 2017 **Conference: Tools of Reason**, *Stanford University*, “Thinking with Diagrams: The Case of Mathematics”
- Nov. 2016 **Midwest PhilMath Workshop 17**, *Notre Dame University*, “Thinking with Diagrams: The Case of Mathematics”
- Sept. 2016 **City College New York, Philosophy Colloquium**, “Aspects of Diagrammatic Reasoning in Mathematics”
- July 2016 **Vrije Universiteit Brussel, Philosophy Colloquium**, (with Isar Goyvaerts) “Aspects of Diagrammatic Reasoning in Category Theory”
- June 2016 **University of Udine, Mathematics and computer science colloquium**, “Pensare con i Diagrammi: il caso dei Nodi”
- June 2016 **\*Five Years MCMP: Quo Vadis, Mathematical Philosophy?**, *Munich Center for Mathematical Philosophy*, “Varieties of Visualizations in Mathematics”

- April 2016 **\*43<sup>rd</sup> philosophy of science conference in Dubrovnik**, *Dubrovnik, Croatia*, “Diagrams in Algebra”
- Nov. 2015 **\*3<sup>rd</sup> International Conference of the Association for the Philosophy of Mathematical Practice**, (*keynote*) *Sorbonne University, Paris*, “‘Chasing’ The Diagram – The Use of Visualizations in Algebraic Reasoning”
- March 2015 **Proofs and Pictures Conference**, *University of South Carolina, Columbia*, “‘Chasing’ The Diagram – The Use of Visualizations in Algebraic Reasoning”
- Feb. 2013 **What is? Seminar**, *Berlin Mathematical School*, “What is a Rational Tangle?”
- Sept. 2012 **FilMat Conference**, *Scuola Normale Superiore, Pisa*, (with Valeria Giardino) “La dinamica dei diagrammi in teoria dei nodi”
- Sept. 2012 **SIFA 2012-Conference of the Italian Society for Analytic Philosophy**, *Alghero, Italy*, (with Valeria Giardino) “Roles and Forms of Diagrams in Knot Theory”
- Sept. 2012 **Mathematical Cultures Conference**, *London*, (with Valeria Giardino) “Low-dimensional topology as visual mathematics”
- June 2012 **Free University of Berlin**, *Sybille Krämer’s colloquium*, “Die epistemische Rollen von Diagrammen in der Topologie”
- May 2012 **Conference of the French Society for Analytic Philosoph (SOPHA)**, *École Normale Supérieure, Paris*, (with Valeria Giardino) “Diagrammes et Illustrations en Topologie: Le Cas des Nœuds”
- Jan. 2012 **Work in Progress Seminar**, *Munich Center of Mathematical Philosophy*, “The Knot Moves: A Case Study on Diagram Dynamics”
- Jan. 2012 **University of Sevilla**, *Philosophy Colloquium*, (with Valeria Giardino) “Use and Epistemic Roles of Diagrams in Knot Theory”
- Jan. 2012 **Work in Progress Seminar**, *Munich Center of Mathematical Philosophy*, (with Valeria Giardino) “The Knot Moves: A Case Study on Diagram Dynamics”
- Dec. 2009 **What is? Seminar**, *Berlin Mathematical School*, “What is a Seifert Surface?”

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## Languages

**Italian:** native.

**English:** excellent (reading, writing, and speaking).

**German and French:** fluent (reading, writing, and speaking).