

Claudio Ternullo

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Areas of Specialisation and Competence

Philosophy of Mathematics (especially Philosophy of Set Theory), Logic, Foundations of Mathematics, Philosophy of Science, Ancient Philosophy

Current Position

2024-present Marie-Skłodowska Curie - SOE (Seal of Excellence) Project Director at the University Babeş-Bolyai of Cluj-Napoca (Funding Scheme: PNRR-I3-C9-2022. Contract n. 35195).

Project Name: 'Self-Similarity, Large Cardinals and Incompleteness'. *Length:* 01/01/2024-31/12/2025. *PI:* Claudio Ternullo.

Education

2012 PhD in Philosophy, University of Liverpool, UK (*Supervisor:* Prof M. Leng. *Thesis:* 'Mathematical Platonism and Set-Theoretic Indeterminacy'. *Examiners:* Prof R. Gaskin (Liverpool), Prof M. Potter (Cambridge)).

2007 PGCE (Philosophy and History), University of Pisa, Italy

2005 PhD in Philosophy, University of Pisa, Italy (*Supervisor*: Prof E. Moriconi. *Thesis*: ‘La teoria cantoriana degli insiemi e l’ipotesi del continuo’. *Examiner*: Prof P. Casalegno (Milan))

2001 MA in Philosophy, University of Pisa, Italy

Main Appointments Held

2023 Post-Doctoral Research Fellow

Europa Excelencia Grant n. EUR2022-134032. ‘Set Theory at a Crossroads: Proving the HOD Conjecture’. *PI*: Prof Joan Bagaria. Location: University of Barcelona.

2020-2023 Beatriu de Pinós Post-Doctoral Fellow (Marie Skłodowska Curie COFUND, Grant n. 00192 BP2018), University of Barcelona

Project Name: ‘Mathematical and Philosophical Aspects of a Multiversist Foundation of Set Theory’. *PI*: Claudio Ternullo. *Length*: 01/02/2020-30/06/2023. *Supervisor*: Prof Joan Bagaria i Pigrau.

2019-2020 Research Fellow in Theoretical Philosophy (European Regional Development Fund, ID: 2014-2020.4.-01.16-0027), University of Tartu

Project title: ‘University of Tartu’s ASTRA project PER ASPERA’. *PI*: Prof. Bruno Mölder. *Length*: 01/01/2018-31/08/2022. *Supervisor*: Prof Juhani Yli-Vakkuri.

2013-2015 Post-Doctoral Research Fellow, KGRC, University of Vienna (John Templeton Foundation Grant ID #35216).

Project title: ‘The Hyperuniverse. The Laboratory of the Infinite.’ *PI*: Prof. Sy Friedman. *Length*: 01/01/2013-30/09/2015 *Supervisor*: Prof Sy Friedman

2008-2012 Temporary Lecturer of Symbolic Logic, University of Liverpool

Further Research Projects

2016-2021 ‘The Hyperuniverse Programme’, *FWF (Fonds zur Förderung der wissenschaftlichen Forschung)*, Grant n. P28420. *PI*: Prof. Sy-David Friedman. Role: Collaborator. Venue: KGRC, University of Vienna. Length: 01/04/2016-31/03/2021.

2021-present ‘Lógica Matemática’, *Programa Estatal de Fomento de la Investigación Científica y Técnica de Excelencia*, Number: MTM-PID2020-116773GB-I00. *PI*: Prof. Enrique Casanovas, Prof. Joan Bagaria. Role: Collaborator. Venue: University of

Barcelona. Length: 01/09/2021-31/08/2024.

Honours and Awards

- 2023 Seal of Excellence (HORIZON-MSCA-2022-PF-01-01 — MSCA Postdoctoral Fellowships 2022). Project: “Self-Similarity, Large Cardinals and Incompleteness”
- 2023 Certificado de Excelencia I3 (Agencia Estatal de Investigación, Ministerio de Ciencia e Innovación, Gobierno de España)
- 2022 Abilitazione Scientifica Nazionale as *Professore di II fascia (Associato)* (MUR - Ministero dell’Università e della Ricerca Italiano)
- 2020 Acreditació as *Professor Lector* (AQU, Agència per la Qualitat del Sistema Universitari de Catalunya)
- 2008-2012 University of Liverpool Graduate School Scholarship in Metaphysics

Publications

LOGIC AND PHILOSOPHY OF MATHEMATICS

A. Monographs

- 2021 Ternullo, C., Fano, V. *L’infinito. Filosofia, matematica, fisica*, Carocci editore, Roma.
- 2018 Antos, C., Friedman, S.-D., Honzik, R., Ternullo, C. *The Hyperuniverse Project and Maximality*, Birkhäuser, Basel.

B. Journal Articles

- 2023 Ternullo, C., Fascitiello, I. ‘Peano’s Conception of a Single Infinite Cardinality’, *HOPOS (The Journal of the International Society for the History of Philosophy of Science)*, 13(2):241-60.
- 2021 Bagaria, J. and Ternullo, C., ‘Steel’s Programme: Evidential Framework, the Core Hypothesis, and Ultimate- L ’, *The Review of Symbolic Logic*, 16(3):788-812.
- 2021 Ternullo, C. and Zanetti, L., ‘Cantor’s Abstractionism and Hume’s Principle’, *History and Philosophy of Logic*, 43(3):284-300.

- 2020 Friedman, S.-D. and Ternullo, C., ‘Maximality Principles in the Hyperuniverse Programme’, *Foundations of Science*, 28(1): 287-305, 2020.
- 2020 Barton, N., Ternullo, C. and Venturi, G. ‘On Forms of Justification in Set Theory’, *The Australasian Journal of Logic*, 17(4):158-200.
- 2017 Ternullo, C. ‘Ipotesi del Continuo’, *APhEx (Analytical and Philosophical Explanation)*, 16.
- 2015 Antos, C., Friedman, S.-D., Honzik, R. and Ternullo, C. ‘Multiverse Conceptions in Set Theory’, *Synthese*, 192(8): 2463-2488.
- 2014 Sergioli, G. and Ternullo, C. ‘Fallacious Analogical Reasoning and the Metaphoric Fallacy to a Deductive Inference (MFDI)’, *Isonomia (Epistemologica)*, 5, 159-178.

C. Book Chapters

- 202? Ternullo, C. ‘Higher-Order Platonism and Multiversism’, in Antos, C., Barton, N., Venturi, G. (eds.), *The Palgrave Companion to the Philosophy of Set Theory*, Palgrave-Macmillan, London, forthcoming.
- 2024 Ternullo, C. ‘Naming God’s Essence: Ineffability, Analogy and Set Theory’, in Sztankowski, M. (ed.), *Ontology of Divinity*, De Gruyter, Berlin, pp. 697-718.
- 2019 Ternullo, C. ‘Maddy on the Multiverse’ (followed by Maddy’s ‘Reply to Ternullo on the Multiverse’), in Centrone, S., Kant, D., Sarikaya, D. (eds.) *Reflections on the Foundations of Mathematics: Univalent Foundations, Set Theory, and General Thoughts*, Springer, Berlin, p. 43-78.
- 2016 Friedman, S.-D. and Ternullo, C., ‘The Search for New Axioms in the Hyperuniverse Programme’ in Boccuni, F. - Sereni, A. (eds.) *Objectivity, Realism and Proof (FilMat Studies in the Philosophy of Mathematics)*, Springer, Berlin, p. 165-188.
- 2015 Ternullo, C., ‘Gödel’s Cantorianism’ in Crocco, G. - Engelen, E.M. (eds.) *Kurt Gödel: Philosopher-Scientist*, Presses Universitaires de Provence, Aix-en-Provence, p. 417-446.

D. Editorial Work

- 2022 Boscolo, S., Oliveri, G., Ternullo, C. (eds.) *Objects, Structures and Logics. FilMat Studies in the Philosophy of Mathematics*, Springer International, Cham.
- 2020 Antos, C., Barton, N., Friedman, S.-D., Ternullo, C., Wigglesworth, J. (eds.) ‘The Foundations of Mathematics: Competing Foundations, New Axioms and the Set-

Theoretic Multiverse’, *Synthèse*, 197: 469–475.

E. Outreach Articles

- 2023 Ternullo, C. ‘La teoria degli insiemi. Dagli assiomi di base ai grandi cardinali’, in Ternullo, C., Fano, V. (eds.) ‘L’infinito fra filosofia e scienze esatte’, *Nuova Secondaria*, 6, XL, pp. 133-7
- 2022 Casu, G., Ternullo, C., Floris, A., Sergioli, G. ‘How To Recognise and Avoid Fallacies? Using Audiovisual Tools for Logical Education in Schools’, in Badino, M., Canullo, C., Matteucci, I., Moruzzi, S., Sergioli, G. (eds.), *Beyond the Two Cultures. Experiences from a POT Project*, Erickson, Trento, 2022, pp. 103-119.
- 2009 Ternullo, C., ‘Logica’ in Caputo, G. - Cortese, S. - Mannucci, M. (eds.) *Breviario per apprendisti filosofi*, ETS, Pisa, p. 131-4.

(Under Review or In Preparation)

- 202? Bagaria, J. and Ternullo, C. ‘Intrinsic Justification for Large Cardinals and Structural Reflection’ (under review)
- 202? Ternullo, C. ‘Two Logical Issues for the Universe/Multiverse debate’ (in preparation)
- 202? Sergeyev, Y., Ternullo, C. ‘The Theory of Grossone and the Continuum Problem’ (in preparation)
- 202? de Ceglie, M. and Ternullo, C. ‘The V -logic Multiverse’ (in preparation)

ANCIENT PHILOSOPHY

Journal Articles and Book Chapters

- 2015 Ternullo, C. ‘La nozione di *iusticia* fra ordine teologico e politico nelle *Glosae super Platonem* di Bernardo di Chartres e Guglielmo di Conches’, *Synaxis*, XXXIII, (2-3), p. 101-34. ISBN: 9788899070304.
- 2006 Ternullo, C. ‘Platone e Tucidide. Appunti per uno studio in parallelo’, in AA.VV., *Pensiero storico e filosofia analitica*, ETS, Pisa, p. 39-67. ISBN: 9788846712528.

Teaching

University of Cagliari (Dipartimento di Pedagogia, Psicologia e Filosofia)

2022-present Philosophy and Foundations of Mathematics (Graduate Course)/Lecturer and Module Convener

2007-2008 Logic and Philosophy of Science/Tutor

University of Vienna (Kurt Gödel Research Center for Mathematical Logic, Dept. of Mathematics)

2013-2015 Philosophy of Mathematics Seminars/Lecturer

University of Liverpool (Department of Philosophy)

2011-2012 PHIL207: Symbolic Logic 2/Lecturer and Module Convener

2010-2011 PHIL127: Symbolic Logic 1/Lecturer and Module Convener
PHIL227: Symbolic Logic 3/Lecturer and Module Convener
PHIL207: Symbolic Logic 2/Lecturer and Module Convener

2009-2010 PHIL127: Symbolic Logic 1/Tutor
PHIL227: Symbolic Logic 3/Tutor
PHIL207: Symbolic Logic 2/Tutor
PHIL107: APT (Analysing Philosophical Texts)/Tutor

2008-2009 PHIL 127: Symbolic Logic 1/Tutor
PHIL 207: Symbolic Logic 2/Lecturer
PHIL107: APT (Analysing Philosophical Texts)/Tutor

2007-2008 PHIL 127: Symbolic Logic 1/Tutor

Talks (last 5 years)

2023 ‘Intrinsic Justification for Large Cardinals and Structural Reflection’, *Logic Colloquium 2023*, University of Milan, 5-9 June

2022 (with Y. Sergeyev) ‘The Theory of Grossone and the Continuum Problem’, *14th French PhilMath Conference*, University of Nantes, 21 October

2022 ‘Intrinsic Evidence for Large Cardinals and Structural Reflection Principles’, *FilMat Conference*, IUSS Pavia, University of Pavia, 1 October

- 2022 ‘Meta-Pluralism: Moving Beyond the Universe-Multiverse Debate’, *Hamkins Masterclass*, University of Konstanz, 21 September
- 2022 ‘Two Logical Issues for the Universe-Multiverse Debate’, *SOPhiA Conference*, University of Salzburg, 8 September
- 2021 ‘Cantor’s Abstractionism and Hume’s Principle’, *9th Annual Meeting of the Society for the Study of the History of Analytic Philosophy (SSHAP)*, University of Vienna, 15 July
- 2022 ‘(Old and New) Infinite Cardinalities’, *Università della Calabria, DIMES*, 15 March
- 2021 ‘Varieties of Set-Theoretic Pluralism’, *LOGOS Seminar*, University of Barcelona, 14 April
- 2021 ‘Steel’s Multiverse and the Ultimate Universe of Sets’, *UNICAMP-Konstanz Philosophy of Set Theory Seminar*, University of Konstanz, 1 April
- 2020 ‘Steel’s Programme: Evidential Framework, the Core and ultimate-*L*’, *Barcelona Set Theory Seminar*, University of Barcelona, October 14
- 2020 ‘Cantor’s Abstractionism and Hume’s Principle’, *Logic Seminar*, University of Campinas, July 16
- 2019 (with de Ceglie, M.) ‘The *V*-logic Multiverse’, *Forcing Project Networking Conference 2019. Set Theory: Bridging Mathematics and Philosophy*, University of Konstanz, July 29-31
- 2019 (with Zanetti, L.) ‘From Bolzano to Frege: a Cantorian Path’, *4th SILFS Post-Graduate Conference*, University of Urbino, June 3-7
- 2017 ‘Epistemic Advantages of Multiversism’, *SILFS Triennial International Conference*, University of Bologna, June 20-23

Organisation of Events

- 2023 (with Bagaria, J., Kennedy, J. and Venturi, G.) *What Can Philosophy Do For Set Theory?* (Organising and Scientific Committee), Barcelona, University of Barcelona, 29-31 March
- 2018 (with Boscolo, S. and Oliveri, G.) *FilMat 2018. Philosophy of Mathematics: Objects, Structures and Logics* (Steering Committee), Mussomeli, 25-27 May
- 2017 (with Antos, C., Barton, N., Wigglesworth, J.) *SotFoM IV*, MCMP, Munich, 9-11

October

- 2016 (with Cogliandro, G., Oviedo, L.) *Theological and Mathematical Aspects of the Absolute Infinite*, Antonianum University, Rome, 22-23 September
- 2015 (with Antos, C., Barton, N., Wigglesworth, J.) *SotFoM III + Hyperuniverse Programme Final Conference*, KGRC, Vienna, 21-23 September
- 2015 (with Antos, C., Barton, N., Wigglesworth, J.) *Symposium on the Foundations of Mathematics II*, Institute of Philosophy, London, 12-13 January
- 2014 (with Antos, C., Barton, N., Wigglesworth, J.) *Symposium on the Foundations of Mathematics I*, KGRC, Vienna, 7-8 July
- 2004 *Il problema dei contesti. Sistemi formali e vie dell'interpretazione*, University of Pisa, Pisa, 19 April

Languages

Italian: mother tongue; **English:** C2; **Spanish:** C1; **German:** B2; **French:** B2; **Catalan:** B1. Excellent knowledge of **Latin** and **Ancient Greek**.