CURRICULUM VITAE

NICOLA GAMBINO

1. PERSONAL INFORMATION

Contact Details
- Address: Department of Mathematics, University of Manchester, Alan Turing Building, Oxford Road, Manchester M13 9PL, United Kingdom
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Education
- December 2002: PhD in Computer Science, University of Manchester (Supervisor: Peter Aczel)
- December 1999: Laurea in Mathematics, University of Padua

Research Interests
- Category Theory
- Mathematical Logic
- Theoretical Computer Science

Appointments
- 2022-: Reader in Pure Mathematics, University of Manchester
- 2021-2022: Professor of Pure Mathematics, University of Leeds
- 2013-2021: Associate Professor of Pure Mathematics, University of Leeds
- 2008-2013: Assistant Professor in Mathematical Logic, University of Palermo
- 2007–2008: Lecturer in Computer Science, University of Leicester
- 2005–2007: Postdoctoral Research Fellow, Université du Québec à Montréal
- 2003-2005: Postdoctoral Research Fellow in Pure Mathematics, University of Cambridge

Visiting Positions
- 2019: Centre for Advanced Study, Oslo (1 week)
  Special program "Homotopy Type Theory"
- 2018: Hausdorff Institute, Bonn (1 week)
  Special program "Types, Sets and Constructions"
- 2016: Max Planck Institute, Bonn (1 week)
  Special program "Higher Structures in Geometry and Physics"
- 2015: Institute Henri Poincaré (5 months)
  Special program "Semantics of Proofs and Certified Mathematics"
- 2011: Institute for Advanced Study, Princeton (3 months)
  Member
- 2007: Centre de Recerca Matemàtica, Barcelona (12 months)
  Special program "Homotopy Theory and Higher Categories"
- 2007: Fields Institute, Toronto (3 weeks)
  Special program "Geometric Applications of Homotopy Theory"
- 2001: Mittag-Leffler Institute, Stockholm (6 months)
  Special program "Mathematical Logic"

Membership of Professional Societies
- 2017-: London Mathematical Society
- 2015-: British Logic Colloquium
- 2012-: Associazione Italiana per la Logica e le sue Applicazioni

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2. Research

Publications

Research Monographs

(1) N. Gambino and A. Joyal, On operads, bimodules and analytic functors, *Memoirs of the American Mathematical Society*, 249 (1184), 2017, 110 pp.

Journal Papers

(2) N. Gambino and M. F. Larrea, Models of Martin-Löf type theory from algebraic weak factorisation systems, *Journal of Symbolic Logic*, 88 (1), 2023, pp. 242-289.

(3) N. Gambino, S. Henry, C. Sattler and K. Szumiło, The effective model structure and ∞-groupoid objects, *Forum of Mathematics, Sigma*, Vol. 10:e34, 2022, pp. 1–59.

(4) N. Gambino, C. Sattler and K. Szumiło, The constructive Kan-Quillen model structure: two new proofs, *The Quarterly Journal of Mathematics*, 73 (4), 2022, pp. 1307–1373.

(5) N. Gambino and S. Henry, Towards a constructive simplicial model of Univalent Foundations, *Journal of the London Mathematical Society*, 105 (2), 2022, pp. 1073-1109.

(6) N. Gambino and G. Lobbia, On the formal theory of pseudomonads and pseudodistributive laws, *Theory and Applications of Categories*, 37 (2), 2021, pp. 14-56.

(7) M. Fiore, N. Gambino, M. Hyland, and G. Winskel, Relative pseudomonads, Kleisli bicategories, and substitution monoidal structures, *Selecta Mathematica - New Series*, 24 (3), 2018, pp. 2791-2830.

(8) N. Gambino and C. Sattler, The Frobenius condition, right properness, and uniform fibrations, *Journal of Pure and Applied Algebra*, 221 (12), 2017, pp. 3027-3068.

(9) S. Awodey, N. Gambino and K. Sojakova, Homotopy-initial algebras in type theory, *Journal of the Association for Computing Machinery*, 63 (6), 2017, pp. 1-51.

(10) N. Gambino and J. Kock, Polynomial functors and polynomial monads, *Mathematical Proceedings of the Cambridge Philosophical Society*, 154 (1) 2013, pp. 153-192.

(11) T. M. Fiore, N. Gambino and J. Kock, Double adjunctions and free monads, *Cahiers de Topologie et Geometrie Differentielles Categoriques*, LIII (4) 2012, pp. 242-307.

(12) T. M. Fiore, N. Gambino and J. Kock, Monads in double categories, *Journal of Pure and Applied Algebra*, 215 (6) 2011, pp. 1174-1197.

(13) N. Gambino, Weighted limits in simplicial homotopy theory, *Journal of Pure and Applied Algebra*, 214 (7) 2010, pp. 1193-1199.

(14) S. Awodey, N. Gambino, P. L. Lumsdaine and M. A. Warren, Lawvere-Tierney sheaves in Algebraic Set Theory, *Journal of Symbolic Logic* 73 (3) 2009, pp. 861-890.

(15) N. Gambino and R. Garner, The identity type weak factorisation system, *Theoretical Computer Science*, 409 (1) 2008, pp. 94-109.

(16) N. Gambino, The associated sheaf functor theorem in Algebraic Set Theory, *Annals of Pure and Applied Logic*, 56 (1) 2008, pp. 68-77.

(17) N. Gambino, Homotopy limits for 2-categories, *Mathematical Proceedings of the Cambridge Philosophical Society*, 145 (1) 2008, pp. 43-63.

(18) M. Fiore, N. Gambino, M. Hyland and G. Winskel, The cartesian closed bicategory of generalised species of structures, *Journal of the London Mathematical Society*, 77 (2) 2008, pp. 203-220.

(19) N. Gambino and P. Schuster, Spatiality for formal topologies, *Mathematical Structures in Computer Science*, 17 (1) 2007, pp. 65-80.

(20) N. Gambino, Heyting-valued interpretations for constructive set theory, *Annals of Pure and Applied Logic*, 137 (1-3) 2006, pp. 164-188.

(21) P. Aczel and N. Gambino, The generalised type-theoretic interpretation of constructive set theory, *Journal of Symbolic Logic*, 71 (1) 2006, pp. 67-103.

Papers in Conference Proceedings

(22) S. Awodey, N. Gambino and K. Sojakova, Inductive types in Homotopy Type Theory, *Proceedings of the 2012 27th Annual ACM/IEEE Symposium on Logic in Computer Science*, IEEE Computer Society, pp. 95-104.

(23) N. Gambino, Presheaf models for Constructive Set Theories, in L. Crosilla and P. Schuster (editors), *From Sets and Types to Topology and Analysis*, Oxford University Press, 2005, pp. 62-77.

(24) N. Gambino and M. Hyland, Wellfounded Trees and Dependent Polynomial Functors, in S. Berardi and M. Coppo and F. Damiani (editors), *Types for proofs and programs*, Lecture Notes in Computer Science 3085, Springer (2004), pp. 210-225.

(25) P. Aczel and N. Gambino, Collection Principles in Dependent Type Theory, in Z. Luo and J. McKinna and R. Pollack (editors), *Types for proofs and programs*, Lecture Notes in Computer Science 2277, Springer (2002), pp. 1-23.

Edited volumes

- S. Awodey, N. Gambino and E. Palmgren, From type theory and homotopy theory to Univalent Foundations of Mathematics, *Mathematical Structures in Computer Science*, Volume 25, Special Issue 5, 2015, pp.1005-1294

Selected Grants

- 2021-2024: EPSRC Standard Grant "Monoidal bicategories, linear logic, and operads" (PI)
  Award value: £395,817
- 2020-2025: AFOSR Grant "Syntax and semantics of 2-dimensional type theories" (PI)
  Award value: £400,875
- 2017-2021: AFOSR Grant "Univalent type theories: models, equalities and coherence" (PI)
  Award value: £311,028
- 2015–2019: EPSRC Standard Grant "Homotopy Type Theory: Programming and Verification" (PI)
  Award value: £92,145
- 2003-2005: EPSRC Postdoctoral Fellowship, "Categorical Logic and Proof Theory: Realizability Interpretations for Constructive Set Theories" (PI)
  Award value: £66,191

Presentations

Invited Conference Talks

- 2023: Logic Colloquium, Milan
- 2022: Annual Meeting of the Italian Association for Logic and Its Applications, Caserta
- 2019: Mathematical Logic and Constructivity, Stockholm
- 2016: International Category Theory Conference, Halifax
- 2014: Typed Lambda-Calculi and Applications and Rewriting Techniques and Applications, Vienna
- 2010: Logic Colloquium, Paris

Invited Tutorials

- 2020: Young Set Theory, Copenhagen
- 2019: Mathematical Structures of Computation, Lyon

Selected Invited Colloquium and Seminar Talks

- 2023: Algebra and Number Theory seminar, Queen Mary University, London
- 2022: Topology Seminar, École Polytechnique Fédérale de Lausanne
- 2020: Pure Mathematics Seminar, University of East Anglia
- 2020: Algebra, Logic and Topology Seminar, University of Coimbra
- 2018: Logic Seminar, University of Lisbon
- 2017: Category Theory Seminar, University Cambridge
- 2016: Pure Mathematics Colloquium, University of Sheffield
- 2016: Journées du Groupement de Recherche Topologie Algébrique, Paris
- 2016: Logic seminar, University of Oxford
- 2015: Scottish Category Theory Seminar, University of Strathclyde

Mentoring of Postdoctoral Research Fellows

- 2021-: Federico Olimpieri
- 2021-2023: Zeinab Galal
- 2019-2021: Sina Hazratpour
- 2018-2020: Karol Szumiło
- 2014-2017: Christian Sattler

Supervision of PhD Students
- 2022-: Calum Hughes
- 2020-: Matteo Spadetto
- 2020-: Luca Mesiti
- 2020-: Andrew Slattery
- 2018-2022: Gabriele Lobbia
  "Pseudomonads, relative monads and strongly finitary notions of multicategory"
- 2015-2019: Raffael Stenzel
  "On univalence, Rezk completeness and presentable quasi-categories"
- 2015-2018: Marco Larrea
  "Models of dependent type theory from algebraic weak factorisation systems"
- 2014-2018: Jakob Vidmar
  "Polynomial functors and W-types for groupoids"
- 2014-2018: Cesare Gallozzi
  "Homotopy Type-Theoretic Interpretations of Constructive Set Theories"

3. Teaching

Undergraduate units
- 2022/23: Mathematics for Materials Engineering
- 2020-2022: Graph Theory (revised and taught)
- 2019-2020: History of Mathematics (co-taught)
- 2017-2019: Discrete Mathematics (designed and taught)
- 2013-2017: Introduction to Discrete Mathematics
- 2008-2012: Elements of Mathematical Logic (designed and taught)
- 2015-2022: Project in Mathematics (supervisor for one group each year)

Postgraduate units
- 2015-16, 2020-21, 2022-23: Category Theory

Project supervisions
- 2022/23: "The elementary theory of the category of sets"
- 2020/21: "Linear Logic"
- 2020/21: "Category Theory"
- 2017/18: "Computer-certified proofs"
- 2015/16: "Type Theory"
- 2015/16: "Proof development with Coq"

4. Service

Editorial Boards
- 2023-: Editor-in-Chief, Applied Categorical Structures
- 2016-: Associate Editor, Mathematical Structures in Computer Science
- 2015-2022: Editor, Applied Categorical Structures
- 2011-2016: Editor, Mathematical Structures in Computer Science

Administrative roles
- 2019-2022: Director of Research and Innovation, School of Mathematics, University of Leeds
- 2018-19: Convenor, Teaching Enhancement Scheme group "Peer review"
- 2015-16: Convenor, Teaching Enhancement Scheme group "Feedback and Assessment"
- 2013-17: Logic Seminar organiser

Conferences Organised
- 2014-: Yorkshire and Midlands Category Theory Seminar
  Co-founder and co-organiser
- 2022: LMS Research School "Bicategories, categorification and quantum theory
  Lead organiser, with V. Miemietz and J. Vicary
- 2019: Summer School on Higher Topos Theory and Univalent Foundations

- 2017: 101st Peripatetic Seminar on Sheaves and Logic
- 2016: Logic Colloquium
  Chair of the Organising Committee
- 2013: International Conference on Type Theory, Homotopy Theory and Univalent Foundations
  with J. Kock

PhD examinations

- 2023: Université de Paris Cité
- 2021: University of East Anglia
- 2020: Université de Paris Cité
- 2019: Macquarie University
- 2018: University of Leicester
- 2016: Carnegie Mellon University
- 2016: University of Nottingham
- 2016: University of Stockholm
- 2016: University of Sheffield
- 2016: University of Cambridge
- 2015: University of Cambridge
- 2014: University of Strathclyde
- 2008: Carnegie Mellon University

MSc examinations

- 2020: Stellenbosch University
- 2020: University of Amsterdam
- 2019: Macquarie University

Refereeing, Reviewing and Evaluation of Research

- 2021:- Member of the UKRI Future Leader Fellowship Peer Review College
- 2016:- Member of the EPSRC Associate College
- 2021: Referee, Evaluation of Research Quality (VQR), Italian National Agency for Evaluation of Universities and Research Institutes
- Grant reviewer
  - 2019: Swedish Research Council
  - 2018: National Science Foundation, US
  - 2016: Centre for Advanced Study, Research Foundation, Flanders
  - 2013: Agence Nationale de la Recherce, France
  - 2010: US-Israel Binational Science Foundation
  - 2009: Czech Science Foundation
- 2020: Jury member, Gentilini Prize for Italian Early-Career Researcher in Logic
- Referee for
  - Annals of Pure and Applied Logic
  - Archive for Mathematical Logic
  - Communications in Algebra
  - Discrete Mathematics
  - Homology, Homotopy and Applications
  - Journal of Symbolic Logic
  - Journal of the London Mathematical Society
  - Journal of Pure and Applied Algebra
  - Journal of Topology
  - Lecture Notes in Mathematics
  - Logical Methods in Computer Science
  - Publications Mathématiques de l'I.H.E.S.
  - Theory and Applications of Categories
  - Transactions of the American Mathematical Society