Curriculum Vitae

1 Personal data

Mai Gehrke; born 10 May 1964, Paris, France; Danish national

1.1 Professional address

LJAD, CNRS and Université de Nice Sophia Antipolis
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2 Career

2.1 Education

- 1987: Ph.D. in Mathematics, University of Houston.
- 1985: M.S. in Mathematics, University of Houston.
- 1982–1987: Teaching Assistantship, University of Houston.

2.2 Professional positions

Permanent
- 2022–present Directeur de Recherche de Classe Exceptionnelle (DRCE1), CNRS, Informatics
  affiliated with LJAD, Université Côte d'Azur, Nice
- 2017–2022 Senior Research Director (DR1), CNRS, Informatics
  affiliated with LJAD, Université Côte d'Azur, Nice
- 2014–2017 Senior Research Director (DR1), CNRS, Informatics
  affiliated with LIAFA/IRIF, Université Paris Diderot, Paris
- 2011–2014 Senior Research Director (DR2), CNRS, Informatics
  affiliated with LIAFA, Université Paris Diderot, Paris
- 2007–2011: Professor (Chair of Algebra) at Radboud University Nijmegen.
- 1999–2002: Part-time consultant at the Physical Science Laboratory, Las Cruces.
- 1990–2007: Professor of Mathematical Sciences at New Mexico State University (Assistant Professor until 1993, Associate Professor until 1999).

Temporary
- 2–7/2010: Senior Researcher, Research in Paris, Ville de Paris, LIAFA, Paris 7.
- 7/2008: Visiting Professor, PPS, Paris 7.
- 2006–2007: Visiting Researcher and Lecturer (Christ Church), University of Oxford.
- 5–8/2006: CNRS Visiting Researcher (3 months), LIAFA, CNRS et Paris 7.
- 5–6/2005: Visiting Professor (2 months), IMM, Denmark's Technical University.
- 2004–2005: Visiting Lektor, Department of Mathematics, University of Copenhagen.
- Spring 1997: Visiting Professor, Department of Mathematics, Vanderbilt University.
- Fall 1996: Visiting Lektor, Department of Mathematics, University of Copenhagen.
- 1988–1990: Postdoc, Department of Mathematics, Vanderbilt University.
- Spring 1988: Assistante Associée, Université de Nice.
- Fall 1987: Assistante Associée, Université de Haute Alsace.

2.3 Scientific Boards and steering committees

- Editorial board, Mathematical Logic Quarterly, 2015–2020.
- Member, CoNRS, section 41, 2012–2015.
- Editorial Board, The Houston Journal of Mathematics, 2009-2014, 2014-2022.
- Scientific Board, The Lorentz Center, International Center for workshops in the Sciences, since 2009–2013.

- Executive Board of DIAMANT (Discrete, Interactive & Algorithmic Mathematics, Algebra & Number Theory: One of the four Dutch national 'mathematics clusters' (including Theoretical Computer Science)), 2009-2013.
- Steering Committee, conference series Topologies, Algebras, and Categories in Logic (TACL), since 2003.

2.4   Awards

- Best Paper Award, ICALP Track B (with Grigorieff and Pin), 2008.
- Plumer Visiting Fellowship Award, Oxford, 2006.
- Amelia Earhart International Fellowship Award, 1987.
- Outstanding Teaching Assistant Award, University of Houston, 1985.

2.5   Research publications

Over 80 research publications including 50 in international peer-reviewed scientific journals, 17 in international peer-reviewed scientific conferences, and 5 chapters in books.

2.6   Graduate students

Ph.D. students

- Jérémie Marques (2020-2023), Université Côte d'Azur, Subject: Dualité et Logique Catégorique.

- Axel Osmond, Université Paris Diderot (co-encadrement avec Paul-André Melliès) (2017-2021). Subject: Effets algébriques, dualité de Stone et algèbre faisceautique.

- Mehdi Zaïdi, co-advised with Sam van Gool, Université de Nice (2017-2022). Subject: Duality theory for for formal languages.

- Luca Reggio, Université Paris Diderot (funded by Université Sorbonne Paris Cité) (2015-2018). Subject: Duality theory for first-order logic.
  Current position: Postdoctoral Fellow at the Institute of Computer Science of the Czech Academy of Sciences (2 years). He has obtained a Marie Curie Fellowship to work in the group of Samson Abramsky in Oxford (2020-2022).

- Anna Carla Russo, co-advised with Antonio Di Nola, Université Paris Diderot and Università di Salerno (2012-2016). Subject: Topos de Grothendieck, MV-algèbres et applications.
  Current position: Mathematics teacher after completion of the Aggrégation.

- Rutger Kuyper, co-director with Peter Stevenhagen, main adviser Sebastiaan Terwijn (2011-2014).
  Current position: Software Engineer at Metaswitch in Wellington, New Zealand.

- Sam van Gool, Radboud University (2010–2014). Subject: computationally and mathematically relevant dualities.
  Current position: Marie Curie Global Fellowship, New York and Amsterdam, to be followed, in January 2019, by a postdoctoral fellowship at the University of Utrecht.

- Dion Coumans, Radboud University (2008–2012). Subject: topological representation theory and topos theory in logic.
  Current position: Senior Consultant, Gupta Consulting, NL.

- Jacob Vosmaer, co-advised with Yde Venema, University of Amsterdam (2006–2010). Dissertation title: Logic, Algebra and Topology.
  Current position: Software Developer at 80beans B.V.

- Candida Palma, co-advised with Raquel Santos, University of Lisbon (2001–2005). Dissertation title: Semi De Morgan Algebras.
  Diseased.

- Hideo Nagahashi, New Mexico State University (1995–2002). Dissertation title: A Sahlqvist Theorem for Distributive Modal Logics.
  Current position: Professor, University of Guam.

- Alex Pogel, New Mexico State University (1995–1998). Dissertation title: Stone Triples and Self-Duality.
  Current position: Senior Research Scientist, Physical Sciences Research Laboratory, NM.

Master's students (Since 2003)

- Axel Osmond, Université Paris Diderot (co-encadrement avec Paul-André Melliès (2016–2017). Subject: Sheaves and duality.
- Mehdi Zaïdi, Université de Nice (2015–2017). Subject: Duality theory for for formal languages.
- Lorijn van Rooijen, Radboud University (2009–2011). Subject: Applications of logic in linguistics.
- Mirte Dekkers, Radboud University (2007–2008). Thesis title: Stone duality: An application in the theory of formal languages. Master's completed December 2008.
- Julie Manisha de Montgomery Nørgaard, University of Copenhagen (2004–2005). Thesis title: Relational semantics based on perfect posets. Master's completed June 2005.

Graduate student committees

22 Ph.D. Committees;
14 Masters Committees.

Habilitation committees

- Jury member, Isar Stubbe, On quantaloid-enriched categories in general, and sheaves on a quantaloid in particular, 12 December 2011
- Referee, Luck Darniere, De la triangulation p-adique à la théorie des modèles des algèbres de Heyting, et vice-versa, Fall 2019

Mentoring of young researchers

- Anna Laura Suarez, 2021-2022, Postdoctoral fellow, DuaLL, LJAD, France.
- William Zuluaga Botero, 2020-2021, Postdoctoral fellow, DuaLL, LJAD, France. Lecturer, National University, Argentina.
- Almudena Colacito, 2020-2022, Postdoctoral fellow, Swiss National Postdoc, LJAD, France.
- Wesley Fussner, 2019–2020, Postdoctoral fellow, DuaLL, LJAD, France. Current: Postdoc, Bern University, Switzerland.
- Brett McLean, 2018–2019, Postdoctoral fellow, DuaLL, LJAD, France. Current: Postdoc, Ghent University, Belgium.
- Tomas Jakl, 2018–2019, Postdoctoral fellow, DuaLL, LJAD, France. Current: Postdoc wit Anuj Dawar, Cambridge University, UK.
- Célia Borlido, 2016–2019, Postdoctoral fellow, DuaLL, IRIF & LJAD, France. Current: National Postdoc, Coimbra, Portugal.
- Leo Cabrer, 2016. Postdoctoral fellow, DuaLL, IRIF. Current: Private Sector (finance), London, UK.
- Daniela, Petrişan, 2015–2018, Postdoctoral fellow, DuaLL, IRIF & LJAD. Current: Maître de Conférences, IRIF, Université Paris Diderot, France.
- Maria Esteban, 2013, PhD student in Barcelona with R. Jansana (3 month visit), Spain.
- Giulio Manzonetto, Nimègue 2010-2011. Current: Maître de Conférences, Université Paris 13, France.
- Nick Bezhanishvili, 2007. Current: Assistant Professor, University of Amsterdam, NL.
- Thomas Bolander, 2004. Current: Associate Professor at IMM, Danish Technical University.
- Alessandra Palmigiano, 2005 and 2007. Current: Full Professor, Vrije Universiteit Amsterdam, NL.
- Jean Bernard Nganou, 2004 and 2012. Current: Assistant Professor, University of Houston Downtown, USA.
- Guram Bezhanishvili, 2000-2001. Current: Professor at New Mexico State University, USA.

2.7   Funding ID

- ERC-advanced grant, PI, Duality in Formal Languages and Logic (DuaLL), 2015-2021.
- ANR grant (in a team of 18), Frontiers of recognizability (FREC), 2011-2014.
- Dutch NWO grant (w. Barendregt, Geuvers, and Rutten), Categorical and Algebraic Models of Computation (1 postdoc) 2010–2014.
- Dutch NWO grant, PI, Mathematically and Computationally Relevant Dualities (2 Ph.D. positions) 2009–2014.
- Research in Paris, 2010.
- EPSRC grants (w. Priestley and Kurz), Coalgebraic logic 2007; Relational semantics for substructural and other logics 2007; Canonicity, duality, and correspondence 2004.
- London Mathematical Society Scheme 7 grant, 2006.
- LANL (Los Alamos National Laboratories) grant (one of 5 team members), Social Dynamics, 2004–2007.
- Carlsberg Foundation, Algebraic Logic, 2004–2005.
- USCRDF/GRDF Georgian-US bilateral grant (w. Esakia), Applications of Topology and Algebra to Modal Logic, 2003–2005.
- US-NSF grants, 2002-2005 (ADVANCE), 1994 (CAREER).
- US-NSA grant (w. Finston), 1992–1994.
- A number of local research awards in New Mexico in 1990–1997.

3   Track Record

3.1   Conference and workshop program committees

2023
- Logic, Algebra and Truth Degrees (LATD), Tbilisi

2022
- Topology, Algebra, and Categories in Logics (TACL), conference, Coimbra
- Topology, Algebra, and Categories in Logics (TACL), school, Praia de Mira

2021
- (co-chair) Relational and Algebraic Methods in Computer Science (RAMICS), Luminy

2020
- 47th International Colloquium on Automata, Languages, and Programming (ICALP), Beijing
- 15th International Workshop on Coalgebraic Methods in Computer Science(CMCS), Dublin
- Relational and Algebraic Methods in Computer Science (RAMICS), Palaiseau.

2019
- Logic in Computer Science (LiCS), Vancouver
- Topology, Algebra, and Categories in Logics (TACL), conference, Nice
- Topology, Algebra, and Categories in Logics (TACL), school, Île de Porquerolles

2018
- Advances in Modal Logic (AiML), Berne

2016
- Third Nordic Logic Summer School (NLS), Stockholm

2015
- Duality in Computer Science, Dagstuhl
- Scandinavian Logic Symposium Summer School, Helsinki
- Topology, Algebra, and Categories in Logic (TACL), Ischia

2014
- Advances in Modal Logic (AiML), Groningen

2013
- Duality in Computer Science, Dagstuhl
- Topologies, Algebras, and Categories in Logics (TACL), Nashville

- Algebra and Coalgebra in Computer Science (CALCO), Warsaw

2012
- Coalgebraic Methods in Computer Science (CMCS), Tallinn
- Algebra and Coalgebra meet Proof Theory (ALCOP), Prague

2011
- Topologies, Algebras, and Categories in Logics (TACL), Marseille.
- European Women in Mathematics (EWM) Summer School, Leiden.

2010
- Mathematical Logic in the Netherlands (MLNL), Utrecht.
- Conference on Mathematical Logic and Set Theory (ICM satellite), Chennai.
- International Workshop on Hybrid Logic and Applications (HyLo), Edinburgh.

2009
- Methods for Modalities (M4M-6), Copenhagen.
- Topological and Algebraic methods in Logic (TACL) (Chair), Amsterdam.
- Mathematical Logic in the Netherlands (MLNL), Nijmegen.
- Third Indian Conference on Logic and its Applications (ICLA) (PC member and workshop organiser), Chennai.

2007
- Algebraic and Topological Methods in Non-Classical Logics (TANCL), Oxford.
- International Conference on Order, Algebra and Logics, Nashville.
- International Workshop on Hybrid Logic (HyLo), Dublin.

2005
- Algebraic and Topological Methods in Non-Classical Logics (TANCL), Barcelona.

2004
- North American Summer School in Logic, Language and Information (NASSLLI), Los Angeles.

3.2   Conference and workshop organisation

- 2021: special session on Stone Duality at Boolean Algebras, Lattices Algebraic and Quantum Logic, Universal Algebra, Set Theory, Set-theoretic and Point-free Topology (BLAST).
- 2021: Relational and Algebraic Methods in Computer Science (RAMICS), Luminy.
- 2021: Special session on Stone and Priestley dualities (BLAST 2021), Las Cruces.
- 2019: Topology, Algebra, and Categories in Logics (TACL school), Ile de Porquerolles.
- 2019: Topology, Algebra, and Categories in Logics (TACL conference), Nice.
- 2018: Quantifiers and Duality, Paris.
- 2018: Journée Niçoises Logique catégorique, topos et dualités, Nice.
- 2015: Workshop Duality in Computer Science, Dagstuhl.
- 2013: Workshop Duality in Computer Science, Dagstuhl.
- 2013: Topology and Informatics Days, LIAFA, Paris.
- 2009: Mathematical Logic in the Netherlands (MLNL), Nijmegen.
- 2008: Sheaves in Geometry and Quantum Theory, with Heunen et al., Nijmegen.
- 2007: Algebraic and Topological Methods in Non-Classical Logics, with Priestley, Oxford.
- 1999: Algebraic Structures for Logic, 23rd Holiday Mathematics Symposium, with Harding, Las Cruces.

3.3   Lectures

Lecture series
- Logic Colloquium, 3 hour tutorial, Stockholm, August 2017.

Plenary lectures at international conferences

- 2021: Category Theory 2021 (CT 2020→2021), Genova.
- 2021: Boolean Algebras, Lattices, Algebraic logic, Set theory, and Topology (BLAST 2021), Las Cruces.
- 2021: Annual North American ASL meeting, Notre Dame.
- 2019: Circularity in Syntax and Semantics (CISS 2019), Göteborg.
- 2018: Computability in Europe 2018, Kiel.
- 2018: International conference on semigroups, Lisbon.
- 2017: Topology, Algebra, and Categories in Logic 2017 (TACL), Prague.
- 2016: Logic, Algebra and Truth Degrees, Phalaborwa, South Africa.
- 2016: Logic in Computer Science (LiCS), New York City.
- 2014: Scandinavian Logic Symposium, Tampere.
- 2013: Boolean algebras, Lattices, Algebraic logic, Set theory, and Topology (BLAST 2013), Chapman University, CA.
- 2011: Concept Lattices and their Applications (CLA 2011), Nancy.
- 2011: Ordered Groups and Lattices in Algebraic Logic, Tbilisi.
- 2011: 36th Int. Symposium on Mathematical Foundations of Comp. Sci. (MFCS), Warsaw.
- 2011: Second International Conference on Orders, Algebras and Logics (OAL), Krakow.
- 2010: Logic Colloquium, Paris.
- 2009: Conference on Algebra and Coalgebra in Computer Science (CALCO), Udine.
- 2009: Seventh Panhellenic Logic Symposium (PLS7), Patras.
- 2008: Advances in Modal Logic (AiML), Nancy.
- 2008: Boolean Algebras, Lattice Theory, Algebra, Set-theory, Topology (BLAST), Boulder.
- 2008: Beth Centenary Minisymposium on Mathematical Logic, 5th European Congress of Mathematics (5ECM), Amsterdam.
- 2008: Applications of topological dualities in many-valued logic (ManyVal), Milano.
- 2008: 29th Linz Seminar on Fuzzy Set Theory: Foundations of Lattice-Valued Mathematics with Applications to Algebra and Topology (LINZ), Linz.
- 2007: Arbeitstagung Allgemeine Algebra (AAA75), Darmstadt.
- 2006: International Symposium on Ordered Structures in Many-Valued Logic (ManyVal), Massa Lubrense.
- 2004: 19th Summer Topology Conference, Cape Town.
- 2003: International Conference on Algebraic and Topological Methods in Non-Classical Logics (TANCL), Tbilisi.
- 2003: Lattices, Universal Algebra and Applications, Lisbon.
- 2001: Tarski Centenary Conference, Warsaw.
- 2000: 21th Linz Seminar on Fuzzy Set Theory: Mathematical Aspects of Non-Classical Logics and Fuzzy Inference (LINZ), Linz.
- 1999: 20th Linz Seminar on Fuzzy Set Theory: Topological and Algebraic Structures (LINZ), Linz.
- 1996: Conference on Modern Algebra and its Applications, Nashville.

Plenary lectures at international workshops

- 2020: 99th Arbeitstagung Allgemeine Algebra, Siena.
- 2019: Logic and Structure in Computer Science and Beyond (LSCSB), Leiden.
- 2018: Workshop on Algebra, Logic and Topology, Coimbra.
- 2018: Achim Jung Fest, Birmingham.
- 2018: International Workshop on Topological Methods in Logic (Tolo VI), Tbilisi.
- 2018: Non-commutative structures, Portorož.
- 2018: Journées Niçoises: Logique catégorique, topos et dualités, Nice.
- 2017: Logical Structures in Computation Reunion Workshop, Simons Institute, Berkeley.
- 2017: 37th Linz Seminar on Fuzzy Sets: Enriched category theory and related topics, Linz.
- 2016: Logical Structures in Computation, Simon's Institute, UC Berkeley.

- 2015: Joint meeting of the GDRs Langages, Types, et Preuves (LTP) - Logique, Algèbre, Calcul (LAC) - Géométrie du Calcul (Geocal), Nancy. (cancelled due to illness)
- 2015: Duality in Computer Science, Dagstuhl. (cancelled due to illness)
- 2015: Topology workshop, University of Cape Town. (cancelled due to illness)
- 2015: Theory workshop, Wilhelm-Schickard-Institut (Tübingen University), Freudenstadt.
- 2014: Beyond 2014, Florence.
- 2014: Arbeitstagungen Allgemeine Algebra (AAA88), Warsaw.
- 2014: International Workshop on Topological Methods in Logic IV (TOLO IV), Tbilisi.
- 2014: Workshops on Duality and Probabilistic Systems, Holetown.
- 2013: Duality in Computer Science, Dagstuhl.
- 2013: A scientific meeting in honor of Antonino Salibra.
- 2013: Algebra & Coalgebra meet Proof Theory (ALCOP), Utrecht.
- 2012: Duality theory in algebra, logic, and computer science, Oxford.
- 2011: Workshop on Universal models, Amsterdam
- 2010: Algebra & Coalgebra meet Proof Theory (ALCOP), London.
- 2010: International Workshop on Topological Methods in Logic II, Tbilisi.
- 2010: Colloque International Logique, catégories, sémantique, Bordeaux.
- 2010: Categorical information flow in quantum physics and linguistics, Oxford.
- 2009: Dagstuhl Seminar on Coalgebraic Logics, Schloss Dagstuhl.
- 2009: Arbeitstagung Allgemeine Algebra (AAA78), Bern.
- 2009: Workshop in honour of Dick de Jongh and Leo Esakia, Eighth International Tbilisi Symposium on Language, Logic and Computation, Bakuriani.
- 2008: DIAMANT/EIDMA Symposium, Leiden.
- 2007: Arbeitstagung Allgemeine Algebra (AAA75), Darmstadt.
- 2006: Algebra & Substructural Logic – Take Three (ASL III), Krakow.
- 2006: Amsterdam-London Workshop on Modal Logic, Amsterdam.
- 2005: Workshop on Modal Logic, Model Theory and (Co)Algebras, Amsterdam.
- 2001: Workshop on Modal Logic, Amsterdam.
- 2000: Workshop on Algebraic methods in Substructural Logic (ASL I), Kanasawa.

International research Schools

- 2018: SGSLPS Spring school, Bern, Switzerland.
- 2013: Ph.Ds in Logic IV, Munich, Germany.
- 2013: CUSO Winter School in Mathematics and Computer Science: Proof and Computation, Les Diablerets, Switzerland.
- 2011: EWM Summer School, Lorentz Center, Leiden, NL.
- 2011: Ph.D.s in Logic III, Brussels, Belgium.
- 2009: 8th International Tbilisi Symposium on Language, Logic and Computation, Bakuriani.
- 2008: Second Indian Winter School on Logic, Kanpur, India.
- 2001: 13th European Summer School in Logic Language and Information (ESSLLI), Helsinki.
- 2000: Complexo Interdisciplinar da Universidade de Lisboa, Lisbon, Portugal.
- 1999: First Southern African Summer School and Workshop on Logic, Universal Algebra, and Theoretical Computer Science (LUATCS), Johannesburg, South Africa.

Outreach/general audience lectures

- 2019: Women in mathematics mentoring session, University of Oregon.
- 2019: Lonseth Alumni Lecture, Oregon State University.
- 2018: Panelist at Women in Computability Workshop, Kiel.
- 2018: Participant at Gender Issues and European Women in Mathematics, Portorož.
- 2016: LICS Logic Mentoring Workshop, New York.
- 2009: Professorial Oratie, Radboud University Nijmegen.

- 2009: Opening of ceremony, Van Melsen Prijs, Radboud University Nijmegen.
- 2008: NWO-EW (Dutch Science Foundation-Exact Sciences Division) Parallelle Werelden Symposium, Muziekgebouw aan 't IJ, Amsterdam.
- 2003: Panelist at Shaping Careers Workshop, Association for Women in Mathematics (AWM) at the Joint Mathematics Meetings, Baltimore.
- 2001: Applications of modal logic in algebra, Address at the Book Launch for 'Modal Logic' by Patrick Blackburn, Maarten de Rijke and Yde Venema, Amsterdam.

Other talks at conferences and workshops

- *A duality theoretic view on limits of finite structures*, DaLFI : Duality and Logic in the passage from the Finite to the Infinite, November 2022, Paris.
- *Duality and the substitution principle*, Computer Science Logic (CSL 2017), Stockholm, August 2017.
- *Duality for sheaf representations and related decompositions of distributive lattice ordered algebras*, Topology, Algebra, and Categories in Logic, June 2015.
- *Distributive lattice-structured ontologies*, Algebraic and Topological Methods in Non-Classical Logics III, Oxford, August 2007.
- *Generalised Kripke frames*, Algebraic and Topological Methods in Non-Classical Logics II, Barcelona, June 2005.
- *Anselms Gudsbevis*, Dansk Forskning i Matematikkens Historie og Filosofi IV, Conference organised by Netvœrk i Matematikkens Historie og Filosofi, November, 2004.
- *Canonical extensions of partially ordered algebras*, 999th AMS Meeting, Southeastern Section, Vanderbilt University, October 16–17, 2004.

Talks at universities (since 2005)

2023 (February) Mathematics Colloquium, Université Côte d'Azur;

2019 (April) Mathematics Colloquium, University of Oregon;

2019 (April) Algebra seminar, University of Oregon;

2018 (August) Seminar LACIM, UQAM;

2017 (February) Mathematics Colloquium, University College Cork;

2016 (November) Logic Colloquium, UC Berkeley;

2015 (March) Descriptive Set Theory Seminar, Paris 6;

2014 (November) Mathematics Colloquium, University of Bern;

2014 (April) Séminaire 'Des Mathématiques', DMA, École Normale Supérieure (ENS Ulm), Paris;

2010 (June) Séminaire Complexité, Logique et Informatique, Paris 7; (June) Séminaire de l'institut Gaspard-Monge, Marne-la-Vallée; (July) Groupe de travail Logique et Sémantique, Bordeaux.

2009 (May) Semantics Colloquium, Radboud University Nijmegen; (April) Mathematics Colloquium, Radboud University Nijmegen; (April) Mathematics Colloquium, Leiden University; (January) Algebra and Geometry Seminar, Laboratoire de Mathematiques Nicolas Oresme, Caen.

2008 (September) Student exchange programme Radboud University - Jagelonian University; (May) Mathematics Colloquium, University of Groningen; (February) Mathematics Colloquium, University of Utrecht;

2007 (October) ILLC Algebra&Coalgebra Seminar, University of Amsterdam; (April) Mathematics Colloquium, Radboud University.

2006 (December) Computer Science Seminar, University of Leicester; (December) Foundations of Computer Science Lunch Seminar, University of Oxford; (October) Databases Seminar, University of Oxford; (May) LIAFA Automata seminar, Paris 7; (May) Seminar of the PPS, Paris 7; (April) Computer Science Colloquium, New Mexico State University;

2005 (December) Mathematics Colloquium, University of Houston; (September) Mathematics Colloquium, New Mexico State University; (August) Category Theory Seminar, Cambridge University; (July) The Oxford Advanced Seminar on Informatic Structures, University of Oxford; (May) Computer Science and Engineering Seminar, Denmark's Technical University; (April and May) Seminar of the Copenhagen Logic Group, Roskilde University.

3.4   Research management and promotion

PI of the ERC Advanced grant, DuaLL, 2015–2021

Member of the CoPil, EUR SPECTRUM, Université Côte d'Azur, 2019–2020

Member of the Conseil de Gestion de l'UFR de Sciences, Université Côte d'Azur, 2018–2020

Member of the Groupe de travail sur les Relations Internationales, Université Côte d'Azur, 2018–2019

Member of the CoNRS, section 41 (Mathematics) and of the INSMI Scientific Board, 2012–2015

Chair of the Algebra & Logic group at Radboud University, 2007–2011

The group is one of three making up the department of mathematics. It counts 12 researchers (6 tenured faculty members, and a fluctuating number of post docs, and PhD students). The work of the group is centred on the interplay between algebra, logic, and theoretical computer science. Locally, the group has strong ties with the computer science groups of Barendregt (Foundations of Computer Science) and Jacobs (Security of Systems). The chair has the responsability for research and teaching management of the group.

Consulting, 1999–2002

Complex adaptive systems, Physical Science Laboratory, New Mexico. Start-up of logic group, development of initial research directions, hiring (3 full-time researchers), organiser of working seminar, competitive awareness assessments.

Committees

- Dutch International Scientific Evaluation Board (ISEB) for Mathematics, 2018.
- Hiring Committees:
    - Professor, Université Côte d'Azur, 2020
    - Assistant Professor of Mathematics, Université de Paris Diderot, 2017
    - 2 Professors of Informatics, Université de Paris Diderot, 2015
    - Assistant Professor of Informatics, Université de Montpelier, 2015
    - Assistant Professor of Informatics, Université de Provence, 2012
    - Professor of Algebra, KDV, University of Amsterdam, 2011.
    - Professor of Logic, ILLC, University of Amsterdam 2010.
    - (as Chair) Assistant Professor of Algebra&Logic, Radboud University Nijmegen 2008.
    - Assistant Professor of Informatics and Security, Radboud University Nijmegen 2008.
    - (as Chair) Professor of Stochastics, Radboud University Nijmegen 2008.
    - Professor of Formal Philosophy, Roskilde University 2008.
    - Assistant Professor of Informatics, AAlborg Universitet at Esbjerg 2007.
    - Department of Mathematical Sciences, New Mexico State University 1997.
- Tenure and Promotion Committees:

    New Mexico State University Computer Science, 1999–2004, 2005–2006 (Chair promotion to Professor 2003–2004).

    New Mexico State University Mathematical Sciences, (to Associate Professor) 1998–1999, (to Professor) 2000–2004 (Chair 2001–2004).

In addition I have served on Committees Advisory to the Department Chair and a great number of Teaching Committees, local and national.

Scientific reviewing and refereeing

- National grant review panels:

    VIDI NWO-EW 2007–2010 (this is the most prestigious mid-career grant scheme for the exact sciences in the Netherlands; the panel of 4-6 researchers makes the final recommendation through a three-step process: pre-selection and assignment of 3-5 international expert reviewers; shortlisting of candidates to be interviewed; interviewing and final selection jointly by the three panels for computer science, mathematics, and astronomy, respectively).

    (US)NSF Division of Mathematical Sciences Interdisciplinary Program 2003 (this was at the time the NSF's only interdisciplinary program; the panel of 10-12 researchers spent 2-3 days in Washington in panel discussion making the final recommendation based on the proposals and 3-5 expert reviews for each application).

- Review of individual grant proposals:
    - Polish Academy of Sciences;
    - Swiss Science Foundation;
    - (South Africa) NRF;
    - (Netherlands) NWO;
    - (US) NSF;
    - New York Academy of Sciences.
- Reviewing, Zentralblatt für Mathematik.

3.5   Teaching

Courses

(joint with Carlos Simpson) M2 course of the Master programme in mathematics with connections to new AI program at UCA (2019–2020): Symbolic reasoning and formal logics (30 hours).
(joint with Carlos Simpson) M2 course of the Master programme in mathematics (Winter 2018–2019): Méthodes topologiques et catégoriques en algèbre (30 hours).

M2 course of the Master programme *Logique Mathématique et Fondements de l'Informatique* at Université Paris Diderot (Spring 2014 and Spring 2015): Duality theory in logic and informatics (50 hours each year).

Taught in the Dutch national master, at Radboud University, New Mexico State University, University of Houston, Vanderbilt University, Université de Haute-Alsace, Université de Nice, University of Copenhagen, Denmark's Technical University, and University of Oxford.

- Service courses: Numbers, Mathematics Appreciation, Calculus I, Calculus II, Calculus III, Linear Algebra, Linear Programming, Calculus for Business Majors, Finite Mathematics for mathematics and computer science majors.
- Advanced undergraduate courses: Discrete Mathematics, Abstract Algebra, Rings and Fields, Differential Equations, Analysis I and II, Algebra I and II, Linear Algebra for Mathematics Majors, Linear Algebra for Engineers, Mathematical Logic, Communicating Mathematics.
- Honours courses: Spirit and Evolution of Mathematics, Great Theorems: The Art of Mathematics.
- Graduate courses: Model Theory, Modern Algebra I and II, Lattice Theory, Universal Algebra, Mathematical Logic, Applied Mathematical Logic, Set Theory, Non-Standard Analysis, Algebraic Logic, Formal Concept Analysis, Lattices and duality.

Other education related activities

- La théorie de la dualité en Logique et en informatique, Séminaire des Mathématiques, École Normale Supérieure (ENS Ulm), Paris.
- Place Value systems, Calculating, and Bar codes, with Dion Coumans and Lorijn van Rooijen, Nijmeegse 2-daagse (course for visiting high-school students), Nijmegen, NL, October 2009.
- Sierpinski triangle, with Dion Coumans and Marleen Kock, Outreach project at Dominicus College, Nijmegen, NL, May 2009.
- Polemic presentation on primary school mathematics education, NVORWO Lustrumsymposium in Utrecht, December 2007.
- Mathematics: an intellectual endeavour, Dominicus College, opening of new building, Nijmegen, December 2007.
- Pure mathematics tutorials, Christ Church, University of Oxford, in charge of the pure maths tutorials at Christ Church for the academic year 2006-2007.
- Logik, Tro, Viden, Interdisciplinary seminar series (3 x 2 hrs.) for the special focus area: Religion in the 21. century, University of Copenhagen, September 2004.
- Helping Students Become Active Learners of Mathematics, US National Science Foundation Chautauqua Series, three day teachers' workshops, with D. Pengelley, UT Austin, April 1996 and March 1995.
- Student Projects at New Mexico State University and their Recent Migration into Classroom Activities, two hour Mathematicians and Education Reform (MER) workshop for Calculus Reform: Issues, Policies

and Programs, Bowdoin College, Maine, July 1992.

- Other outreach activities: Outreach coordinator 2002–2004; Mathematics projects in elementary school, middle and high school; career day presentations; Pi Mu Epsilon talks; Prefreshman program presentations (e.g. STEP).