

Curriculum vitae

Prof. Christopher Voll, PhD (cantab)

Personal Information

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Academic Positions

07/2011– Professor of Mathematics, in particular Algebra, Bielefeld University
 (W2 before December 2016, W3 thereafter)
02/2011–06/2014 Reader in Pure Mathematics, Southampton University
09/2006–02/2011 Lecturer in Pure Mathematics, Southampton University
04/2006–08/2006 Research fellow, École Polytechnique Fédérale de Lausanne
10/2005–03/2006 Research fellow, Max-Planck-Institut für Mathematik (MPIfM), Bonn
10/2004–09/2005 Deutsche Forschungsgemeinschaft (DFG) Forschungsstipendiat, Heinrich-Heine-Universität Düsseldorf
10/2002–09/2004 Engineering and Physical Sciences Research Council (EPSRC) Postdoctoral Fellow in Mathematics, Oxford University

Publications

- [1] Subgroup growth in free class-2-nilpotent groups, with V. Siconolfi and M. Vantomme, J. Comb. Algebra (2024), published online first DOI
- [2] Ehrhart polynomials, Hecke series, and affine buildings, with C. Alfes, J. Maglione, Sémin. Lothar. Combin. **91B** (2024), Art. 84, 12 pp.
- [3] Generalized Igusa functions and ideal growth in nilpotent Lie rings, with A. Carnevale, M. M. Schein, Algebra & Number Theory **18** (2024), No. 3, 537–582, DOI.
- [4] Flag Hilbert-Poincaré series of hyperplane arrangements and their Igusa zeta functions, with J. Maglione, Israel J. Math. **1** (2024), 177–233.
- [5] Groups, graphs, and hypergraphs: average sizes of kernels with support constraints, with T. Rossmann, Mem. Amer. Math. Soc. Mem. Amer. Math. Soc. **294** (2024), no. 1465, v+120 pp.

- [6] Zeta functions of integral nilpotent quiver representations, with S. Lee, *Int. Math. Res. Not. (IMRN)*, 2021, rnab345.
- [7] Hessian matrices, automorphisms of p -groups, and torsion points of elliptic curves, with M. Stanojkovski, *Math. Ann.* **381** (2021), 593–629.
- [8] Ideal zeta functions associated to a family of class-2-nilpotent Lie rings, *Quarterly J. Math.* **71** (2020), 959–980.
- [9] Generalized Igusa functions and ideal growth in nilpotent Lie rings, with A. Carnevale and M. M. Schein, *Sém. Lothar. Combinat.* **84B** (2020), Art. 71.
- [10] Zeta functions of groups and rings – functional equations and analytic uniformity, in *Spectral Structures and Topological Methods in Mathematics*, editors M. Baake, F. Götze, W. Hoffmann, EMS Series of Congress reports **13** (2019), 345–363.
- [11] Local functional equations for submodule zeta functions associated to nilpotent algebras of endomorphisms, *Int. Math. Res. Not. (IMRN)* (2019), 2137–2176.
- [12] Enumerating graded ideals in graded rings associated to free nilpotent Lie rings, with S. Lee, *Math. Z.* **290** (2018), 1249–1276.
- [13] Enumerating traceless matrices over compact discrete valuation rings, with A. Carnevale and S. Shechter, *Israel J. Math.* **227** (2018), 957–986.
- [14] Orbit Dirichlet series and multiset permutations, with A. Carnevale, *Monatsh. Math.* **186** (2017), 215–233.
- [15] Uniform analytic properties of representation zeta functions of finitely generated nilpotent groups, with Duong H. D., *Trans. Amer. Math. Soc.* **369** (2017), 6327–6349.
- [16] Representation zeta functions of some nilpotent groups associated to prehomogeneous vector spaces, with A. Stasinski, *Forum Math.* **29** (2017), 717–734.
- [17] Arithmetic groups, base change, and representation growth, with N. Avni, B. Klopsch and U. Onn, *Geom. Func. Anal. (GAFA)* **26** (2016), 67–135.
- [18] Similarity classes of integral p -adic matrices and representation zeta functions of groups of type A_2 , with N. Avni, B. Klopsch and U. Onn, *Proc. Lond. Math. Soc.* **112** (2016), 267–350.
- [19] Zeta functions of groups and rings – recent developments, in *Groups St Andrews 2013 in St Andrews* (editors C. M. Campbell, M. R. Quick, E. F. Robertson, C. M. Roney-Dougall), London Math. Soc. Lecture Note Ser. **422** (2015), 469–492.
- [20] Normal zeta functions of the Heisenberg groups over number rings I – the unramified case, with M. M. Schein, *J. Lond. Math. Soc. (2)* **91** (2015), 19–46.
- [21] Normal zeta functions of the Heisenberg groups over number rings II – the non-split case, with M. M. Schein, *Israel J. Math.* **211** (2016), 171–195.
- [22] Enumerating characters and classes of p -groups, with E. A. O’Brien, *Trans. Amer. Math. Soc.* **367** (2015), 7775–7796.
- [23] Representation zeta functions of nilpotent groups and generating functions for Weyl groups of type B , with A. Stasinski, *Amer. J. Math.* **136** (2014), 501–550.
- [24] A New Statistic on the Hyperoctahedral Groups, with A. Stasinski, *Electron. J. Combin.* **20**, issue 3 (2013), P50.
- [25] Representation zeta functions of compact p -adic analytic groups and arithmetic groups, with N. Avni, B. Klopsch and U. Onn, *Duke Math. J.* **162** (2013), 111–197.
- [26] Representation zeta functions of some compact p -adic analytic groups, with N. Avni, B. Klopsch and U. Onn, in *Zeta functions in algebra and geometry*, *Contemp. Math.* **566** (2012), 295–330.

- [27] A newcomer's guide to zeta functions of groups and rings, in *Lectures on profinite topics in group theory*, with B. Klopsch, N. Nikolov (editor D. Segal), London Math. Soc. Student Texts **77** (2011), 99–144.
- [28] Functional equations for zeta functions of groups and rings, *Ann. Math.* **172** (2010), 1181–1218.
- [29] On representation zeta functions of groups and a conjecture of Larsen-Lubotzky, with N. Avni, B. Klopsch und U. Onn, *C. R. Math. Acad. Sci. Paris, Ser. I*, **348** (2010), 363–367.
- [30] Enumerating finite class-2-nilpotent groups on 2 generators, *C. R. Math. Acad. Sci. Paris, Ser. I*, **347** (2009), 1347–1350.
- [31] Zeta functions of three-dimensional p -adic Lie algebras, with B. Klopsch, *Math. Z.* **263** (2009), 195–210.
- [32] Igusa-type functions associated to finite formed spaces and their functional equations, with B. Klopsch, *Trans. Amer. Math. Soc.* **361** (2009), 4405–4436.
- [33] Counting subgroups in a family of nilpotent semidirect products, *Bull. London Math. Soc.* **38** (2006), 743–752.
- [34] Normal subgroup growth in free class-2-nilpotent groups, *Math. Ann.* **332** (2005), 67–79.
- [35] Functional equations for local normal zeta functions of nilpotent groups, with an appendix by A. Beauville, *Geom. Func. Anal. (GAFA)* **15** (2005), 274–295.
- [36] Zeta functions of groups - singular pfaffians, in *Essays in geometric group theory*, Ramanujan Math. Soc. Lect. Notes Ser. **9** (2009), 145–159.
- [37] Zeta functions of groups and enumeration in Bruhat-Tits buildings, *Amer. J. Math.* **126** (2004), 1005–1032.

Education and professional qualifications

- | | |
|-----------------|--|
| 11/2008 | Habilitation in Mathematik and venia legendi, Düsseldorf |
| 10/1999–09/2002 | PhD in Pure Mathematics, University of Cambridge. Title: Zeta functions of groups and enumeration in Bruhat-Tits buildings. Supervisor: M. P. F. du Sautoy |
| 10/1998–07/1999 | Certificate of Advanced Study in Mathematics ('Part III of the Mathematical Tripos'), University of Cambridge |
| 10/1996–09/1998 | Reading Mathematics and Philosophy, Hamburg University, Germany. 'Vordiplom' in mathematics |
| 10/1995–09/1996 | Reading Mathematics and Philosophy, Leipzig University |
| 07/1994 | Abitur, Joh.-Seb.-Bach-Gymnasium Windsbach (Bayern) |

Major research Grants

- | | |
|-----------------|---|
| 01/2022–12/2025 | co-PI in three projects of DFG ¹ TRR 358 "Integral Structures in Geometry and Representation Theory" (Bielefeld–Paderborn) |
| 10/2017–12/2021 | DFG grant for joint research project with B. Klopsch (Düsseldorf) and A. Fel'shtyn (Szczecin) on "Zeta functions of groups and dynamical systems" with in the Polish-German research initiative "Beethoven 2". Value: € 197,000 (Bielefeld) |
| 10/2018–12/2021 | DFG grant for project "Order zeta functions and resolutions of singularities" (co-PI with A. Frühbis-Krüger, Oldenburg). Value: € 132,600 |

¹See <http://gepris.dfg.de/gepris/person/1834343> DFG-grant portfolio

- 01/2015–12/2017 German-Israeli Foundation for Scientific Research and Development Grant “Subgroup and subring growth under base extension” (G-1246-304.6/2014; co-PI with M. M. Schein, Bar-Ilan University). Value: € 180,000
- 07/2013–06/2016 DFG Priority Programme 1489 ‘Algorithmic and Experimental Methods in Algebra, Geometry, and Number Theory’ project on ‘Toroidal methods for computing zeta functions of groups and rings’ (VO-1248/3-1; sole PI). Value: €239,600
- 07/2013–06/2017 DFG Collaborative Research Centre 701 projects C10 ‘Local cohomology and support in representation theory’ (co-PI with H. Krause, Bielefeld) and C12 ‘Representation growth of arithmetic groups’ (sole PI). Value: €497,000 (C10) + €248,500 (C12)
- 04/2009–12/2011 EPSRC First Grant (EP/F044194/1) for project ‘Zeta functions of groups and rings and Igusa’s local zeta function’. Value: £269,889
- 10/2005–03/2006 Max-Planck-Gesellschaft, postdoctoral stipend. Value: €8,808
- 10/2004–09/2005 DFG Forschungsstipendium (postdoctoral stipend). Value: €17,616
- 10/2002-09/2004 EPSRC Postdoctoral Fellowship in Mathematics (GR/R93827/01), Oxford University. Value: £67,177

Minor grants and awards

- 09/2022 Foundation Compositio Mathematica grant to co-organize (with M. Juhnke-Kubitzke, R. Sanyal, L. Kühne) conference “Geometry meets Combinatorics in Bielefeld”
- 08/2021 Two-week ‘Research-in-Pairs’ (RiP)-stay at Mathematisches Forschungsinstitut Oberwolfach (MFO) to collaborate with C. Haase (FU Berlin) and R. Sanyal (Goethe-University Frankfurt).
- 2019 Nomination for the Karl Grottemeyer prize for excellence in teaching at Bielefeld University
- 09/2022 Foundation Compositio Mathematica grant to co-organize (with B. Klopsch, W. Veys, W. Zuniga-Galindo) the “Fourth International Workshop on Zeta Functions in Algebra and Geometry”
- 05/2016 Faculty of Mathematics Teaching Award “Goldener Wanderwischer” for best lecture course in the category “service teaching”, Bielefeld.
- 07/2014–06/2017 Feodor-Lynen Research Stipend to visit E. A. O’Brien (Auckland), Alexander-von-Humboldt Foundation.
- 06/2010 EPSRC Small Grant (EP/H044779/1, with B. Klopsch, PI) to collaborate with U. Onn, Beersheva, Israel. Value: £13,238
- 01/2010 EPSRC Overseas Travel Grant (EP/H044779/1) to collaborate with E. A. O’Brien, Auckland, NZ. Value: £7,712
- 02/2009 London Mathematical Society (LMS) Scheme 2 grant (with M. P. F. du Sautoy and B. Klopsch) to fund visit by M. Berman. Value: £1,200
- 01/2009 EPSRC Small Grant (EP/G055408/1, with B. Klopsch, CI) to fund workshop ‘Representations and Asymptotic Group Theory’, April 2009, Southampton, and visit by N. Avni. Value: £14,740
- 11/2008, 03/2007 Two-week ‘Research-in-Pairs’ (RiP)-stays at MFO to collaborate with B. Klopsch
- 07/2008 Royal Society Outgoing Short Visits Grant to visit E. A. O’Brien and B. Martin, both NZ. Value: £2,680

2007–2013	LMS Scheme 3 grant (with B. Klopsch, N. Nikolov) for research group South England Profinite Groups Meetings. Value: ~£1.000 per year
09/2006–04/2008	Nuffield Foundation, Newly Appointed Lecturer’s grant. Value: £4,800
06/2006–08/2006	Fond National Suisse, Bref Séjour Individuel. Value: CHF 10,870
10/2003–09/2004	Linacre College, Oxford, Junior Research Fellowship (non-stipendiary)
04/2001	Knight-Rayleigh-Prize, University of Cambridge
10/1999–09/2002	Studienstiftung des deutschen Volkes, Promotionsstipendium (PhD grant)
10/1999–09/2002	Cambridge European Trust, European Student Bursary
10/1998–06/1999	German Academic Exchange Service (DAAD), Jahresstipendium
1996–2002	Studienstiftung des deutschen Volkes, membership

Selected talks and presentations

10/2025	17th International Symposium on Natural Sciences, Incheon National University (Korea)
11/2024	Oberseminar Diskrete Mathematik, - Geometrie und Optimierung, Frankfurt a. M.
11/2024	Oberseminar Kombinatorische Algebraische Geometrie, Tübingen
08/2024	Conference ‘Algebra, Analysis, and Aperiodic Order’, Bielefeld University
07/2024	Mathematisches Kolloquium, Heinrich-Heine-Universität Düsseldorf
12/2023	Karlsruher Weihnachtsworkshop, KIT Karlsruhe
11/2023	Algebra Colloquium, Lincoln
10/2023	Buildings 2023, Giessen (contributed talk)
11/2022	Seminar ‘Globale Analysis und Geometrie’, Regensburg
10/2022	Norddeutsches Gruppentheoriekolloquium, Heinrich-Heine-Universität Düsseldorf
03/2022	Mathematical Colloquium, University of Haifa
02/2022	Combinatorial Coworkspace, Haus Bergkranz, Kleinwalsertal
11/2021	Mathematical Colloquium, Osnabrück
08/2021	Workshop on Computational Group Theory, MFO
12/2020	Colloquium Institute for Algebra and Geometry, Otto-von-Guericke Universität Magdeburg
02/2020	Combinatorial Coworkspace, Haus Bergkranz, Kleinwalsertal
02/2020	Group Theory Days 2020, Düsseldorf
07/2019	Advanced School on ‘Representations of pro- p groups’, Instituto de Ciencias Matemáticas, Madrid
06/2019	Oberseminar Geometrische Analysis und Zahlentheorie, University of Paderborn
03/2019	Algebra and Combinatorics Seminar, University of Auckland
02/2019	Algebra and Topology Seminar, Australian National University, Canberra
09/2018	Workshop ‘Zeta functions of groups and dynamical systems’, Düsseldorf

09/2018	Conference ‘Groups, Geometries, and Representations 2018’, Oxford
09/2017	Algebra Seminar, Leiden
07/2017	Mathematical Colloquium, Karlsruhe
07/2017	Mathematical Colloquium, Paderborn
12/2016	Seminaire Geometrie et Theorie des Modeles, ENS Paris
08/2016	Workshop on Computational Group Theory, MFO
05/2016	Algebra Seminar, Kaiserslautern
05/2016	Dresdner Mathematisches Seminar
07/2015	Mathematisches Kolloquium, Hannover
03/2015	Algebra and Combinatorics Seminar, University of Auckland
12/2014	Mathematisches Kolloquium, Düsseldorf
09/2014	Third International Workshop on Zeta Functions in Algebra and Geometry, Guanajuato, Mexico
05/2014	Amitsur Algebra Seminar, Hebrew University, Jerusalem
05/2014	Algebra Seminar, Bar-Ilan University
03/2014	Workshop ‘Experimental Methods in Computational Algebra’, Hannover
10/2013	Conference ‘Geometry, Groups and Topology 2013’, Karlsruhe
08/2013	Groups St Andrews 2013 in St Andrews (one hour speaker)
04/2013	Workshop ‘Arithmetic Groups’, Banff International Research Station
11/2012	Darstellungstheorietage Magdeburg (contributed talk)
06/2012	Norddeutsches Gruppentheorie-Kolloquium 2012, Braunschweig
09/2011	DMV Jahrestagung, Minisymposium Geometric Group Theory, Köln
03/2011	North British Geometric Group Theory seminar, Durham
03/2011	Algebra and Geometry seminar, Bristol
05/2010	Second International Workshop on Zeta Functions in Algebra and Geometry, Palma de Mallorca
03/2010	Algebra seminar, University of Auckland
02/2010	Algebra seminar, Oxford
11/2009	Number theory seminar, Oxford
07/2009	Mathematische Gesellschaft, Göttingen
06/2009	International conference Activités Additives et Analytiques, Lille
05/2009	Algebra seminar, Oxford
03/2009	London Algebra Colloquium
11/2008	Habilitationskolloquium, Düsseldorf
10/2008	Algebra seminar, Nottingham
07/2008	Algebra seminar, University of Auckland, NZ
06/2008	Workshop on Profinite and Asymptotic Group Theory, MFO
09/2007	Conference ‘Profinite and Asymptotic Group Theory’ (to celebrate Professor D. Segal’s 60th birthday), Trento, Italy

06/2007	(First) International Workshop on Zeta Functions in Algebra and Geometry, Segovia
02/2007	Number Theory and Algebraic Geometry Joint Seminar K.U. Leuven - U. Gent.
01/2007	Pure Mathematics Colloquium, Durham
11/2006	Algebra seminar, Birmingham
10/2006	Algebra seminar, Oxford
05/2006	Workshop on Pro- p Extensions of Global Fields and pro- p Groups, MFO
04/2006	Seminaire Methodes Algebriques Discretes, EPF, Lausanne
03/2006	Number Theory Lunch Seminar, MPIfM, Bonn
05/2005	Conference on Asymptotic and Probabilistic Methods in Geometric Group Theory, Geneva (non-plenary talk)
03/2005	Number Theory Lunch Seminar, <i>Max-Planck-Institut für Mathematik</i> , Bonn.
06/2004	Mathematisches Kolloquium, Düsseldorf
06/2004	Rencontres Arithmétiques, Caen
01/2004	Algebra seminar, Oxford
12/2003	AMS Regional Meeting, Bangalore (non-plenary talk)
11/2003	'Counting on buildings' (interdisciplinary talk) Linacre College, Oxford
05/2003	Workshop Profinite groups and discrete subgroups of Lie groups, MFO
06/2002	Algebra seminar, Cambridge

Organisation of conferences, workshops etc.

06/2026	'6th International Workshop on Zeta Functions in Algebra and Geometry', Galway (with A. Carnevale, R. Osburn, T. Rossmann, W. Veys)
09/2025	Annual meeting of the priority programme 'Combinatorial Synergies', Hannover (with M. Brandenburg, M. Cuntz)
08/2025	workshop 'Cohomology Theories for Automorphic Forms and Enumerative Algebra' (with C. Alfes, Y. Choie, A. Pohl), Mathematisches Forschungsinstitut Oberwolfach
12/2024	two-week programme 'Combinatorial Methods in Enumerative Algebra', ICTS Bangalore (member of organizing committee)
09/2023	week-long conference 'Dynamics and asymptotics in algebra and number theory in Bielefeld', Bielefeld (member of organizing committee)
09/2022	three-day RISM-conference 'New Trends Around Profinite Groups 2022', Villa Toeplitz, Varese (member of organizing committee)
09/2022	Section 'Algebra and Number Theory' of DMV Annual Meeting 2022 (with C. Alfes-Neumann)
09/2022	week-long conference 'Geometry meets Combinatorics in Bielefeld', (member of organizing committee, partly supported by Foundation Compositio Mathematica)
05/2022	week-long 'Fifth International Workshop on Zeta Functions in Algebra and Geometry', Nice (member of scientific committee)

03/2021	First Joint Meeting of the Israel Mathematical Union and the German Mathematical Society (DMV) (member of programme committee) [cancelled due to covid 19]
09/2021	week-long CIRM-conference ‘New Trends Around Profinite Groups’, Trento (member of organizing committee)
05/2017	week-long ‘Fourth International Workshop on Zeta Functions in Algebra and Geometry’, Bielefeld University (member of organizing committee, partly supported by DFG and Foundation Compositio Mathematica)
09/2013	four-day workshop ‘Zeta functions of groups and related algebraic structures’, University of Padova (with E. Detomi, B. Klopsch and A. Lucchini, partly supported by LMS)
03/2012	two-day workshop ‘Asymptotic Group Theory and Model Theory’, Royal Holloway University of London (with B. Klopsch, supported by EPSRC)
06/2009	week-long workshop ‘Representation Growth’ (Batsheva-Seminar), Midrasha Sde-Boker, Israel (with N. Avni and U. Onn)
04/2009	two-day workshop ‘Representations and Asymptotic Group Theory’, Southampton (with B. Klopsch, supported by EPSRC)
2007–2013	research group ‘South England Profinite Groups Meetings’ (jointly with B. Klopsch, N. Nikolov, three meetings per year, supported by LMS)

Other professional services and memberships

	Referee for Acta Arithm., Alg. Combinat., Amer. J. Math., Ann. Comb., Arch. Math. (3), Comm. Algebra, Composition, Contemp. Math., Electron. J. Combin., Groups Geom. Dyn., Int. J. Alg. Comp., Israel J. Math. (5), J. Algebra (5), J. Group Theory (6), J. Lond. Math. Soc. (4), J. Number Theory, Monatsh. Math., Math. Proc. Cambridge Phil. Soc., Math. Z., Nagoya Math. J., Proc. Amer. Math. Soc., Proc. Lond. Math. Soc. (4), Quart. J. Math., Revista Colombiana de Matemáticas, Rev. Un. Mat. Argentina, Trans. Amer. Math. Soc. (3)
	23 contributions to the Mathematical Reviews (AMS)
since 2020	Member of the German Mathematical Society (DMV)
since 2002	Member of the London Mathematical Society
since 2001	Member of the Cambridge Philosophical Society

Postdocs mentored

01/2025–present	Dr. Jianhao Shen
10/2022–present	Dr. Martina Conte
09/2022–present	Dr. Moritz Petschick
10/2021–12/2024	Dr. Karthika Rajeev
10/2022–09/2024	Dr. Ilaria Castellano (now researcher at Politecnico di Torino)
10/2020–09/2021	Dr. Viola Siconolfi (now researcher at Politecnico di Bari)
09/2019–03/2021	Dr. Seungjai Lee (now Assistant Professor at Incheon National University)
09/2018–03/2022	Dr. Josh Maglione (now Lecturer at Galway University)
09/2017–08/2019	Dr. Mima Stanojkovski (now Associate Professor at Trento University)

01/2016–08/2019 Dr. Alastair Litterick (now Lecturer at the University of Sussex)
 05/2015–09/2018 Dr. Angela Carnevale (now Lecturer at Galway University)
 04/2016–09/2017 Dr. Ann Kiefer (now researcher at the Luxembourg Centre for Educational Testing at the Université de Luxembourg)
 10/2015–06/2017 Dr. Thomas Cauwbergs
 03/2014–02/2016 Dr. Matthew Levy
 10/2011–08/2016 Dr. Tobias Rossmann (now Lecturer at Galway University)
 09/2013–09/2015 Dr. Duong H. Dung (now Lecturer at the University of Wollongong)
 04/2009–12/2011 Dr. Alexander Stasinski (now Professor at Durham University)

PhD students supervised

09/2024–present Alec Schmutz
 09/2023–present Noam von Rotberg
 09/2023–present Tomas Reunbrouck
 10/2021–present Lars Bügemannskemper
 10/2022–09/2024 Bianca Marchionna (PhD awarded 12/2024, co-supervised with T. Weigel, Milano-Bicocca)
 10/2019–09/2023 Marlies Vantomme (PhD awarded 09/2023)
 08/2018–09/2023 Elena Tielker (PhD awarded 09/2023)
 06/2015–11/2018 Paula Lins (PhD awarded 01/2019, now Lecturer at Lincoln University, UK)
 10/2010–09/2015 Michele Zordan (PhD awarded 04/2016, now Senior Teaching Fellow at Imperial College London)
 10/2008–10/2012 Rob Snocken (PhD awarded 12/2013)

Undergraduate Teaching

2011–present Lecture courses taught at Bielefeld include:

- “Ausgewählte Kapitel der Mathematik” (Lehramt für Haupt- und Realschule, Bachelor; 2024)
- Mathematics for Chemistry (2017, 2020, 2024, 2025)
- Mathematics for Computer Scientists (Bachelor; 2019, 2021)
- Lie Algebras and Lie Groups (Master; 2017, 2021, 2023)
- Commutative Algebra and Algebraic Geometry (Master; 2017, 2020)
- Algebraic Number Theory (Master; 2016, 2020)
- Linear Algebra for Physicists (2015, 2024)
- Algebra (Bachelor; 2014/15, 2021/22, 2022)
- Lie Algebras (Master; 2014)
- Profinite Groups (Master; 2013)
- Commutative Algebra (Master; 2011/12, 2020)
- Linear Algebra (2012/13, 2013/14 2017/18)
- Groups and Symmetries (Bachelor; 2012)

2011–present	Seminars taught at Bielefeld include: • Bachelorseminar “Arrangements von Hyperebenen” (WiSe 2022/23) • Proseminar “Abzählende Kombinatorik” (SoSe 2016, SoSe 2022) • Masterseminar “Topics in Algebra” (WiSe 2021/22) • Bachelorseminar “Arithmetische Aspekte quadratischer Formen” (WiSe 2019/20) • Masterseminar “Topics in Asymptotic Group Theory” (SoSe 2018) • Proseminar “Graphentheorie” (WiSe 2014/15, SoSe 2017) • Bachelorseminar “Die symmetrische Gruppe – Algebra und Kombinatorik” (WiSe 2015/16) • Proseminar “Coxetergruppen” (SoSe 2015) • Seminar “Kommutative Algebra und Kombinatorik” (SoSe 2012) • GHR-Seminar “Gruppentheorie” (SoSe 2012)
2006–11	Lecture courses taught at Southampton include: • Galois Theory (2010/11) • Groups and Symmetries (2009/11) • Group Theory and its Applications (2008/09) • Elementary Number Theory (2006-09)
2006–11	Semester projects supervised at Southampton: • Elliptic curves and cryptography • The arithmetic of elliptic curves • There are infinitely many Carmichael numbers
2008–11	(Co-)organisation of ‘Consolidation classes’, Southampton
2000–04	Numerous supervisions and tutorials at Cambridge and Oxford
1996–98	‘Übungshelfer’ (=teaching assistant) for various mathematics and service courses, Hamburg

Service and administration

2024– present	Equal Opportunities Manager of TRR 358
2021– present	Member of the Executive Board of the Bielefeld Graduate School in Theoretical Sciences (BGTS), Bielefeld
2021–2023	Member of the Senate, Bielefeld
2011–present	Member of numerous professorial search committees, Bielefeld
2014–present	BAföG-Advisor Mathematics, Bielefeld
2012–2022	Member of ‘Fakultätskonferenz Mathematik’, Bielefeld
2011–2020	Coordinator of ‘Mathematisches Kolloquium’, Bielefeld
2009–11	Senate representative for Mathematics, Southampton
2007–11	ERASMUS Coordinator for Mathematics, Southampton
2007–11	Degree programme coordinator ‘Mathematics and a modern language’, Southampton

Bielefeld, October 2025