

- CONTACT INFORMATION douba@math.uni-bonn.de
<https://www.math.uni-bonn.de/people/douba/>
- RESEARCH INTERESTS Geometric group theory, discrete subgroups of Lie groups, geometric topology, low-dimensional topology, dynamics
- ACADEMIC POSITIONS **Universität Bonn**
 Assistant (Akademischer Rat auf Zeit), September 2025 - August 2032
- Simons Laufer Mathematical Sciences Institute**
 SLMath Postdoc within the program *Geometry and Dynamics for Discrete Subgroups of Higher Rank Lie Groups*, January 2026 - May 2026
- Institut des Hautes Études Scientifiques**
 Huawei Young Talents Program Fellow, September 2022 - August 2025
- EDUCATION **McGill University**
 Ph.D. in Mathematics, October 2022
 - Supervisors: Piotr Przytycki, Dmitry Jakobson
 - Thesis title: *Unipotents and graph manifold groups*
 M.Sc. in Mathematics, October 2017
 - Supervisor: Eyal Goren
 - Thesis title: *Towards a general theory of Weierstrass points on curves*
 B.Sc. in Honours Mathematics, June 2015
First Class Honours in Mathematics
- PUBLICATIONS S. Douba and K. Tsouvalas, *On regular subgroups of $SL_3(\mathbb{R})$* , Math. Res. Lett., to appear.
 S. Douba, G.-S. Lee, L. Marquis, and L. Ruffoni, *Convex cocompact groups in real hyperbolic spaces with limit set a Pontryagin sphere*, Bull. London Math. Soc., to appear.
 N. Bogachev and S. Douba, *Geometric and arithmetic properties of Löbell polyhedra*, Alg. Geom. Top. (2025)
 S. Douba, B. Fléchettes, T. Weisman, and F. Zhu, *Cubulated hyperbolic groups admit Anosov representations*, Geom. Topol. (2025)
 S. Douba, *Systoles of hyperbolic hybrids*, Tunis. J. Math. (2025).
 S. Douba, *Proper $CAT(0)$ actions of unipotent-free linear groups*, J. Inst. Math. Jussieu (2025).
 S. Douba and J. Huang, *Density of systoles of hyperbolic manifolds*, C. R. Math. (2024).
 N. Bogachev, S. Douba, and J. Raimbault, *Infinitely many commensurability classes of compact Coxeter polyhedra in \mathbb{H}^4 and \mathbb{H}^5* , Adv. Math. (2024).
 S. Douba, *A novel witness to incoherence of $SL_5(\mathbb{Z})$* , Proc. Am. Math. Soc. (2024).
 S. Douba and K. Tsouvalas, *Anosov groups that are indiscrete in rank one*, Int. Math. Res. Not. (2023).
 S. Douba, *Virtually unipotent curves in some non-NPC graph manifolds*, Internat. J. Algebra Comput. (2023).
 S. Douba, *A hyperbolic lattice in each dimension with Zariski-dense surface subgroups*, Proc. Am. Math. Soc. (2023).
 S. Douba, *Thin right-angled Coxeter groups in some uniform arithmetic lattices*, Bull. London Math. Soc. (2022).
 S. Douba, *2-Systems of arcs on spheres with prescribed endpoints*, Mich. Math. J. (2021).
- PREPRINTS S. Douba, G.-S. Lee, L. Marquis, and L. Ruffoni, *Convex cocompact groups with three-dimensional limit sets*, preprint.
 S. Douba and K. Tsouvalas, *Matrix entries, unipotents, and linearity of amalgams*, preprint.

S. Douba, F. Fournier-Facio, S. Hughes, and S. Machado, *Quasihomomorphisms to real algebraic groups*, submitted.

S. Douba and F. Vargas Pallete, *On reflections of congruence hyperbolic manifolds*, submitted.

S. Douba, D. Kubrak, and K. Tsouvalas, *Ping-pong in the projective plane over a nonarchimedean field*, submitted.

J. Audibert, S. Douba, G.-S. Lee, and L. Marquis, *Zariski-closures of linear reflection groups*, submitted.

HONOURS AND AWARDS	2025	1851 Research Fellowship (declined)	
	2022	Carl Herz Prize (ISM)	
	2020	Alexis D. and W. Charles Pelletier Fellowship in Mathematics	
	2018–2020	ISM Graduate Scholarship	
	2014, 2015	NSERC Undergraduate Student Research Award	
	2010–2011	Sheila Baillie Scholarship	
TALKS (CONFERENCES & WORKSHOPS)	Aug/Sep	2026	<i>Surface Group Representations</i> (mini-course), Lodha Mathematical Sciences Institute, Mumbai
	July	2026	<i>Summer Conference on Topology and Its Applications (Geometric Group Theory Session)</i> , University of Split, Croatia
	Sep	2025	<i>Hyperbolic manifolds in dimensions 4 (and more)</i> , Centre de recherches mathématiques, Montréal
	June	2025	<i>Swiss Knots 2025</i> , Université de Genève
	April	2025	<i>Higher-rank geometric structures</i> (mini-course), Institut Henri Poincaré, Paris
	Jan	2025	<i>Hyperbolic manifolds, their submanifolds and fundamental groups</i> , IMPA, Rio de Janeiro
	Dec	2024	<i>Arithmetic groups, hyperbolic manifolds, and computation</i> , Institut de Mathématiques de Bordeaux
	July	2024	<i>Joint Meeting AMS-UMI</i> , Palermo, special session on Anosov representations and higher Teichmüller theory
	Feb	2024	<i>Groups and Geometry in the South East</i> , University of Bristol
	June	2023	<i>Groups Around 3-Manifolds</i> , Centre de recherches mathématiques, Montréal
	June	2023	<i>CMS Summer Meeting: Session on Geometric Topology, Pseudo-Anosov Maps, and Complex Dynamics</i> , University of Ottawa
	March	2023	<i>The 56th Spring Topology and Dynamical Systems Conference</i> , Rhodes College
	Oct	2022	<i>Arbeitsgemeinschaft: Higher Rank Teichmüller Theory</i> , Mathematisches Forschungsinstitut Oberwolfach
	Sep	2022	<i>Workshop on Complex Geometry and Geometric Group Theory</i> , Karlsruher Institut für Technologie
	May	2022	<i>Colloque panquébécois de l'ISM XXIV</i>
	April	2022	<i>Joint Mathematics Meetings: AMS Special Session on Geometric Group Theory</i>
	August	2021	<i>World of Geometric Group Theory</i>
	May	2021	<i>The 54th Spring Topology and Dynamical Systems Conference</i> , Murray State University
TALKS (SEMINARS & COLLOQUIA)	April	2026	<i>Geometry & Topology Seminar</i> , California Institute of Technology
	April	2026	<i>Geometry & Topology Seminar</i> , University of California, Riverside
	Feb	2026	<i>Mathematics Colloquium</i> , University of California, Santa Cruz
	Nov	2025	<i>Geometry Seminar</i> , Max-Planck-Institut, Leipzig
	Nov	2025	<i>Séminaire de géométrie topologie dynamique</i> , Université Paris-Saclay
	Dec	2024	<i>Colloque de géométrie</i> , Université Paris-Est Créteil
	Nov	2024	<i>Geometry & Topology Seminar</i> , University of Warwick
	Nov	2024	<i>Topology Seminar</i> , University of Oxford
	Oct	2024	<i>Séminaire virtuel francophone groupes et géométrie</i> , Institut Fourier
	April	2024	<i>Séminaire géométrie et topologie</i> , IMJ-PRG
	March	2024	<i>Geometry & Topology</i> , Yale University

	March	2024	<i>Oberseminar Geometrie</i> , Université de Fribourg
	Nov	2023	<i>Geometry Seminar</i> , Max-Planck-Institut, Leipzig
	Nov	2023	<i>Geometric Group Theory Seminar</i> , University of Cambridge
	Oct	2023	<i>Dioscuri Seminar</i> , Jagiellonian University, Kraków
	Oct	2023	<i>Séminaire de théorie spectrale et géométrie</i> , Institut Fourier
	Sept	2023	<i>Séminaire groupes, algèbres, et algèbres d'opérateurs</i> , Laboratoire de mathématiques Blaise Pascal, Clermont-Ferrand
	May	2023	<i>Séminaire de géométrie et topologie de Marseille</i> , Institut de mathématiques de Marseille
	May	2023	<i>Séminaire géométrie dynamique</i> , Laboratoire Paul Painlevé, Lille
	March	2023	<i>Groups and Operator Algebras</i> , Université Paris-Saclay
	Jan	2023	<i>Groups and Operator Algebras</i> , Université Paris-Saclay
	Dec	2022	<i>Séminaire de théorie ergodique</i> , Institut de recherche mathématique de Rennes
	Dec	2021	<i>Groups and Operator Algebras</i> , Université Paris-Saclay
	Dec	2021	<i>Séminaire de géométrie topologie dynamique</i> , Université Paris-Saclay
	Nov	2021	<i>Junior Geometry Seminar</i> , University of Cambridge
	Nov	2021	<i>Group Theory Afternoon</i> , École normale supérieure (Paris)
	Oct	2021	<i>Junior Topology and Group Theory Seminar</i> , University of Oxford
	Oct	2021	<i>Geometry/Topology Seminar</i> , Rutgers University–New Brunswick
	June	2021	<i>Dynamics and Group Geometry Early Researchers Seminar</i> , University of Warwick
	May	2021	<i>Geometric Group Theory Seminar</i> , University of Cambridge
	February	2021	<i>Topology Seminar</i> , University of Wisconsin-Milwaukee
	February	2021	<i>Club Mathématique</i> , Université de Sherbrooke
	November	2020	<i>Bristol Junior Geometry Seminar</i> , University of Bristol
	July	2020	<i>Trends in Low Dimensional Topology</i>
	March	2020	<i>Dynamics, Geometry, and Groups</i> , Queen's University
TEACHING AND MARKING	Fall	2025	Instructor, Graduate Seminar on Advanced Geometry, Introduction to homogeneous dynamics, Universität Bonn
	Fall	2020	Teaching Assistant, Algebra I, McGill University
	Fall	2019	Marker, Euclidean Geometry, McGill University
	Winter	2019	Teaching Assistant, Analysis II, McGill University
	Fall	2018	Teaching Assistant, Algebra I, McGill University
	Fall	2018	Marker, Euclidean Geometry, McGill University
	Winter	2018	Teaching Assistant, Calculus I, McGill University
	Winter	2017	Teaching Assistant, Calculus I, McGill University
	Fall	2016	Teaching Assistant, Analysis I, McGill University
	Fall	2016	Marker, Honours Algebra III, McGill University
	Winter	2016	Teaching Assistant, Calculus II, McGill University
	Fall	2015	Teaching Assistant, Analysis I, McGill University
MENTORING	Winter	2019	McGill Directed Reading Program, geometry of the hyperbolic plane
TRAVEL	Jan.–March	2024	Jagiellonian University, Kraków, visitor
	April–July	2022	Laboratoire de mathématiques d'Orsay, visitor
	Sept.–Dec.	2021	Laboratoire de mathématiques d'Orsay, visitor
ORGANIZATION	Jan.	2026	<i>A Kleinian eye on mapping class groups and higher-rank Lie groups</i> , log cabin workshop, Groveland, CA
	Apr.	2025	<i>Young Geometric Group Theory XIII</i> , University of Copenhagen
	Feb.	2023	<i>Reflection Groups</i> , mini-workshop, IHÉS
	June	2021	<i>Geometric Group Theory without Boundaries II</i> , virtual summer school
	July	2020	<i>Geometric Group Theory without Boundaries</i> , virtual summer school

2018–2020 *Mathematics and Statistics Graduate Student Seminar*, McGill University
 2018–2021 *Geometric Group Theory Seminar*, McGill University
 Fall 2018 Reading course on ergodic theory, McGill University

PROGRAMS
ATTENDED

April– 2025 *Higher Rank Geometric Structures*, Institut Henri Poincaré
 July
 April– 2024 *Group Actions and Rigidity: Around the Zimmer Program*, Institut
 Henri Poincaré
 July 2022 *Hyperbolicity, Self-Similarity, and Groups Acting on Fractals*, In-
 stitut Henri Poincaré
 April–
 July
 May 2019 *Simons Semester on Geometric and Analytic Group Theory*, IM-
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