

Mireille Soergel

Curriculum Vitae

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Education

Oct 2019– **PhD in Mathematics**, *Université de Bourgogne*, Dijon, France.

June 2023 Title: *Constructing group actions on non-positively curved spaces for Dyer groups and Garside groups*

Advisors: Thomas Haettel (Université de Montpellier, France) and Luis Paris

Defended on May 22th 2023

April 2016– **Master of Science in Mathematics**, *Ruprechts-Karls-Universität*, Heidelberg,
March 2019 Germany.

Thesis: *Simplicial complexes associated to two-generated Artin groups*

Supervisors: JProf. Dr. Maria Beatrice Pozetti and JProf. Dr. Petra Schwer (Karlsruhe Institute of Technology, Germany)

Sep 2011– **Bachelor of Science in Mathematics**, *ETH Zürich*, Zürich, Switzerland.

April 2016 Thesis: *Complete minimal systems in $\ell_\infty(\omega)$*

Supervisor: Dr. Lorenz Halbeisen

Experience

since Oct **Postdoc**, *Max Planck Institute for Mathematics in the Sciences*, Leipzig,
2023 Germany.

Oct 2022– **Scientific Assistant**, *ETH Zürich*, Zürich, Switzerland.

Sept 2023

Oct 2019– **Doctoral contract**, *Université de Bourgogne*, Dijon, France.

Sept 2022

Teaching

Feb 2023 – **Course coordinator**, *ETH Zürich*, Zürich, Switzerland.

Sept 2023 Topology: making the exercise sheets, organizing the exam, coordinating the teaching assistants, teaching weekly exercise classes and grading weekly exercise sheets

March 2020– **Teaching assistant**, *Université de Bourgogne*, Dijon, France.

Jan 2022 Fall Semester 2021: Maths 1B (Logic and Algebra) (30 hours of exercise classes)

Spring Semester 2021: Maths 2A (Analysis) (30 hours of exercise classes)

Fall Semester 2020: Maths 1B (Logic and Algebra) (30 hours of exercise classes)

Spring Semester 2020: Mathematics applied to Biology (10 hours of exercise classes)

Oct 2016– **Teaching assistant**, *Ruprechts-Karls-Universität Heidelberg*, Heidelberg,
March 2018 Germany.

Winter Semester 2017/2018: Linear Algebra I

Summer Semester 2017: Linear Algebra II

Winter Semester 2016/2017: Linear Algebra I

each including grading weekly exercise sheets and final exams

- Feb 2015– **Teaching assistant**, *ETH Zürich*, Zürich, Switzerland.
June 2015 Numerical Analysis II, including grading weekly exercise sheets

Research

Publications and Preprints

- 2024 M. Soergel, joint with Nicolas Vaskou, *Dyer groups: Centres, hyperbolicity, and acylindrical hyperbolicity*, preprint, arXiv:2410.22464
- 2024 M. Soergel, *A generalization of the Davis-Moussong complex for Dyer groups*, *J. Comb. Algebra* 8 (2024), no. 1/2, pp. 209–249
- 2023 M. Soergel, joint with Luis Paris, *Word problem and parabolic subgroups in Dyer groups*, *Bull. Lond. Math. Soc.* 55 (2023), no. 6, 2928–2947
- 2023 M. Soergel, *Systolic complexes and group presentations*, *Groups Geom. Dyn.* 17 (2023), no. 3, pp. 899–921

Invited Talks

- Oct 2024 Warwick (UK), Geometry and Topology Seminar, *Dyer groups: Coxeter groups, right-angled Artin groups and more*
- Oct 2024 Louvain-la-Neuve (Belgium), Group Theory Seminar, *Dyer groups: Coxeter groups, right-angled Artin groups and more*
- Sep 2024 Paderborn (Germany), Integral Structures in Geometry and Representation Theory, *Dyer groups: Coxeter groups, right-angled Artin groups and more*
- July 2024 Sevilla (Spain), European Congress of Mathematics Mini-Symposium on Computational Group Theory, *Dyer groups: Coxeter groups, right-angled Artin groups and more*
- July 2024 online, PGGT Seminar, *Dyer groups: Coxeter groups, right-angled Artin groups and more*
- May 2024 Galway (Ireland), Groups in Galway, *Dyer groups: Coxeter groups, right-angled Artin groups and more*
- March 2024 Orsay (France), Séminaire Groupes et Actions, *Groupes de Dyer: une généralisation des groupes de Coxeter et des groupes d'Artin à angles droits*
- Feb 2024 Marseille (France), GAGTA, *Dyer groups: Coxeter groups, right-angled Artin groups and more*
- Nov 2023 Cambridge (UK), Geometric Group Theory Seminar, *Dyer groups: Coxeter groups, right-angled Artin groups and more*
- Oct 2023 Magdeburg (Germany), Oberseminar, *A Davis-Moussong complex for Dyer groups*
- June 2023 Ottawa (Canada), Canadian Mathematical Society Meeting, *An introduction to Dyer groups*
- April 2023 online, Lincoln (UK), Algebra Seminar, *Dyer groups*
- March 2023 online, 56th Spring Topology and Dynamical Systems Conference, *The geometry of Dyer groups*

- March 2023 Zürich (Switzerland), Geometry Graduate Colloquium, *Simplicial non-positive curvature*
- Dec 2022 Münster (Germany), Tea Seminar, *A generalized Davis-Moussong complex for Dyer groups*
- Nov 2022 Orsay (France), Paroles aux Jeunes Chercheuses et Chercheurs du GDR Platon
- Nov 2022 Zürich (Switzerland), Geometry Seminar, *A generalized Davis-Moussong complex for Dyer groups*
- July 2022 Vienna (Austria), Summer topology conference, *Dyer groups are CAT(0)*
- May 2022 Montpellier (France), Workshop Tresses, MCG et Khovanov-Seidel, *Structures de Garside sur les groupes libres*
- Feb 2022 online, Séminaire virtuel francophone Groupes et Géométries, *Présentations systoliques et groupes de Garside*
- Dec 2021 Münster (Germany), Tea Seminar, *Systolic complexes and Garside groups*
- Dec 2021 online, Bielefeld (Germany), Oberseminar Groups and Geometry, *Systolic complexes and group presentations*
- Oct 2021 Dijon (France), Séminaire GADT, *Complexes systoliques et groupes de Garside*
- Sep 2021 Kleebach (France), Meeting Groups and Geometry, *Systolic complexes and Garside groups*

Research stays

- June 2023 Montreal (Canada), Thematic Program on Geometric Group Theory, with financial support from the CRM
- Jan 2022–
June 2022 Montpellier (France), Scientific visit to Thomas Haettel
- Nov 2021 Nice (France), Scientific visit to Indira Chatterji

Service

- April 2025 Co-organizer of the Young Geometric Group Theory XIII Conference in Copenhagen (Denmark)
- June 2024 Co-organizer of the Queer in Math Day at MPI MiS Leipzig (Germany)
- April 2024 -
Sep 2024 Co-organizer of the Geometry Seminar at MPI MiS Leipzig (Germany)
- June 2021 –
June 2022 Elected PhD student representative in the department council in Dijon (France)
- March 2021 –
Jan 2022 Organizer of the mathematics PhD students seminar in Dijon (France)
- Oct 2017–
Oct 2018 Elected member of the mathematics departement council (Fakultätsrat) in Heidelberg (Germany) as a student representative
- Oct 2017–
Oct 2018 Member of the undergrad committee (Studienkommission) for mathematics in Heidelberg (Germany) as a student representative

Languages

French native
German native
English proficient