

# Mireille Soergel

## Curriculum Vitae

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📄 soergelm.github.io

### Education

- Oct **PhD in Mathematics**, *Université de Bourgogne*, Dijon, France.  
2019–June Title: *Constructing group actions on non-positively curved spaces for Dyer groups and*  
2023 *Garside groups*  
Advisors: Thomas Haettel (Université de Montpellier, France) and Luis Paris
- 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 **Scientific Assistant**, *ETH Zürich*, Zürich, Switzerland.  
2022–Sept  
2023
- Oct **Doctoral contract**, *Université de Bourgogne*, Dijon, France.  
2019–Sept  
2022

### Teaching

- Feb 2023 – **Course coordinator**, *ETH Zürich*, Zürich, Switzerland.  
Sep 2023 Topology: making the exercise sheets, organizing the exam, coordinating the teaching  
assistants, teaching weekly exercise classes and grading weekly exercise sheets
- March **Teaching assistant**, *Université de Bourgogne*, Dijon, France.  
2020–Jan Fall Semester 2021: Maths 1B (Logic and Algebra) (30 hours/semester)  
2022 Spring Semester 2021: Maths 2A (Analysis) (30 hours/semester)  
Fall Semester 2020: Maths 1B (Logic and Algebra) (30 hours/semester)  
Spring Semester 2020: Mathematics applied to Biology (10 hours/semester)

- 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

- 2023 M. Soergel, joint with Luis Paris, *Word problem and parabolic subgroups in Dyer groups*, accepted, *Bulletin of the London Mathematical Society*, arXiv:2212.10862
- 2022 M. Soergel, *A generalization of the Davis-Moussong complex for Dyer groups*, preprint, arXiv:2212.03017
- 2023 M. Soergel, *Systolic complexes and group presentations*, published, *Groups, Geometry and Dynamics*

### Talks

- 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*
- Feb 2023 Tours (France), Winterbraids XII, *The geometry of Dyer groups*
- 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*
- Aug 2022 Amiens (France), Journées Tresses, *Dyer groups are CAT(0)*
- 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*
- June 2021 online, Oxford (UK), Junior Topology and Group Theory Seminar, *Systolic complexes and group presentations*
- June 2021 Nearly Carbon Neutral Geometric Topology Conference, Video recording, *Systolic complexes and group presentations*
- Dec 2020 online, Rennes (France), Séminaire Pampers, *Complexes systoliques et graphes de Cayley*
- Dec 2020 online, Montpellier (France), Séminaire des doctorants, *Complexes systoliques et graphes de Cayley*
- Conferences attended
- Sept 2023 Pasadena (California, USA), AIM Workshop *Geometry and topology of Artin groups*
- June 2023 Montreal (Canada), Cube Complexes and Combinatorial Geometry
- June 2023 Montreal (Canada), Groups Around 3-Manifolds
- Feb 2023 Münster (Germany), Young Geometric Group Theory XI
- Juin 2022 Paris (France), Hyperbolic groups and their generalisations
- April 2022 Marseille (France), Groups acting on fractals
- Jan 2022– June 2022 Montpellier (France), Scientific visit to Thomas Haettel
- Dec 2021 Dijon(France), Winterbraids XI
- Nov 2021 Nice (France), Scientific visit to Indira Chatterji
- Nov 2021 Marseille (France), Paroles aux jeunes chercheurs en Géométrie et Dynamique
- Sep 2021 Berlin (Germany), The dual approach to Coxeter and Artin groups; Garside theory and applications
- July 2021 Online, Young Geometric Group Theory X
- May 2021 Online, Workshop Perspectives on Artin Groups
- April 2021 Online, Second Meeting of AlMaRe
- Dec 2020 Online, Paroles aux jeunes chercheurs en Géométrie et Dynamique
- June 2020 Online, Artin groups, CAT(0) geometry and Related topics
- March 2020 Montpellier (France), Scientific visit to Thomas Haettel
- Feb 2020 Saint-Jacut-de-la-Mer (France), Young Geometric Group Theory IX
- Feb 2020 Pisa (Italy), Winterbraids X
- Jan 2020 Dijon (France), First Meeting of AlMaRe
- Nov 2019 Montpellier (France), Scientific visit to Thomas Haettel
- Nov 2019 Nancy (France), Paroles aux jeunes chercheurs en Géométrie et Dynamique
- Nov 2019 Dijon (France), Low dimensional actions of 3-manifold groups
- Oct 2019 Caen (France), Journées Normandes en Topologie

- Jan 2019 Marseille (France), Master Class Groups and Geometries  
Sep 2018 Bochum (Germany), Summer School – New Perspectives in Hyperplane Arrangements  
May 2018 Heidelberg (Germany), Meeting of the German Chapter of European Women in Mathematics (EWM)

## Volunteer Work

- June 2021 – Elected PhD student representative in the department council  
June 2022  
March 2021 – Organizer of the mathematics PhD students seminar in Dijon  
Jan 2022  
Oct 2017– Elected member of the mathematics department council (Fakultätsrat) as a  
Oct 2018 students representative  
Oct 2017– Member of the undergrad committee (Studienkommission) for mathematics as a  
Oct 2018 students representative  
Feb 2016– Editor of VAMP, the ETH maths and physics students' journal  
May 2016

## Languages

- French native  
German native  
English proficient

## Interests

- Music Most recently, I sang in the Christmas music project of the Collegium Vocale Grossmünster in Zürich (Switzerland). Previously, I played viola in amateur orchestras, the Société philharmonique de Dijon (France) and the orchestra Polyphonia in Zürich (Switzerland). I was also a soprano singer in the choir Studentenkantorei in Heidelberg (Germany).