# Mireille Soergel

*Curriculum Vitae*

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🖳 *soergelm.github.io*

## Education

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|---|---|
| Oct 2019–June 2023 | **PhD in Mathematics**, *Université de Bourgogne*, Dijon, France.<br>Advisors: Thomas Haettel (Université de Montpellier, France) and Luis Paris |
| April 2016–March 2019 | **Master of Science in Mathematics**, *Ruprechts-Karls-Universität*, Heidelberg, Germany.<br>Thesis: *Simplicial complexes associated to two-generated Artin groups*<br>Supervisors: JProf. Dr. Maria Beatrice Pozetti and JProf. Dr. Petra Schwer (Karlsruhe Institute of Technology, Germany) |
| Sep 2011–April 2016 | **Bachelor of Science in Mathematics**, *ETH Zürich*, Zürich, Switzerland.<br>Thesis: *Complete minimal systems in $\ell_\infty(\omega)$*<br>Supervisor: Dr. Lorenz Halbeisen |

## Experience

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| since Oct 2022 | **Scientific Assistant**, *ETH Zürich*, Zürich, Switzerland. |
| Oct 2019–Sept 2022 | **Doctoral contract**, *Université de Bourgogne*, Dijon, France. |

### Teaching

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| Feb 2023 – Sep 2023 | **Course coordinator**, *ETH Zürich*, Zürich, Switzerland.<br>Topology: making the exercise sheets, organizing the exam, coordinating the teaching assistants, teaching weekly exercise classes and grading weekly exercise sheets |
| March 2020–Jan 2022 | **Teaching assistant**, *Université de Bourgogne*, Dijon, France.<br>Fall Semester 2021: Maths 1B (Logic and Algebra) (30 hours/semester)<br>Spring Semester 2021: Maths 2A (Analysis) (30 hours/semester)<br>Fall Semester 2020: Maths 1B (Logic and Algebra) (30 hours/semester)<br>Spring Semester 2020: Mathematics applied to Biology (10 hours/semester) |
| Oct 2016–March 2018 | **Teaching assistant**, *Ruprechts-Karls-Universität Heidelberg*, Heidelberg, Germany.<br>Winter Semester 2017/2018: Linear Algebra I<br>Summer Semester 2017: Linear Algebra II<br>Winter Semester 2016/2017: Linear Algebra I<br>each including grading weekly exercise sheets and final exams |
| Feb 2015–June 2015 | **Teaching assistant**, *ETH Zürich*, Zürich, Switzerland.<br>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

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|---|---|
| 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* |

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| 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

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| 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

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| June 2021 – June 2022 | Elected PhD student representative in the department council |

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

## Languages

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| French | native |
| German | native |
| English | proficient |

## Interests

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| 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 (Swizerland). I was also a soprano singer in the choir Studentenkantorei in Heidelberg (Germany). |