List of Scientific Contributions
Jean-Philippe Labbé

The publications below are presented with the following convention:

- authors are listed in alphabetical order by surname, and
- publications appear from the most recent to the oldest.

The field underlying my research publishes mostly through peer-reviewed journals.
The publications are available on the webpage:

`http://page.mi.fu-berlin.de/labbe/pages/research`

Preprints

1. Michael Cuntz, Sophia Elia, and **Jean-Philippe Labbé**, *Congruence normality of simplicial hyperplane arrangements via oriented matroids*, `arXiv:2009.14152` (2020) 39 pp.
2. **Jean-Philippe Labbé**, *Combinatorial foundations for geometric realizations of subword complexes of Coxeter groups*, `arXiv:2003.02753` (2020) 34 pp.

Publications in international refereed journals

3. Joseph Doolittle, **Jean-Philippe Labbé**, Carsten Lange, Rainer Sinn, Jonathan Spreer, and Günter M. Ziegler, *Combinatorial inscribability obstructions for higher-dimensional polytopes*, Mathematika **66** (2020) no. 4, 927–953.
4. **Jean-Philippe Labbé** and Carsten Lange, *Cambrian acyclic domains: counting c-singletons*, Order **37** (2020) no. 3, 571–603.
5. **Jean-Philippe Labbé**, Günter Rote, and Günter M. Ziegler, *Area difference bounds for dissections of a square into an odd number of triangles*, Exp. Math. **29** (2020) no. 3, 253–275.
6. Sarah B. Brodsky, Cesar Ceballos, and **Jean-Philippe Labbé**, *Cluster algebras of type D_4, tropical planes, and the positive tropical Grassmannian*, Beitr. Algebra Geom. **58** (2017) no. 1, 25–46.
7. Hao Chen and **Jean-Philippe Labbé**, *Limit directions for Lorentzian Coxeter systems*, Groups Geom. Dyn. **11** (2017) no. 2, 469–498.
8. **Jean-Philippe Labbé**, Thibault Manneville, and Francisco Santos, *Hirsch polytopes with exponentially long combinatorial segments*, Math. Program. **165** (2017) no. 2, Ser. A, 663–688.
9. **Jean-Philippe Labbé** and Eran Nevo, *Bounds for entries of γ-vectors of flag homology spheres*, SIAM J. Discrete Math. **31** (2017) no. 3, 2064–2078.
10. Christophe Hohlweg and **Jean-Philippe Labbé**, *On inversion sets and the weak order in Coxeter groups*, European J. Combin. **55** (2016) 1–19.
11. Nantel Bergeron, Cesar Ceballos, and **Jean-Philippe Labbé**, *Fan realizations of type A subword complexes and multi-associahedra of rank 3*, Discrete Comput. Geom. **54** (2015) no. 1, 195–231.
12. Hao Chen and **Jean-Philippe Labbé**, *Lorentzian Coxeter systems and Boyd-Maxwell ball packings*, Geom. Dedicata **174** (2015) 43–73.

13. Cesar Ceballos, **Jean-Philippe Labbé**, and Christian Stump, *Subword complexes, cluster complexes, and generalized multi-associahedra*, J. Algebraic Combin. **39** (2014) no. 1, 17–51.
14. Christophe Hohlweg, **Jean-Philippe Labbé**, and Vivien Ripoll, *Asymptotical behaviour of roots of infinite Coxeter groups*, Canad. J. Math. **66** (2014) no. 2, 323–353.
15. Srečko Brlek, **Jean-Philippe Labbé**, and Michel Mendès France, *Combinatorial variations on Cantor's diagonal*, J. Combin. Theory Ser. A **119** (2012) no. 3, 655–667.

Conference Proceedings

Note: FPSAC is the major international conference in the field, with 12-page papers and a selection rate of about 25% of which about 2/3 are posters and 1/3 are talks.

16. **Jean-Philippe Labbé**. *Universal Oriented Matroids for Subword Complexes of Coxeter Groups*. In: *FPSAC 2020*. 2020, pp. 12.
17. Nantel Bergeron, Cesar Ceballos, and **Jean-Philippe Labbé**. *Fan realizations of type A subword complexes and multi-associahedra of rank* 3. In: *Proceedings of FPSAC 2015*. DMTCS Proc. Assoc. DMTCS, Nancy, 2015, 429–440.
18. Hao Chen and **Jean-Philippe Labbé**. *Lorentzian Coxeter groups and Boyd-Maxwell ball packings*. In: *26th FPSAC*. DMTCS Proc. Assoc. DMTCS, Nancy, 2014, 103–111.
19. Cesar Ceballos, **Jean-Philippe Labbé**, and Christian Stump. *Multi-cluster complexes*. In: *24th FPSAC*. DMTCS Proc. Assoc. DMTCS, Nancy, 2012, 1–8.
20. Christophe Hohlweg, **Jean-Philippe Labbé**, and Vivien Ripoll. *Asymptotical behaviour of roots of infinite Coxeter groups I*. In: *24th FPSAC*. DMTCS Proc. Assoc. DMTCS, Nancy, 2012, 851–862.

Articles in Preparation

21. Christian Schilling, Federico Castillo, and **Jean-Philippe Labbé**, *Comprehensive foundation of one-matrix functional theory for excited states*, in preparation (2020) 20 pp.
22. Winfried Bruns, Vincent Delecroix, Matthias Köppe, and **Jean-Philippe Labbé**, *Algebraic polyhedra in Sagemath with Normaliz*, in preparation (2020) 21 pp.
23. Federico Castillo, **Jean-Philippe Labbé**, and Christian Schilling, *Paulitopes*, in preparation (2020) 15 pp.
24. Ana Maria Botero, **Jean-Philippe Labbé**, and Lauren Williams. *Introduction to total positivity and cluster algebras*. In: *ECCO – Lectures Notes*. (Book in preparation). Cambridge University Press, 2019, 32 pp.

Theses

25. **Jean-Philippe Labbé**. *Convex Geometry of Subword Complexes of Coxeter Groups*. Habilitation thesis, (including 7 articles in the Appendix), `http://dx.doi.org/10.17169/refubium-28145`. Freie Universität Berlin, Oct. 2019, pp. xiv+56.
26. **Jean-Philippe Labbé**. *Polyhedral Combinatorics of Coxeter Groups*. `https://refubium.fu-berlin.de/handle/fub188/628`. PhD thesis. Freie Universität Berlin, July 2013, pp. xvi+103.
27. **Jean-Philippe Labbé**. *Approche combinatoire des amas par les éléments triés des groupes de Coxeter*. `https://archipel.uqam.ca/3670`. MA thesis. Université du Québec à Montréal, Aug. 2010, pp. xiv+95.

28. **Jean-Philippe Labbé**, *Brocoli: Sagemath package dealing with LImit ROots of COxeter groups*, `https://github.com/jplab/brocoli` (2017) version 1.0.0 3500 lines.
29. **Jean-Philippe Labbé** and Sébastien Labbé, *A Perron theorem for matrices with negative entries and applications to Coxeter groups*, `arXiv:1511.04975` (2015) 14 pp.
30. **Jean-Philippe Labbé**, *Aller à l'université: Pourquoi?*, Écho de Frontenac, `https://echodefrontenac.com/2012-06-04/1905-aller-a-luniversite-pourquoi` **83** (2012) no. 23, 2.