

Title: The n-low Garside shadow

Abstract: The existence of a finite Garside family in the Artin-Tits monoid of a finite rank Coxeter group was proved by Dehornoy, Dyer and Hohlweg by showing that the set of low elements in W forms a finite Garside shadow. We shall discuss ideas involved in the recent proof of the conjecture that, more generally, the set of n-low elements forms a finite Garside shadow.

Reading list for the talk:

- Dehornoy, Dyer and Hohlweg, Garside families in Artin-Tits monoids and low elements in Coxeter groups, *C. R. Acad. Sci. Paris, Ser 1*, 353 (2015), 403-408
- Dyer and Hohlweg, Small roots, low elements and the weak order in Coxeter groups, *Adv. in Math* 301 (2016), 739-784
- Dyer, n-low elements and maximal rank k reflection subgroups of Coxeter groups, to appear, *J. of Alg.* memorial issue for P. Dehornoy, available at <https://www.sciencedirect.com/science/article/pii/S0021869321001101>