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On the homology on the braid group modulo its center

Tuesday, 16 September 2025 17:30 (30 minutes)

Let B_n be the braid group with n-strands and Z(B_n) its center. The (integral) homology of B_n was computed in the seventies by F. Cohen. In this talk we will see how to compute the homology of H_*(B_n/Z(B_n); F_p) for any n natural number and p prime. The approach will be topological, since the classifying space of B_n/Z(B_n) can be realized as the homotopy quotient C_n(R^2)//S^1, where C_n(R^2) is the unordered configuration space of point in the plane. Combining the results of F. Cohen with techniques from equivariant cohomology we can do the computation. This talk is based on https://arxiv.org/abs/2404.10639.

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