

# CONJUGACY CLASSES OF 3-BRAID GROUP $\mathcal{B}_3$

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ABSTRACT. In this article we describe the summit sets in  $\mathcal{B}_3$ , the smallest element in a summit set and we compute the Hilbert series corresponding to conjugacy classes. The results will be related to Birman-Menesco classification of knots with braid index three or less than three.

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*Key words and phrases*. Garside normal form, base-summit set, summit words, smallest summit words, conjugacy class.

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