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Hopf algebra of uniform block permutations

In this talk I will present the Hopf algebra of uniform block permutations and show that it is self-dual, free, and cofree. These results are closely related to the fact that uniform block permutations form a factorizable inverse monoid.

This Hopf algebra contains the Hopf algebra of permutations of Malvenuto and Reutenauer and the Hopf algebra of symmetric functions in non-commuting variables of Gebhard, Rosas, and Sagan.