

Involutions and pseudo-involutions in the Riordan group

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Abstract

We define the Riordan group and consider its involutions and pseudo involutions, as well as A - and B -sequences of Riordan matrices. We then look at one elementary method, via palindromes, for producing pseudo-involutions associated with many well-known combinatorial sequences. This unified approach yields both classical cases and new(er) examples, some with interesting combinatorial interpretations. Finally, we give a combinatorial interpretation of some pseudo-involutions via Parker's generalization of the Carlitz-Scoville-Vaughn theorem. This is joint work with Lou Shapiro.

Keywords: Riordan group, involution, Carlitz-Scoville-Vaughn theorem.