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**Fatemeh Bagherzadeh-Golmakani** and **Murray R. Bremner\***, bremner@math.usask.ca, and **Sara Madariaga**. *Jordan trialgebras and post-Jordan algebras*.

Lie (Jordan) algebras are defined by polynomial identities of low arity satisfied by the (anti)commutator in associative algebras. Loday discovered Lie dialgebras (Leibniz algebras) in the 1990's, together with diassociative algebras and the (anti)dicommutator; Jordan dialgebras arrived a decade later. Roughly speaking, Lie (Jordan) dialgebras are noncommutative analogues of Lie (Jordan) algebras. Loday and Ronco discovered dendriform algebras, governed by the Koszul dual of the diassociative operad; the (anti)dicommutator produces pre-Lie and pre-Jordan algebras. These results can be reformulated using Manin white and black products. Triassociative and tridendriform algebras came next, and then Lie trialgebras and post-Lie algebras. We study the Jordan side of the picture, and find the correct definitions of Jordan trialgebras and post-Jordan algebras. Lie (Jordan) trialgebras combine Lie (Jordan) algebras and dialgebras into one structure. We use a computational approach to determine the identities of arities  $\leq 4$  for the anti(di)commutator in triassociative and tridendriform algebras. Our results complement the partial results of others using a more theoretical approach. (Joint work with postdoctoral fellows Fatemeh Bagherzadeh and Sara Madariaga.) (Received August 10, 2016)