

Hierarchies of noncommutative KdV-type equations

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We start out from a recursive method to construct simultaneous solutions to all equations in the noncommutative counterparts to the potential KdV, KdV and mKdV hierarchies. Applications concern both the classical scalar hierarchies (countable nonlinear superposition) and matrix hierarchies (generalized multisoliton solutions). Finally we turn to structural properties of the recursion operator of the noncommutative KdV.

Large parts of the talk are based on joint work with S. Carillo.