

1137-35-262

Oliver Ruff* (oruff@kent.edu) and **Gro Hovhannisyan**. *Young diagrams and solitons on a time scale.*

Hirota's "direct method" is a powerful technique for constructing multisoliton solutions to integrable nonlinear evolution equations. The resulting N -soliton solutions can be expressed as certain Wronskian (or Wronskian-type) determinants, and calculations involving them often have a nice interpretation in terms of Young diagrams. We consider Hirota's approach in the context of Hilger's time-scale calculus, where analogues of many classical equations are known, and examine the resulting combinatorics in the important case of the Kadomtsev-Petviashvili equation. (Received February 05, 2018)