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Pavlo Pylyavskyy* (ppylyavs@umn.edu), **Thomas Lam** and **Reiho Sakamoto**. *Rigged configurations and cylindric loop Schur functions*.

Box-ball systems are remarkable discrete dynamical systems introduced by Takahashi and Satsuma. They exhibit solitonic behavior, providing a combinatorial model for deep phenomena in non-linear science. I will explain in simple terms how box-ball systems are defined and how to think of them as combinatorial models for KdV. I will explain then how to solve the "forward scattering problem": for a given initial state, I will write down explicit formulas for the sizes of solitons that come out of it under time evolution. This is joint work with Thomas Lam and Reiho Sakamoto. (Received February 23, 2016)