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Review: The Semi-Dynamical Reflection Equation: Solutions and Structure Matrices

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The semi-dynamical reflection equation: solutions and structure matrices. (English summary)

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The reflection equation comes up when one introduces boundary conditions to the solutions of the quantum Yang-Baxter equation. The dynamical reflection equation [P. P. Kulish and A. I. Mudrov, in *Quantum groups*, 281–309, Contemp. Math., 433, Amer. Math. Soc., Providence, RI, 2007; [MR2349627 \(2008i:17022\)](#)] was introduced as the analogous constraint on solutions of the dynamical quantum Yang-Baxter equation. In the paper under review, the authors continue earlier work [J. Avan and G. Rollet, *J. Phys. A* **40** (2007), no. 11, 2709–2731; [MR2325504 \(2008f:81120\)](#); *Ann. Henri Poincaré* **7** (2006), no. 7-8, 1463–1476; [MR2283739 \(2008j:81136\)](#)] on the solutions of a related equation, the semi-dynamical reflection equation [Z. Nagy, J. Avan and G. Rollet, *Lett. Math. Phys.* **67** (2004), no. 1, 1–11; [MR2063015 \(2005h:81174\)](#)]. In particular they focus on the non-constant equation, and explicitly construct some solutions. They compare and contrast their findings with earlier work cited above.

Reviewed by *Gizem Karaali*

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