

**Friday, February 17th** (at 4.00pm, UK time)

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*Title: Deformed Ruijsenaars-Schneider model: integrability and time discretization.*

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**ABSTRACT**

We will discuss the recently introduced deformed Ruijsenaars-Schneider (RS) many-body system.

On the one hand, it is the dynamical system for poles of elliptic solutions to the Toda lattice with constraint of type B. On the other hand, equations of motion for this system coincide with those for pairs of RS particles which stick together preserving a special fixed distance between the particles.

We prove integrability of the deformed RS system by finding the integrals of motion explicitly. We also obtain Backlund transformations and integrable time discretization of the deformed RS system.

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