

# Bethe Colloquium

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## R-matrix Quantization of the Ruijsenaars-Schneider Models

I describe an algebraic scheme for quantizing the Ruijsenaars-Schneider models in the R-matrix formalism. It is based on a special parametrization of the cotangent bundle over  $GL(n, \mathbb{C})$ . In new variables the standard symplectic structure is described by a classical (Frobenius)  $r$ -matrix and by a new dynamical  $\bar{r}$ -matrix. Quantizing these  $r$ -matrices, I will exhibit the quantum L-operator algebra and construct its particular representation corresponding to the Ruijsenaars-Schneider system. I will also indicate a couple of open problems.

### Lecture Hall 1

Physikalisches Institut  
Nussallee 12  
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**Thursday, 17<sup>th</sup> January, 2019, at 16 c.t.**