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Calogero-Moser and Ruijsenaars-Schneider models

In the first part of the talk we will investigate the finite-volume spectra the nonrelativistic Calogero-Moser quantum systems, which can be solved analytically. We will compare the analytically calculated spectra from the finite-volume Calogero-Moser systems to the wavenumbers obtained from the corresponding Bethe ansatz equations. The eigenstates are also calculated numerically using the truncated Hilbert space method.
After that, the Ruijsenaars-Scheider models will be presented, which are the relativistic counterparts of the Calogero-Moser systems. The trigonometric Ruijsenaars-Schneider model can also be solved analytically. We will also present the numerical solutions of the trigonometric and elliptic models and compare the solutions to the corresponding Bethe ansatz equations.

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