

1125-81-926

Vincent X Genest (vxgenest@mit.edu) and **Luc Vinet*** (vinet@crm.umontreal.ca), Centre de Recherches Mathématiques, Université de Montréal, Montreal, QC H3C 3J7, Canada.

Supersymmetry and Superintegrability of the B_n Calogero Model.

The rational B_n Calogero model for distinguishable particles is shown to be supersymmetric. The superintegrability is demonstrated by exhibiting the constants of motion that commute with the supercharges. Focusing for simplicity on the case $n = 3$, the symmetry algebra is found to be a generalization of the Bannai-Ito algebra that involves additional symmetries constructed in terms of the B_n Weyl group generators. (Received September 13, 2016)