Commun. Theor. Phys. **66** (2016) 275–279 Vol. 66, No. 3, September 1, 2016
**Fisher Information and Complexity Measure of Generalized Morse Potential Model**

C.A. Onate*∗* and J.O.A. Idiodi
Physics Department, University of Benin, Nigeria

 (Received March 28, 2016; revised manuscript received May 10, 2016)
***Abstract***

*The spreading of the quantum-mechanical probability distribution density of the three-dimensional system* *is quantitatively determined by means of the local information-theoretic quantity of the Shannon information and information energy in both position and momentum spaces. The complexity measure which is equivalent to Cramer–Rao* *uncertainty product is determined. We have obtained the information content stored, the concentration of quantum*
*system and complexity measure numerically for n* = 0*,* 1*,* 2 *and* 3 *respectively.*

**PACS numbers:** 03.65.Ca, 03.65.Ta, 89.70.+c, 31.15.Ew, 02.50.Cw
**Key words:** fisher information, Shannon entropy, complexity measures

*Available at:* [*www.iopscience.iop.org*](http://www.iopscience.iop.org)