

2nd World Congress and Expo on Nanotechnology and Material Science

April 04-06, 2016 at Dubai, UAE

Generalized Heisenberg Algebra and coherent states

Yassine Hassouni, E. M. F. Curado and M. A. Rego Monteiro

Université Mohammed V-Agdal, Morocco

In this work we deal with Klauder's approach, which is based on the construction of coherent states of the Heisenberg algebra. This algebra appears in many areas of modern theoretical physics and as an example we notice that the one-dimensional quantum oscillator algebra is an important tool in the second-quantization approach. The Hamiltonian of the physical system under some consideration, in our context, belongs explicitly to the set of generators of the algebra, the other generators in this set being the step operators of the system. The version of the Generalized Heisenberg Algebra (GHA) is written using a general function called the characteristic function of the algebra, which is connected with the energy spectrum of the physical system under consideration. It was shown that there is a class of quantum systems described by this GHA. This class is characterized by those quantum systems having energy eigenvalues written as successive energy levels and the characteristic function is a different function for each physical system.

Biography:

Head, Theoretical Physics Laboratory, Faculty of Science, UM5A

Professional Major Positions

2003-Present	Head, Theoretical Physics Laboratory (LPT), Faculty of Science, UM5A, Rabat, Morocco
2001-Present	Full Professor (highest academic rank in the higher education in Morocco), Faculty of Science, UM5, Rabat, Morocco
1997-2001	Professor, Faculty of Science, UM5A, Rabat, Morocco
1996-1997	Assistant Professor, Faculty of Science, UM5A, Rabat, Morocco
1997	EDUCATION
1997	Post-PhD degree (Doctorat d'Etat), Theoretical Physics, Theoretical Physics Laboratory (LPT), Rabat, Morocco
1994	PhD degree (Doctorat de 3ème Cycle), Mathematical Physics, Theoretical Physics Laboratory (LPT), Rabat, Morocco
1991	MSc degree (Certificat d'Etudes Approfondies), Theoretical Physics, Theoretical Physics Laboratory (LPT), Rabat, Morocco

Other Distinguished Positions Of Responsibility & Leadership.

2000-Present	Regular Associate Member, Abdus Salam Center (ICTP), Trieste, Italy
2014- Present	Member of the steering Committee of the international