# Review of: "Fidelity of quantum blobs"

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The article “Quantum distinguishability and symplectic topology” discusses a very relevant matter to Quantum Physics and Quantum Information Theory, the idea of distinctness between two quantum states.

In this article is investigated the possibility of a branch of symplectic topology to operate similarly to quantum fidelity. After that the authors try to apply concepts of fidelity to pairs of quantum blobs in phase space. For simplicity, the authors chose to examine the squeezed coherent states analogous to quantum blobs which are considered to be the smallest units in phase space. The authors consider an $N$-particle system in $d$-dimensional space.

The authors examined the distinguishability of two quantum blobs on the phase space and the overlap created by the two states. in case of the time evolution, the authors deduced the Schr$\ddot{O}$dinger equation for the overlap.

The article is very interesting and compelling.

The question are:

What will happen to the indistinguishability of the quantum blobs when the state is not a coherent squeezed state, but a thermal squeezed state?

In section “Conservation of probability” in Eq. 21 you dropped the second-order terms. Why do you think they are not comparable to the first-order terms.