

One parameter groups of Bogoliubov transformations

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Abstract

On the bosonic Fock space, we consider a family of Bogoliubov transformations corresponding to a strongly continuous one parameter group of symplectic maps R_t . We look for the weakest possible assumptions on the generator of this group so that the induced representations of CCR are unitarily equivalent for all time t . It is then easy to see that the unitary operators which intertwine these representations can be chosen to form a unitary group. We also give explicit formulas for this group and for its selfadjoint generator.