Ezekiel Olusola Ayoola* (eoayoola@googlemail.com), Department of Mathematics, University of Ibadan, Ibadan, Nigeria. Arc-wise connectedness of solution sets of quantum stochastic differential inclusions.

We show that the sets of solutions of quantum stochastic differential inclusions driven by stochastic processes associated with the basic field operators of quantum field theory are arc-wise connected. The results hold within the framework of the Hudson-Pathasarathy formulation of quantum stochastic calculus. This complements similar results in the classical cases of differential inclusions defined on finite dimensional Euclidean spaces. (Received July 10, 2010)