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Resolution of quantum singularities DEBORAH KONKOWSKI, U.S. Naval Academy, THOMAS HELLIWELL, Harvey Mudd College — A review of quantum singularities in static and conformally static spacetimes is given. A spacetime is said to be quantum mechanically non-singular if a quantum wave packet does not feel, in some sense, the presence of a singularity; mathematically, this means that the wave operator is essentially self-adjoint on the space of square integrable functions. Spacetimes with classical mild singularities (quasiregular ones) to spacetimes with classical strong curvature singularities have been tested. Here we discuss the similarities and differences between classical singularities that are healed quantum mechanically and those that are not. Possible extensions of the mathematical technique to more physically realistic spacetimes are discussed.

Deborah Konkowski
U.S. Naval Academy

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