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Sommario/riassunto

The problem of time is a central feature of quantum cosmology: differing from ordinary quantum mechanics, in cosmology there is nothing "outside" the system which plays the role of clock, and this makes difficult the obtention of a consistent quantization. A possible solution is to assume that a subset of the variables describing the state of the universe can be a clock for the remaining of the system. Following this line, in this book a new proposal consisting in the previous identification of time by means of gauge fixation is applied to the quantization of homogeneous cosmological models.