Possibilities of Dirac-Einstein Equation

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ABSTRACT: It has been stated that the Dirac-Einstein [1] equation separates easily into the Dirac equation and the Einstein equation. Next, the possible conjugations existing in the Dirac-Einstein equation have been analyzed. Next, one has come back to the problem of the cosmological constant and its significance in the Dirac-Einstein equation.

The Dirac-Einstein equation separates into the Dirac equation and the Einstein equation. The potential term of the Dirac equation gives the possibility of the conjugation. In this member the gravitational potential can be considered. The potential term V can be a matrix, too.

$$i\,\hbar\,\gamma^{\mu}\,\delta_{\mu}\;\Psi\;+\;V\Psi\;=\;\left(R_{ik}+\;g_{ik}\,g^{ik}\,R_{ik}\right)\Psi$$

$$V\;=\;g_{ik}$$

Next, another conjugation through the derivative of Ψ exists and the quantum effects are introduced by the Planck constant.
The term $V\Psi$ is an analog of the term Λg_{ik} with the cosmological constant. It means that this term (although it has been rejected by Einstein) can appear in his equation.
The conjugation by the derivative of spinor means that the Einstein term and the potential term must spy upon the derivative of spinor at least in a certain sense.
Next conjugation: the gravitational field – because of the unification of all interactions by mass – is equivalent to the sum of all next fields [1]. It means mathematically that:

$$g_{ik}\;=\;\;G_{ik}+\;T_{el-magn_{ik}}+T_{strong_{ik}}+\;\ldots$$

The field of the coordinates is the next conjugation, because the time is equivalent to the fields and interactions [2].

Special Relativity reads that the time is connected with other space coordinates.

References:

[1] Z. Morawski, “Attempt at Unification of Interactions and Quantization of Gravitation”, this website
[2] Z. Morawski, “Approach to Nature of Time”, this website