

Gravitational Physics and Astronomy 2022



Online Conference on Gravitational Physics and Astronomy

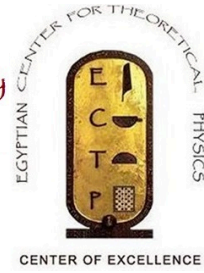
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<https://indico.cern.ch/e/GPA2022>



https://www.mdpi.com/journal/physics/special_issues/SPGPCC



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Discrete Relativity

Monday, 5 December 2022 17:00 (30 minutes)

In General Relativity (GR) Einstein equation is constructed from GR lagrangian under an implicit assumption. It is that in regular matter, energy of particles in motion can be completely discarded. This appears when the opposite assumption is tried and when its consequences in GR are studied. This study is lead by a macroscopic approximation given by a new equation called "Discrete Relativity equation". An unexpected consequence is that strong theoretical arguments exist for replacement of today's assumption by the new one. The most important consequence is that the "surrounding effect", which is the central concept of a previous work, is in the inner part of this new GR. But in most of the cases the 2 assumptions predictions are the same. And GR lagrangian in vacuum remains a fundamental equation common to the 2 assumptions. A direct result is that a surrounding effect arises in gravitation and this gives an explanation to the gravitational issues of today. And under a second assumption which is a unifying one, it explains also the Millenium Yang-Mills problem.

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