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Progress in Group Field Theory and Related Quantum Gravity Formalisms

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submissions:

closed (30 June 2019)

Message from the Guest Editors

Dear Colleagues,

In recent years, the Group Field Theory (GFT) formalism for quantum gravity has seen significant progress in different directions: our understanding of its quantum geometric degrees of freedom has been deepened, new techniques have been developed towards GFT renormalisation, and the possibility of establishing a continuum limit; new connections between quantum gravity, condensed matter physics and quantum information have been explored; applications of GFT to the physics of cosmology and black holes point to possible novel resolutions of puzzles of classical gravity and represent promising avenues for connecting quantum gravity with observations. The many (conceptual and mathematical) relations and structural overlaps with other quantum gravity formalisms, such as random tensor models, loop quantum gravity, and lattice gravity, allow also to take advantage of the many developments occurring in them, which include both interesting results of direct implementation within GFT as well as inspiring advances towards shared goals. [...]

For more information, please visit [link](#).

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Special Issue



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Message from the Editor-in-Chief

The multidisciplinary *Universe* journal is aiming to follow and, hopefully, to lead to the largest extent as possible the ever-self renovating threads which weave mathematical theories with our understanding of the magnificent natural world. On behalf of all the distinguished members of the editorial board, I extend my welcome to this new journal and look forward to hearing from the interested contributors and learning about their valuable research.

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