



Department of
Theoretical Physics

THE QUANTUM SPACETIME SEMINAR SERIES

The double copy: gravity from gauge theory

(Zoom Seminar)

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Zoom link shall be shared separately



Three of the four fundamental forces in nature are described by (non-)abelian gauge theories. The fourth, gravity, is best described by General Relativity, which traditionally looks like a completely different theory to the others. However, a new correspondence (“the double copy”) has been found in recent years, that relates quantities in gauge, gravity and other theories, and which itself is inspired by previous work in string theory. This provides new calculational tools for (quantum) gravity, but also suggests our conventional foundations of QFT are hiding a deep underlying structure. In this talk, I will review the current state of research in this area, and try to point out where open problems are, so that newcomers may join the fun.