



Department of
Theoretical Physics

THE QUANTUM SPACETIME SEMINAR SERIES

Positivity with Gravity

(Zoom Seminar)

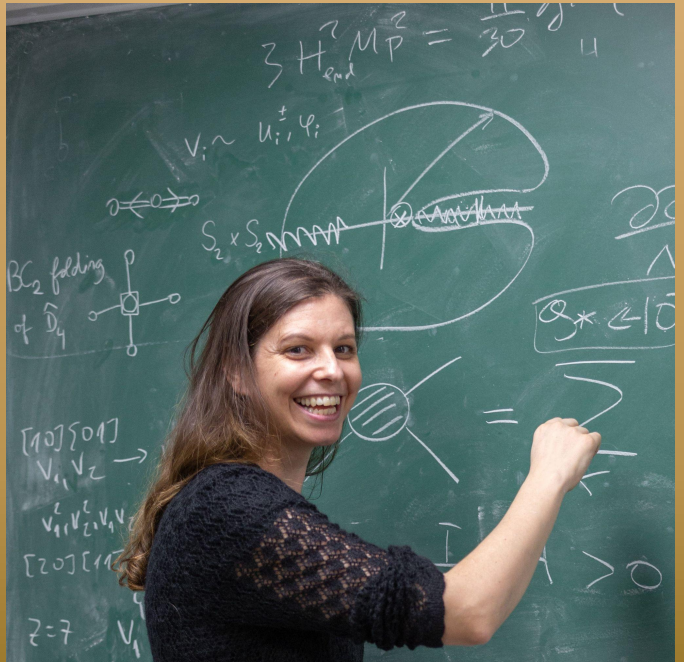
Claudia de Rham

(Imperial College)

Date: June 14, 2021

Time: 3.00 pm IST

Zoom link shall be shared separately



In standard effective field theories, the notion of causality is intrinsically linked with that of subluminality and with a set of positivity constraints to be imposed on the low-energy scattering amplitudes. I will highlight how the presence of gravity leads to a more subtle relation between causality, (sub)luminality and positivity bounds pertinent to the Weak Gravity Conjecture. These considerations are relevant for putting constraints on cosmological and gravitational effective field theories and I will provide explicit criteria to be satisfied so as to ensure causality and a standard high energy completion in gravitational effective field theories.