ICTS String Seminar

Title	:	Holo-ween
Speaker	:	Mark Van Raamsdonk, (University of British Columbia)
Date	:	Wednesday, July 29, 2020
Time	:	09:00 am (IST)

Abstract : We argue that given holographic CFT1 in some state with a dual spacetime geometry M, and given some other holographic CFT2, we can find states of CFT2 whose dual geometries closely approximate arbitrarily large causal patches of M, provided that CFT1 and CFT2 can be non-trivially coupled at an interface. Our CFT2 states are "dressed up as" states of CFT1: they are obtained from the original CFT1 state by a regularized quench operator defined using a Euclidean path-integral with an interface between CFT2 and CFT1. Our results are consistent with the idea that the precise microscopic degrees of freedom and Hamiltonian of a holographic CFT are only important in fixing the asymptotic behavior of a dual spacetime, while the interior spacetime of a region spacelike separated from a boundary time slice is determined by more universal properties (such as entanglement structure) of the quantum state at this time slice. Our picture requires that low-energy gravitational theories related to CFTs that can be non-trivially coupled at an interface are part of the same non-perturbative theory of quantum gravity.

ICTS virtual seminar	:	Please register at https://docs.google.com/forms/d/e/1FAIpQLSf0jLgoqiOgDnxbEBGiuIWiOmh9WX8caH-pr13qDBZOO91lmg/viewform
		(Links to join the seminars will be sent to your registered email address)

Recordings of past talks can be found here:
https://www.youtube.com/channel/UCw9LdPQ5t7Q7muD0qzn70TA