ICTS MONTHLY COLLOQUIUM

A New Generalization of Entanglement Entropy

The idea of holography in string theory provides a simple geometric computation of entanglement entropy. This generalizes the well-known Bekenstein-Hawking formula of black hole entropy and strongly suggests that a gravitational spacetime consists of many bits of quantum entanglement. After we give a brief review of this field, I will explain progresses on a recently introduced quantity called pseudo entropy, which generalizes the entanglement entropy and has a manifest gravity dual.

TADASHI TAKAYANAGI

received his PhD from the University of Tokyo in 2002. He worked in Harvard University and in KITP Santa Barbara as a post-doctoral fellow. He is currently a professor at Yukawa Institute for Theoretical Physics, Kyoto University and has been working on the deep connections between quantum gravity and quantum information, especially from the viewpoint of holography in string theory. He has been awarded with several prizes including, The Nishina Memorial Prize in 2016, and The New Horizons in Physics Prizes in 2015.

3:30 pm, 31 January 2022

ONLINE COLLOQUIUM
Zoom link - https://bit.ly/ictsMCjan22

Meeting ID : 889 0892 4452
Passcode : 313132

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