

## **ICTS String Seminar**

Title : Heavy Operators and Hydrodynamic Tails

Speaker : Luca Delacretaz (University of Chicago)

Date : Wednesday, 30 September 2020

Time : 07:30 pm (IST)

Abstract : The late time physics of interacting QFTs at finite temperature is controlled by hydrodynamics. For CFTs this implies that heavy operators -- which are generically expected to create thermal states -- can be studied semiclassically. We show that hydrodynamics universally fixes the OPE coefficients  $C_{\{HH'L\}}$ , on average, of all neutral light operators with two non-identical heavy ones, as a function of the scaling dimension and spin of the operators. These methods can be straightforwardly extended to CFTs with global symmetries, and generalize recent EFT results on large charge operators away from the case of minimal dimension at fixed charge. We also revisit certain aspects of late time thermal correlators in QFT and other diffusive systems.

[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>