

Elefterios Soultanis (U Jyväskylä):  
**Generalized Lorentzian products**

Given a one-parameter family of Riemann metrics on a manifold  $M$ , one can easily define a Lorentzian metric on the product of  $M$  and the parameter-interval. In this talk I will explain how to do the same for a one-parameter family of distances on a metric space in the framework of Lorentzian length spaces (LLS). LLS's form a non-smooth analogue of Lorentzian manifolds and are well-suited for the recently developed optimal transport approach to causal geometry. This approach, as well as our construction draws heavily from the techniques of non-smooth metric geometry and analysis.