

phd/early postdoc symposium on non-locality

June 17, 2021

This is the program for the first-ever phd/early postdoc symposium on **nonlocality**, taking place on Thursday, June 17, 06:00 Los Angeles, 09:00 New York, 15:00 Amsterdam, 21:00 Shenzhen, 22:00 Tokyo, via Zoom.

1. Introduction & ice breaker (~15 minutes)

2. <u>Identification of important unsolved problems</u> (~45 minutes)

- QFT: clear statements and status on unitarity
- QFT: role of Wick rotation and Sen prescription
- QFT: gauge theories and determining Feynman rules
- QFT: renormalizability
- GR: status of exact solutions
- GR: can regular black hole solutions be found?
- general: where does the form factor come from?

3. Exploration of possible connections to other fields (~45 minutes)

- non-locality in quantum entanglement and quantum information
- diffeomorphism invariance in quantum gravity needs non-locality
- role of holography

4. <u>Future plans & wrapping up</u> (~15 minutes)

5. <u>Closing remarks</u>