

Title: Panel Discussion IV: UV/IR coupling in Quantum Gravity: Feature or Bug?[]

Speakers:

Collection: Quantum Spacetime in the Cosmos: From Conception to Reality

Date: May 11, 2023 - 4:00 PM

URL: <https://pirsa.org/23050132>

Abstract: Zoom Link: <https://ptp.zoom.us/j/99946149565?pwd=M2puMy9nSEtBZTg1MnRmSllHeUE0UT09>

UV/IR Coupling in QG: Feature or Bug?

EFT: GR, QFT \rightarrow simplifier

- * Nonlocality crucial for sing. resolution?
- * Status of nonlocality in approaches to QG?

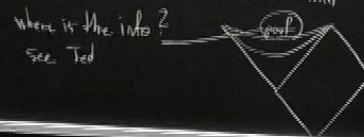
IR/UV Coupling

- * Crucial for sing. resolution?
 - * Signature of IR/UV coupling?
 - * Status of IR/UV corresp. in QG models?
- Answer: Dark Energy

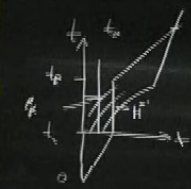
Fuzzball example ∇^{-1} (tunneling)

- Nonlocality (A) ∇^{-1} in action
- (B) not an EFT in M^4

- IR/UV: (A) UV affects IR - possibly Wilsonian
 - (B) Duality between UV & IR
- Non-Wilsonian



Model	NL	IR/UV	Notes
LAG	✓	X	
ST	✓	✓	T-duality
CST	✓	✓	
AS	X	✓?	A, not B



$$\frac{a(t_0)}{a(t)} t_0 \leq H^{-1}(t_0)$$