



**Prof. Ivette Fuentes**  
University of Southampton, UK.



**Date & Time:**

**26<sup>th</sup> November, 2025 @ 5:30 PM IST**



**Venue:**

**Classroom-4, TCG CREST**

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## **Title – Should We Quantize Gravity - or Gravitize Quantum Theory?**

### **Abstract**

Unifying quantum theory and gravity is often framed as a quest to quantize gravity using mathematical and theoretical methods. An alternative approach explores how gravity itself might modify quantum theory, ideally guided by experimental insights. I will present our theoretical work with Roger Penrose using a Bose-Einstein condensate to probe these effects, alongside our experimental test of the quantum equivalence principle with Ron Folman's team, demonstrating that quantum theory and gravity are compatible under passive gravity. Finally, I will outline new directions toward “gravitizing” quantum theory, including experiments to test active gravity effects on quantum superpositions.

**Organized by:**

***CQuERE (Centre for Quantum Engineering, Research and Education), TCG CREST, Kolkata, INDIA***

**For more details, please visit the website: <http://www.tcgcrest.org/iyq2025>**

**For any queries, feel free to contact us through the email: [iyq.2025@tcgcrest.org](mailto:iyq.2025@tcgcrest.org)**