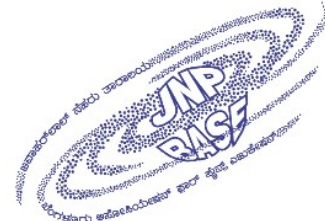




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Kaapi with Kuriosity is a monthly public lecture series organised by the International Centre for Theoretical Sciences (ICTS-TIFR), in collaboration with the Jawaharlal Nehru Planetarium and other educational institutions in Bengaluru.



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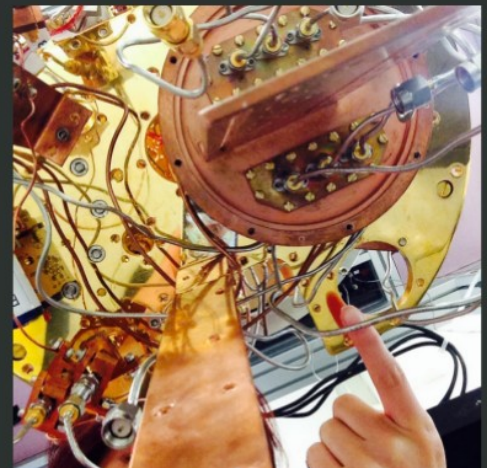
THE ARROW OF TIME IN QUANTUM MEASUREMENT



What can quantum measurement tell us about the arrow of time? To answer this question, we use cutting edge techniques involving superconducting circuits cooled to near absolute zero to capture “movies” of quantum behaviour. When we press rewind on an ordinary movie of everyday life, the movie looks strange and shows very unlikely behaviour: people walk backwards, water flows up hill, and messy floors spontaneously become clean. It is clear from watching an ordinary movie which way is backwards and which way is forwards, but is the same true for movies of quantum behaviour? In this talk, I will share these quantum movies and discuss how we can infer an arrow of time from quantum measurement alone.

Kater Murch

received his B.A. in physics from Reed College in 2002, and conducted graduate research at the University California, Berkeley in the group of Dan Stamper-Kurn where his research focused on Bose-Einstein condensates, cavity quantum electrodynamics, and quantum measurements. Murch conducted post-doctoral research at the University of California, Berkeley in the group of Irfan Siddiqi. Kater Murch joined the faculty at Washington University in 2013 and was awarded the Alfred P. Sloan Fellowship in Physics in 2015.



WHEN & WHERE

**4 PM, SUNDAY
23RD JULY 2017**

**JAWAHARLAL NEHRU
PLANETARIUM,
SRI T. CHOUDIAH ROAD,
HIGH GROUNDS, BENGALURU,
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