# The 73rd KITP Public Lecture

Sponsored by the Friends of KITP

### **Quantum Theory of the Classical**

We live in a Universe that is fundamentally quantum. Yet, our everyday world appears to be resolutely classical. The underlying quantumness of our Universe has been by now convincingly established by careful laboratory experiments. They attest to the quantum nature of systems of various size and, above all, of the "stuff" (e.g. atoms) everything is made of. The evidence for the absence of quantumness in our world comes from ongoing everyday "experiments" – our perceptions – that are poorly controlled, but, because of their immediate, personal nature, are immensely persuasive.

Why does quantum theory result in a familiar "classical reality" in quantum systems? How and why does quantum theory result in our classical perceptions?

#### Wednesday, May 29th at Kohn Hall

7:00 PM (reserved seats are held until 6:50 PM) Admission is FREE

### **RSVP for Reserved Seating**

by Wednesday, May 22nd

Online at: https://www.kitp.ucsb.edu/public-

<u>lecture-rsvp</u>





# About the Speaker

Wojciech Hubert Zurek is a Laboratory Fellow at Los Alamos. He is a leading authority on quantum theory, especially decoherence and the physics of information. His work on decoherence established a major bridge between the quantum and the classical, and the nocloning theorem is the cornerstone of quantum information theory. Zurek is a Fellow of the American Physical Society, served as the Einstein Professor at the Ulm University, and received the Los Alamos Medal in 2014, the highest honor bestowed by the Los Alamos National Laboratory.

### Lot 10 parking

As you enter campus from Highway 217, turn right onto Mesa Rd, merge into the left lane, and at the stop light turn left into Parking Structure 10. Park, buy a permit from the dispenser (near the elevator and stairs), and display the permit on your dashboard. KITP is right next door to the parking structure.

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