

**Plenary Talk** PLV IV Tue 9:30 ZHG011  
**Decoherence and Quantum Darwinism** — ●WOJCIECH ZUREK  
— Los Alamos National Laboratory, USA

The measurement problem has been a central puzzle of quantum theory since its inception, and understanding how the classical world

emerges from our fundamentally quantum Universe is key to its resolution. While the "Copenhagen" and "Many Worlds" interpretations have dominated discussion of this philosophically charged question, I will show how the physics of decoherence and the theory of Quantum Darwinism accounts for the emergence of classical reality.