In recent years, new insights about holographic dualities have led to unexpected connections between low-dimensional quantum gravity, black hole mechanics, and condensed matter physics. For example, quantum mechanical systems describing non-Fermi liquids such as the Sachdev-Ye-Kitaev (SYK) model have been understood to be dual, in some limit, to theories of two dimensional dilaton-gravity with black holes. Simple models of holography in low dimensions thus give a dual description of quantum black holes, and also provide an arena in which general consistency principles may be used to bootstrap quantum gravity. The tractability of these models even when quantum gravity effects become strong has opened a new window on black hole physics, thermalization, quantum chaos, and more. These developments have also helped elucidate a spacetime picture of how information comes out of an evaporating black hole, its relation to spacetime wormholes, and the role of disorder in gravity. This workshop aims to bring together experts from these fields to take stock of recent progress and develop new collaborations.

**Speakers**

Ahmed Almheiri  
Nathan Benjamin  
Micha Berkooz  
Alejandra Castro Anich  
Netta Engelhardt  
Yingfei Gu  
Thomas Hartman

Daniel Jafferis  
Clifford Johnson  
Daniel Kapec  
Vladimir Kazakov  
Finn Larsen  
Henry Maxfield  
Sameer Murthy

Geoff Penington  
Eric Perlmutter  
Xiaoliang Qi  
Subir Sachdev  
Douglas Stanford  
Zhenbin Yang  
Xi Yin