

LECTURES ON FRONTIERS OF QUANTUM MATTERS

量子物质前沿讲座



清华大学
Tsinghua University

TITLE |

**Few Lessons Taught by Two
Dimensional near
Anti-de Sitter Space**

SPEAKER |

Zhenbin Yang
(Princeton University)



TIME |

3:00-4:30 June 13, 14, 15, 2018



VENUE |

Room 104, Science Building
Tsinghua University

主办方：清华大学高等研究院

ABSTRACT

Near Extremal Black Hole in nature has a universal AdS_2 structure near its horizon. Study of this structure has shown that the gravitational dynamics can be captured by the asymptotic symmetry of AdS_2 space. For near extremal black hole, the asymptotic symmetry will be slightly broken and lead to a Schwarzian action. The same mechanism also appears in a condensed matter system called SYK model. The dynamics and quantization of Schwarzian action will be described and relation with black hole information problem will be discussed.

Schedule:

1. Classical dynamics of 2d gravity system.
2. Semiclassical effect of 2d Gravity.
3. Quantum dynamics of 2d Gravity.