

# STRONGLY INTERACTING CONFORMAL FIELD THEORY IN CONDENSED MATTER PHYSICS



Organized by: Institute for Advanced Study, Tsinghua University

June 25 - 27, 2017

Room 104, Science Building(科学馆) Tsinghua University

Program and Registration: <http://cft.csp.escience.cn>

## CONFIRMED INVITED SPEAKERS

Ehud Altman (Berkeley)  
Dmitry Bagrets (Cologne)  
Chao-Ming Jian (UCSB)  
Shamit Kachru (Stanford)  
Dunghai Lee (Berkeley)  
Srinivas Raghu (Stanford)  
Subir Sachdev (Harvard)  
Herman Verlinde (Princeton)  
Ashvin Vishwanath (Harvard)  
Chong Wang (Harvard)  
Yong-Shi Wu (Utah)  
Yi-Zhuang You (Harvard)

## ORGANIZERS

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Recent years tremendous progresses have been made towards understanding strongly interacting conformal field theories without supersymmetry. First of all, it was observed from various reasonings that different field theory Lagrangians in 2+1d can be secretly identical (dual) to each other in the strongly coupled infrared limit: a surprising and powerful statement, which implies that the same CFT could use different Lagrangians as its disguise. Secondly, motivated by the original model constructed by Sachdev and Ye (which was recently reintroduced and generalized by Kitaev), many exactly soluble models with approximate 0+1d conformal symmetry have been proposed. These models share many amazing properties such as maximal chaos, finite ground state entropy, and holographic dual in the AdS<sub>2</sub> space. This conference will bring together world-leading experts on these topics to discuss latest progresses in these directions.

## TOPICS INCLUDING

Duality web of 2+1d CFTs, and its connection to condensed matter physics;  
Unconventional quantum critical points;  
SYK model and non-fermi liquid states;  
Holographic duality and condensed matter physics.