Abstracts

Gurău, **Răzvan** - *A primer in tensor field theory*

In this short course I will introduce the basics of tensor field theory. I first will focus on the zero dimensional case. I will detail the $1/N$ expansion in several examples of tensor models and compare it to the $1/N$ expansion of mixed vector / tensor models (like the SYK model). In the second part of the course I will discuss the renormalization in tensor field theories and the various fixed points one finds in the large N limit.

Rosenhaus, **Vladimir** - *SYK and Conformal Field Theory*

We discuss correlation functions in SYK and relevant aspects of conformal field theory.

Sárosi, **Gábor** - *Holography in two dimensions and the SYK model*

I will explain recent developments in understanding holography in two bulk dimensions, and its connection to microscopics of near extremal black holes. This will include motivating and reviewing Jackiw-Teitelboim gravity and discussing the SYK model focusing on its holographic features.