



# TOHOKU FORUM for CREATIVITY

Tohoku Forum for Creativity Thematic Program 2015

Fundamental Problems in Quantum Physics: Strings, Black Holes and Quantum Information

**International Workshop on Strings, Black Holes and Quantum Information**

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## Entanglement Entropies for Probe Branes

Andreas Karch  
(Washington U.)

Schedule:

Monday, September 7, 15:30-16:30

Place:

TOKYO ELECTRON House of Creativity 3F, Lecture Theater  
Katahira Campus, Tohoku University

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Abstract:

Some of the most interesting holographic field theories can be realized via probe branes. Unfortunately until recently very few tools had been developed to calculate the holographic entanglement entropy (EE) for probes. We'll review some recent constructions that allow us to effectively calculate the EE for probe branes and present some surprising results for the EE in one of the simplest holographic field theories, flavored maximally supersymmetric Yang-Mills at finite charge density.