

May 8, 2015  
KAP 414  
3:30 pm- 4:30

## Prof. Xunyu Zhou (Purdue University)

“Optimal exit time from casino gambling:  
Why a lucky coin and a good memory matter”

**Abstract:** We consider the dynamic casino gambling model initially proposed by Barberis (2012) and study the optimal stopping strategy of a pre-committing gambler with cumulative prospect theory (CPT) preferences. We develop a systematic and analytical approach to finding the gambler's optimal strategy. We illustrate how the strategies computed in Barberis (2012) can be strictly improved by reviewing the betting history or by tossing an independent coin, and we explain that the improvement generated by using randomized strategies results from the lack of quasi-convexity of CPT preferences. Finally, we show that any path-dependent strategy is equivalent to a randomization of path-independent strategies.

This is a joint work with Xuedong He (Columbia), Sang Hu (NUS) and Jan Obloj (Oxford).