Abstract: Recommender systems have been greatly developed in the last 20 years and are now widespread in various practical applications. In this talk, we first introduce the problem setting of recommender systems with learning to rank and the Bayesian personalized ranking (BPR) which is a popular learning to rank strategy for recommender systems. Then we propose a personalized pairwise novelty weighting framework for BPR loss function, which effectively improves novelty of recommended items with negligible decrease in accuracy.