

**NYU Stern School of Business**  
**Department of Information, Operations & Management Sciences**  
**OPERATIONS MANAGEMENT RESEARCH SEMINAR**

**TOPIC: The d-Level Nested Logit Model**

**SPEAKER: Paat Rusmevichientong (USC)**

**DATE: Wednesday, October 15, 2014**

**TIME: 9:30 AM - 10:30 AM**

**PLACE: KMC 4-80**

**ABSTRACT**

We provide a new tree-based formulation for the d-level nested logit model, allowing for an arbitrary number of levels. We then consider the canonical revenue management problem of finding a revenue-maximizing assortment under this choice model. By exploiting the succinct description of the selection probabilities and expected revenues under our formulation, we develop an efficient algorithm for computing an optimal assortment. For a d-level nested logit model with  $n$  products, the running time of the algorithm is  $O(d n \log n)$ .

Joint work with Guang Li and Huseyin Topaloglu

**BIO**

Paat Rusmevichientong is an Associate Professor of Operations Management at the USC Marshall School of Business. His research interests include stochastic optimization problems with applications to supply chain and revenue management. He received BA in Mathematics from UC Berkeley, and MS and PhD in Operations Research from Stanford University. He has been a recipient of the NSF CAREER Award, the USC Marshall Dean's Award for Research Excellence, and the USC Marshall Golden Apple Award for Excellence in Undergraduate Teaching.