

# SCMS Seminar



## MODEL SELECTION VIA STABILITY

**Dr. Junhui Wang**

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**Time:** 9:30-10:30 a.m., Friday, November 7th, 2014

**Venue:** Room 303, Starr Building (史帶樓), Management School, Fudan University

**Abstract:** In this talk, I will present some novel model selection criteria based on a general concept of stability. The stability concept measures the robustness of any given model against the randomness in the sampling and can be adapted in various scenarios. Two scenarios will be discussed in details: selection of the number of clusters for cluster analysis and selection of the tuning parameter for penalized regression. In specific, clustering stability and variable selection stability will be defined, and the corresponding model selection criteria are set to select the model with the largest clustering stability or variable selection stability. Numerical examples will be provided to demonstrate the effectiveness of the proposed selection criteria. Asymptotic selection consistency of the proposed selection criteria will also be discussed.

**Bio:** Dr. Junhui Wang received his Ph.D. degree from University of Minnesota in 2006, then worked at University of Illinois at Chicago until 2013, and now associate professor at City University of Hong Kong. His research is mainly on statistical machine learning, model selection, and high-dimensional data analysis.