# Model Assessment, Selection and Averaging

Hsin-Cheng Huang[1] and Xiaotong Shen[2]

[1] Institute of Statistical Science, Academia Sinica, Taiwan
[2] Department of Statistics, University of Minnesota, USA

Central to statistical theory and application is statistical modeling, which typically involves choosing a single model or combining a number of models of different sizes and from different sources. Whereas model selection seeks a single best modeling procedure, model averaging combines the strength of different modeling procedures. In this talk, I shall introduce a general technique of model assessment for model selection and averaging, and develop a methodology for determining the tuning parameter based on generalized degrees of freedom. Numerical examples and theoretical justification are provided to demonstrate the effectiveness of the proposed methodology.