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Chengyu Liu* (cliu59@wisc.edu), 101 Conover, 1650 Kronshage Dr., Madison, WI 53706, and **Wei Pan**, Peking, Peking. *Fair Regulation and Calculation Of Scores In Competitions Involving Judges' assessment.*

Introduction: The goal of our research is to evaluate scoring system in competitions involving judges' assessment using psychological and statistical approaches and thus to improve the system used in competitions. The data from real competitions and situations will be used to find the loopholes in the old scoring system and methods will be design to fix the loopholes. The outcome improving methods will be evaluated for efficiency and tested if theoretically efficient.

Preliminary Results: Present Candidate Solutions: 1 Use a new kind of statistic to describe the data center. 2 Comparison of all the score given by one judge, and analyze the pattern of score change. 3 Eliminate the bias by psychology analysis and orthogonal table analysis of bias.

Discussion and Future Work: All 3 methods we developed now all have their advantages and disadvantages, the second one is the most feasible one in all 3 of the candidates. The most crucial problems are maximum extraction of information from the data and the balance between data quantity and data collection efficiency. And we plan to gather the view and experience of more people who work in music and art areas to help us to get better solutions. (Received September 22, 2010)