1033-92-81 **Di Wu*** (di.wu@wku.edu), TCCW 337, Department of Mathematics, 1906 College Heights Blvd #11078, Bowling Green, KY 42101. *NMR Protein Structure Refinement through Mean Force Potentials.*

Protein structures determined by traditional techniques, including X-ray crystallography, Nuclear Magnetic Resonance and comparative modeling, are generally not as accurate as desired. Therefore, it always requires further refinement, and developing an efficient technique is critical and urgent. Determined Proteins with high resolution structures have rich information in conformational properties, many of which are statistically distributed. In this talk, I will show deriving mean force of potentials from statistical analysis on geometric angles and distances and its application to NMR protein structure refinement. This is the joint work with Zhijun Wu, Robert Jernigan at the Iowa State University. (Received September 03, 2007)