

Meeting: 1002, Pittsburgh, Pennsylvania, SS 7A, Special Session on Knots and Macromolecules

1002-57-117 **Kenneth C Millett*** (millett@math.ucsb.edu), Department of Mathematics, University of California, Santa Barbara, Santa Barbara, CA 93106. *Local versus global structure in knot space.*

Preliminary results of a joint project with Eric Rawdon to study of the local structure of knot space near the ideal equilateral knots will be presented and contrasted with data reflecting the global structure of knot spaces. These data are developed by means of random perturbations of the ideal knots and analyzed by calculating the HOMFLY polynomials of the configurations. The computational methods, their strengths and limitations will also be discussed. (Received September 09, 2004)