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**Yuanan Diao\*** ([ydiao@uncc.edu](mailto:ydiao@uncc.edu)), Department of Mathematics and Statistics, UNCC, Charlotte, NC 28223. *The variance of the writhe of equilateral random polygons*. Preliminary report.

The variance of the writhe of an equilateral random polygon is a problem that has not been studied in depth before. In this talk, I will discuss the formulation of this problem and the technical difficulties in obtaining a precise formula for it. I will present some partial analytic results that suggest the variance should behave as  $O(n \ln n)$ . Some numerical results will be presented that supports this conjecture. (Received September 20, 2010)