

1073-57-158

**Y. Diao**, Dept. of Math. and Stat., UNCC, Charlotte, NC 28223, **C. Ernst\***  
([claus.ernst@wku.edu](mailto:claus.ernst@wku.edu)), Dept. of Math. and Comp. Science, WKU, Bowling Green, KY 42101,  
**A. Montemayor**, Dept. of Math. and Comp. Science, WKU, Bowling Green, KY 42101, and **U.**  
**Ziegler**, Dept. of Math. and Comp. Science, WKU, Bowling Green, KY 42101. *Generating  
Random Polygons in Spherical Confinement I.*

We discuss a fast algorithm or method that generates confined equilateral random polygons in spherical confinement where the polygons start and end at the center of the confinement sphere. For a polygon the placement of each vertex is selected based on the true theoretical probability distribution of its location, and thus we can prove that we do generate polygons in our sample space with uniform probability. (Received July 31, 2011)