1041-57-153 **Kenneth C. Millett*** (millett@math.ucsb.edu), Department of Mathematics, UCSB, Santa Barbara, CA. *Knots and Slipknots in Random Walks and Equilateral Polygons.*

Collectively, Diao, Pippenger, Sumners, and Whittington proved the Delbruck-Frisch-Wasserman conjecture that the probability that a self-avoiding random walk or equilateral polygon contains a knot goes to one as the number of edges goes to infinity. A slipknot is defined to be a knotted segment of a walk or polygon that is contained in a larger unknotted segment. Millett, Dobay, and Stasiak showed that the statistics of random closures, to the sphere at infinity, of a polygonal segment provide an effective definition of knotting of the segment. Using this definition, we confirm the knotting theorems and extend them to show that the probability that a self-avoiding random walk or equilateral polygon, in 3-space or the simple cubic lattice, contains a slipknot goes to one as the number of edges goes to infinity. (Received August 09, 2008)