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Tetsuo Deguchi* (deguchi@phys.ocha.ac.jp), 2-1-1 Ohtsuka, Bunkyo-ku, Tokyo, 112-8610, Japan. *Correlation functions of random knots and some physical applications*. Preliminary report.

We discuss a model function describing the pair correlation function of a random knot. The model is supported by computer simulation on the probability distribution function of distance between two nodes of an equilateral random polygon with fixed knot. We also discuss some applications of the correlation function in polymer physics. (The talk is based on the collaboration with Dr. A. Yao.) (Received August 28, 2006)