1161-57-106   **Kenneth C Millett*** (`millett@math.ucsb.edu`), Department of Mathematics, University of California, Santa Barbara, Santa Barbara, CA 93106. *Knots in Proteins.*

Since 2000, knots in proteins have attracted the attention of biologists, biophysicists, and mathematicians. Following a brief historical inventory, we will describe the application of algebraic and topological methods to identify and quantify the presence of knotting in macromolecules, we will describe a new application of the HOMFY-PT polynomial, the superposition of the DMS spectrum. We will employ this to describe important instances of knots and slipknots in proteins, their mathematical character, and explore what they tell us about the consequences of knotting entanglement. (Received August 13, 2020)