Eleni Panagiotou* (eleni-panagiotou@utc.edu) and Kevin W Plaxco. A topological study of protein folding kinetics.

Focusing on a small set of proteins that i) fold in a concerted, “all-or-none” fashion and ii) do not contain knots or slipknots, we show that the Gauss linking integral, the torsion and the number of sequence-distant contacts provide information regarding the folding rate. Our results suggest that the global topology/geometry of the proteins shifts from right-handed to left-handed with decreasing folding rate, and that this requires more sequence-distant contacts. (Received September 24, 2018)