Persistent Contacts Along the Primitive Path SCOTT MILNER, JING CAO, Penn State University — In an entangled polymer melt or solution, the uncrossability of the chains effectively restricts a given chain to move perpendicular to its contour path such that the chain is confined in a tube like region. In the present work, we use MD simulations to investigate the dynamics of the tube, represented by the isoconfigurationally averaged primitive path of a self-entangled ring polymer in a melt. A new approach to find entanglement molecular weight is introduced based on identifying close contacts between points along the primitive path, which is in a good agreement with previous work.

Scott Milner
Penn State University