1144-92-119 **Chaim Even-Zohar*** (chaim@ucdavis.edu). ***Random Knots are Knotted – A New Approach.***

A variety of random knot models have been proposed and investigated by mathematicians and biologists, who are interested in such models to study the structure of polymers and to compare their knot types to those that arise by random processes.

A desired property for such a random model is that the probability of obtaining every specific knot type decays to zero as the typical complexity of the knot increases. Past approaches to establish this property, in several random models, rely on the prevalence of localized connect summands. However, this phenomenon is not clear in other models that exhibit, in a sense, "a large step length" or "spatial confinement".

In joint work with Joel Hass, Nati Linial, and Tahl Nowik, we use finite type invariants and a coupling argument to establish this property for random knots that arise from petal projections (Adams et al. 2012). We expect our methods to extend to other well-studied knot models, in which local entanglements are similarly believed to be rare, such as random grid diagrams and uniform random polygons. (Received August 19, 2018)