1124-57-255 **Moshe Cohen*** (mcohen@vassar.edu), **Chaim Even-Zohar** and **Sunder Ram Krishnan**.
Random 2-bridge Chebyshev billiard table diagrams.

Koseleff and Pecker show that all knots can be parametrized by Chebyshev polynomials in three dimensions. These long knots can be realized as trajectories on billiard table diagrams. We use this knot diagram model to study random knot diagrams by flipping a coin at each 4-valent vertex of the trajectory.

We truncate this model to study 2-bridge knots together with the unknot. We give the exact probability of a knot arising in this model. Furthermore, we give the exact probability of obtaining a knot with crossing number c. (Received September 11, 2016)