1119-57-214 **Jozef H. Przytycki*** (przytyck@gwu.edu), Department of Mathematics, George Washington University, Washington, DC 20052. *A few problems in knot theory or motivated by knot theory.*

We propose several problems which are either directly involving knots or are motivated by them. We list five of them below:

1. Find a short skein relation for the number of Fox n colorings. The starting point is the formula $col_3(D) = 3|V(e^{pi/3}|^2$; Jaeger and Jones were interested in this problem.

2. Prove or disprove Nakanishi 4-move conjecture. In particular, show that the 2-cable of the pentafoil knot can be reduced by 4-moves.

3. Understand the multiplication in the Kauffman bracket skein algebra of $F_{0,4} \times [0, 1]$ (in analogy of the Gelca-Frohman noncommutative torus result).

4. Let G be a (bipartite) circle graph, Show that the independence simplicial complex I_G is homotopy equivalent to a wedge of spheres (a joint project with Marithania Silvero Casanova).

5. Study unimodality of a plucking polynomial of a rooted tree with a delay function (a joint project with Mathathoners). (Received February 15, 2016)