

# THE STICK NUMBERS OF LATTICE KNOTS

YOUNGSIK HUH

$S_L(K)$ , the *lattice stick number*(or *lattice curvature*) of a knot type  $K$ , is defined to be the minimal number of line segments required to construct a polygonal representation of  $K$  in the cubic lattice. Rensberg and Promislow proved that  $S_L(3_1) = 14$ . They also estimated the lattice stick numbers of other knots via statistical approach.

In this talk, we give a rigorous proof that  $S_L$  is more than 14 for all knots except for  $3_1$  and  $4_1$ .

HANYANG UNIVERSITY