1163-57-800   **Joshua A Howie*** (`jahowie@ucdavis.edu`). *Alternating genera of knots.*

The alternating genus of a knot is the minimum genus of a surface onto which the knot has an alternating diagram satisfying certain conditions. We study spanning surfaces for knots, and define a related invariant from the extremal spanning surfaces. This gives a lower bound on the alternating genus and can be calculated exactly for torus knots. (Received September 13, 2020)