1033-52-162 **Peter McKinley Huggins*** (`phuggins@math.berkeley.edu`), 1690 Whirlaway Lane, Tracy, CA 95377. *Polyhedral geometry for univeristy ranking data.* Preliminary report.

Like many rankings, the US News and World Report's popular "Best Colleges" rankings are based upon a linear functional of multivariate data. Yet the choice of the functional itself is subjective. We show just how different these rankings can be under perturbations of the functional – and we propose alternative ranking and summary methodology based upon polyhedral geometry, which we believe gives a better assessment of the universities' relative strengths and weaknesses. Along the way I'll sneak in advertisements for new software for zonotope construction, as well as approximation of spherical polytope volumes. (Received September 10, 2007)