An antipodal set in Euclidean $n$-space is a set of points with the property that through any two of them there is a pair of parallel hyperplanes supporting the set. In this talk, I will present two research topics that are connected by the idea of antipodality.

The first part of the talk will focus on the extension of the above concept to hyperbolic $n$-space. This is joint work with Károly Bezdek and Deborah Oliveros.

In the second part, the maximum number of touching positive homothetic copies of a convex body in Euclidean $n$-space will be discussed. According to a conjecture of Károly Bezdek and János Pach, this number should be $2^n$; which bound, if it holds, is sharp as it is attained by cubes. The previously known bound was $3^n$ which I improved to $2^{(n+1)}$. 

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Touching Homothetic Bodies and Antipodality