

Meeting: 1002, Pittsburgh, Pennsylvania, SS 2A, Special Session on Convexity and Combinatorics

1002-52-179 **Karoly Bezdek*** (bezdek@math.ucalgary.ca), 2500 University Drive N.W., Calgary, Alberta
Canada. *Ball-Polytopes*.

A ball-polytope in n -dimensional Euclidean space is the intersection of finitely many congruent n -dimensional balls with non-empty interior. The talk will survey results of the following type: - Alexander's problem for ball-polytopes and its relatives; - The geometry of circle-polygons (isoperimetric-type inequalities); - The geometry of ball-bodies via ball-polytopes (the containment theorem); - The geometry of 3-dimensional ball-polytopes i.e. of ball-polyhedra (an analogue of Cauchy's rigidity theorem for ball-polyhedra). (Received September 13, 2004)