CAMERON L. STEWART, University of Waterloo, Waterloo, Ontario

On sums which are powers

Erdos and Moser investigated the problem of finding sets of positive integers A with the property that $a+b$ is a square whenever a and b are distinct elements of A. With Rivat and Sarkozy we showed that if A is a subset of the first N positive integers then A has cardinality at most $37 \log N$ provided that N is large enough. We shall discuss recent joint work with Gyarmati and Sarkozy where we replace the requirement that $a+b$ be a square with the requirement that $a+b$ be a pure power.