1102-05-19 **Jozsef Balogh**, **Hong Liu**, **Maryam Sharifzadeh** and **Andrew Treglown***
(a.c.treglown@bham.ac.uk). *The number of maximal sum-free subsets of integers.*

A set $S$ of integers is sum-free if $x + y \notin S$ for every $x, y \in S$. Green and independently Sapozhenko proved that there are $O(2^{n/2})$ sum-free sets in $\{1, \dots, n\}$, thereby resolving a conjecture of Cameron and Erdős.

Cameron and Erdős also raised the question of how many *maximal* sum-free sets there are in $\{1, \dots, n\}$, giving a lower bound of $2^{\lfloor n/4 \rfloor}$. In this talk we show that there are in fact at most $2^{(1/4+o(1))n}$ maximal sum-free sets in $\{1, \dots, n\}$.

Our proof makes use of 'container' and 'removal' lemmas of Green as well as a result of Deshouillers, Freiman, Sós and Temkin on the structure of sum-free sets. (Received June 15, 2014)