

CCSU  
DEPARTMENT OF MATHEMATICAL SCIENCES  
COLLOQUIUM

Friday, April 1  
3:00 – 4:00 PM  
Maria Sanford, Room 101

**SUM SETS, DIFFERENCE SETS,  
AND THEIR RELATIVE SIZES**

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**Abstract:** Given a subset of integers  $A$ , the sum set  $A+A$  is the set of all possible sums of two elements taken from  $A$ . Sum Sets are a common object of study in additive number theory and can be studied combinatorially by a variety of tools. In this survey talk, results pertaining to when the difference set is smaller than the sum set and when the difference set is practically everything, but a  $k$ -fold sum set is practically nothing will be presented. The background for this talk has been kept to a minimum and motivated undergraduates could pursue research in this area.

To join us online use the following link: <https://ccsu.webex.com/meet/gotchev>

For further information: [gotchevi@ccsu.edu](mailto:gotchevi@ccsu.edu); 860-832-2839; <https://web.ccsu.edu/colloquium/>