

A perfect power is a number of the form x^k , where x, k are positive integers with $k \geq 2$. While the set of perfect powers has “perfect” multiplicative structure, we do not have a good understanding on the multiplicative structure of a nontrivial shift of the set of perfect powers. In this talk, I will discuss some related results on shifted perfect powers, highlighting a solution towards a conjecture of Hajdu and Sárközy on the multiplicatively irreducibility of any small perturbations of the set of shifted k -th powers for $k \geq 3$. This is a joint work with Ernie Croot, Seoyoung Kim, and Semin Yoo.