

---

**K.S. SENTHIL RAANI**, IISER Berhampur  
*Sets containing all sufficiently large distances*

In 1986, Falconer-Marstrand, Furstenberg-Katznelson-Weiss and Bourgain improved Boardman results independently that the unbounded  $d$ -dimensional sets  $A \subset \mathbb{R}^d$  with positive asymptotic density admits sufficiently all large distances. In this talk we introduce the notion of well-distributed sets with  $s$ -density; an  $s$ -dimensional set is well distributed if its high density scales are not too sparsely located on  $\mathbb{R}$ . Suppose  $s$  is close to  $d$ . We prove that a well distributed set  $A \subset \mathbb{R}^d$  with  $s$ -density, admits sufficiently all large distances. This is based on the joint work with Prof. Malabika Pramanik.