

## ICTS Colloquium

- Title : The Grothendieck inequality
- Speaker : Gadadhar Misra, Department of Mathematics, Indian Institute of Science, Bangalore
- Date : Monday, April 22, 2019
- Time : 3:00 PM
- Venue : Emmy Noether Seminar Room, ICTS Campus, Bangalore
- Abstract : If  $|\sum_{i,j=1}^n a_{ij} s_i t_j|$  is less or equal to 1 for all vectors  $s, t$  with  $|s_i|, |t_i|$  less or equal to 1, then  $|\sum_{i,j=1}^n a_{ij} \langle x_i, y_j \rangle|$  less or equal to  $K(n)$  for any choice of unit vectors  $x_1, \dots, x_n; y_1, \dots, y_n$  in a Hilbert space  $H$ ,
- The limit of  $K(n)$  remains finite as  $n \rightarrow \infty$  and is the universal constant  $K$  of Grothendieck. I will discuss this inequality along with many of its surprising consequences.