

TOPOLOGY SEMINAR

Somnath Basu (Binghamton)

Transversal string topology
and applications

Tuesday, May 22nd, 4:00pm, in 383-N

Abstract: We define and study certain geometric loops, called transversal strings. In particular, we consider smooth paths in $M \times M$ that start and end on the diagonal and only intersect the diagonal non-tangentially, including the end points. Such strings can be naturally split at the intersection points giving rise to a differential graded coalgebra. The natural question of where this coalgebra lives leads to further algebraic structures. It also leads to understanding the homotopy type of the complement of the diagonal in $M \times M$, which is known not to be an invariant of the homotopy type of M .