

# Explanation Generation over Temporal Interval Algebra

**Debasis Mitra**

Florida Institute of Technology  
Melbourne, Florida, USA  
dmitra@fit.edu

## Abstract

Temporal interval algebra has generated strong interest for both theoretical and practical reasons. All its maximal tractable subalgebras (MTS) have been identified. One of the uses of this understanding could be to develop a formalism for classifying an input temporal network into one of these MTSs, or decide the input's intractability. We have proposed a linear algorithm for checking consistency when the input belongs to one of the seventeen MTSs, and for finding out the constraints responsible for inconsistency in case the network is unsatisfiable.