1163-55-136 **Mikael Vejdemo-Johansson*** (`mvj@math.csi.cuny.edu`), **Jie Chu**, **Denis Khryashchev** and **Ping Ji**. *Homotopy path enumeration for the evasion problem.*

The evasion problem asks: Given a family of moving sensors and a movement pattern over time, can there be a path that evades discovery? Adams and Carlsson gave an algorithmic sufficient and necessary condition for evasion with the assumption of some extra capabilities on part of each sensor. From the Adams-Carlsson algorithm, we can recover an enumeration of homotopy classes of possible evasion patterns. In this talk we will describe two methods of this homotopy path enumeration. (Received August 20, 2020)