

**Dmitry Scheglov** (Penn State). *Absence of mixing for special flows over interval exchange maps.*

*Abstract.* The history of the problem comes from the work of V.Arnold where he noticed that some ergodic flows on surfaces can be represented as special flows over the interval exchange maps for functions with symmetric or asymmetric logarithmic singularities and asked a question about mixing properties of such flows. The first result belongs to A.Kocergin who proved the absence of mixing for symmetric singularities and almost all circle rotations. The next result in this area belongs to Ya.Sinai and K.Khanin who proved mixing for asymmetric singularities and almost all circle rotations. Recently C.Ulcigrai proved mixing for almost all interval exchanges and asymmetric singularities. We prove the absence of mixing for the case of symmetric singularities for almost all interval exchanges of 4 intervals of the permutation type (4321). The proof includes elements of graphs combinatorics, substitution systems, and Kontsevich-Zorich induction.