Gleb Koshevoy

Presentation Title
Majority Rule on Rhombus Tilings and Condorcet Super-domains
(with Vladimir I. Danilov and Alexander V. Karzanov)

Abstract
We consider a Condorcet domain (CD) formed by a rhombus tiling as a voting design and consider a problem of aggregation of voting designs using majority rule. A Condorcet super-domain is a collection of CDs obtained from rhombus tilings on a zonogone $Z(n; 2)$ with the property that if voting designs (ballots) belong to this collection, then the simple majority rule does not yield cycles. A study of Condorcet super-domains and methods of constructing them form the main subject of this paper.

Keywords
Hombus tilings , Condorcet domains, voting designs, medians

Affiliation
Institute for Information Transmission Problems RAS