Topology of polyhedral products and the Golod property of Stanley-Reisner rings

入江 幸右衛門 (大阪府立大)

In this talk I would like to explain the paper "Topology of polyhedral products and the Golod property of Stanley-Reisner rings, arXive:1306.6221", which is a join paper with Daisuke Kishimoto (Kyoto Univ.). In the paper the following theorem and its generalization are proved: "If the Alexander dual of a simplicial complex is sequentially Cohen-Macaulay $\mathbb{Z}$, then the moment-angle complex is homotopy equivalent to a wedge of spheres." I will be talking about algebraic and combinatoric background of the problem for topologists, and about the idea and details of the proofs of the main theorems for algebraists.