# ON TOPOLOGICAL TILINGS AND SHIFT EMBEDDABILITY FOR ACTIONS OF AMENABLE GROUPS

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**Time**：**Monday, May 19th, 2025, 14:00-16:00**

**Zoom meeting: 502 398 6833     Password: 721994**

**Abstract**：

Let $G \curvearrowright X$ be a free action of an amenable group on a compact metrizable space. The shift embeddability problem asks whether there exists a $G$-equivariant embedding of $X$ into the $M$-cubical shift $([0, 1]^M)^G$, and over the years it has become one of the central questions in the mean dimension theory. The best-known result to date was the theorem of Gutman, Qiao, and Tsukamoto, which provides a satisfying answer for actions of $\mathbb{Z}^d$. In this talk, we will describe how this theorem can be generalized to actions of amenable groups from a larger class. After stating the main results, we will focus on the parts of the proof that required a different approach from that of GQT, specifically:

    1)defining the right notion of a tiling,

    2)encoding the tilings using a small amount of information, and

    3)obtaining the tiling from an a priori weaker property.