

**Adam Przeździecki**, Warsaw University of Life Sciences – SGGW  
*How comprehensive is the category of abelian groups?*

**Abstract:** The talk will introduce an embedding  $G$  of the category of graphs into the category of abelian groups which induces isomorphisms

$$G_{X,Y} : \mathbb{Z}[\text{Hom}_{\text{graphs}}(X, Y)] \xrightarrow{\cong} \text{Hom}_{\text{Ab}}(GX, GY)$$

for any graphs  $X$  and  $Y$ . Here  $\mathbb{Z}[S]$  denotes the free abelian group with basis  $S$ . The existence of  $G$  implies the equiconsistency of weak Vopěnka's principle and the claim that all classes of abelian groups closed under limits are reflective. This equiconsistency translates to the stable homotopy category.