

**The regular two-graph on 276 vertices, revisited**

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This is based on ongoing joint work with Akihiro Munemasa

In this talk, I will discuss the regular two-graph on 276 vertices. This is a beautiful mathematical object which has automorphism group  $Co_3.2$ . We will classify certain graphs in the switching class of this two-graph, and show how you can use this classification to obtain a Euclidean 2-distance set of order 277 in the Euclidean space of dimension 23, which was found in 2025 by Hong-Jun Ge, Akihiro Munemasa and me. There many many Euclidean 2-distance sets of order 276 in dimension 23.