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Symmetry properties of generalized graph truncations

In the generalized graph truncation construction, one replaces each vertex of a k-regular graph Γ with a copy of a graph Υ of order k.

In this talk, which is based on joint work with Eduard Eiben and Robert Jajcay, we focus on symmetry properties of generalized truncations, especially in connection
to the symmetry properties of the graphs Γ and Υ used in the construction, and consider possible isomorphisms between different generalized truncations.

As an application, we obtain a classification of cubic vertex-transitive graphs of girths 3, 4, and 5.

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