

Hom-idempotent graphs, normal Cayley graphs and stable Kneser graphs

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In this talk, we will discuss the notion of hom-idempotence on graphs: A graph G is said to be *hom-idempotent* if there is a homomorphism from the Cartesian product $G \square G$ to G . This notion is strongly related to a special family of Cayley graphs: the normal Cayley graphs. We will mention some results concerning hom-idempotence of Kneser graphs and s -stable Kneser graphs. We will also show some applications of hom-idempotence of graphs to k -tuple colorings of graphs.

References

- [1] FLAVIA BONOMO, IVO KOCH, PABLO TORRES, MARIO VALENCIA-PABON, *k-tuple colorings of the cartesian product of graphs*, Discrete Applied Mathematics, Vol. 245, pp. 177-182, 2018.
- [2] PABLO TORRES, MARIO VALENCIA-PABON, *Shifts of the Stable Kneser Graphs and Hom-Idempotence*, European Journal of Combinatorics, Vol. 62, pp. 50-57, 2017.