

Strong geodetic problem

Sandi Klavžar^(1,2,3)

- (1) University of Ljubljana, Ljubljana, Slovenia
- (2) University of Maribor, Maribor, Slovenia
- (3) Institute of Mathematics, Physics and Mech., Ljubljana, Slovenia

The *strong geodetic problem* [3] asks to determine a smallest set S of vertices of a graph G such that by fixing one shortest path between each pair of vertices from S , all vertices of G are covered. The cardinality of S is the *strong geodetic number* $sg(G)$ of G . State of the art on this graph invariant will be surveyed. Topics investigated include complexity issues [3, 6], general bounds on $sg(G)$ [3, 4], the strong geodetic number of Cartesian products [1, 2, 3, 5], and the strong geodetic number of complete bipartite/multipartite graphs [4, 6].

References

- [1] V. Gledel, V. Iršič, S. Klavžar, Strong geodetic cores and Cartesian product graphs, arXiv:1803.11423 (2018).
- [2] S. Klavžar, P. Manuel, Strong geodetic problem in grid like architectures, *Bull. Malays. Math. Sci. Soc.* 41 (2018).
- [3] P. Manuel et al., Strong geodetic problem in networks, *Discuss. Math. Graph Theory*, in press.
- [4] V. Iršič, Strong geodetic number of complete bipartite graphs and of graphs with specified diameter, *G&C* 34 (2018).
- [5] V. Iršič, S. Klavžar, Strong geodetic problem on Cartesian products of graphs, *RAIRO Oper. Res.* 52 (2018).
- [6] V. Iršič, M. Konvalinka, Strong geodetic problem on complete multipartite graphs, arXiv:1806.00302 (2018).