Magic-type Labelings

Petr Kovář

VŠB – Technical University of Ostrava, Czech Republic

Magic and antimagic graph labelings are a flourishing topic since about 2000. The overview of results has more about 90 pages in Joe Gallians latest survey. The results include general techniques of construction based mostly on algebraic properties, special techniques developed for particular classes of graphs as well as disproving the existence on parity, modularity or graph structure.

In this talk we plan to give a brief overview of techniques and their constraints. We recall some open problems and mention some applications of magic type labeling.

The second part of the talk will be devoted to distance magic labeling and their generalizations. We mention a sport scheduling application, some general results on regular graphs, work in progress and open problem related to distance magic labelings and their generalizations.

petr.kovar@vsb.cz