Vol. 22 No. 1

2016

SMALL AT4-GRAPHS AND STRONGLY REGULAR SUBGRAPHS CORRESPONDING TO THEM

Received May 15, 2015

A. A. Makhnev, D. V. Paduchikh

Let \mathcal{M} be the class of strongly regular graphs for which μ is a nonprincipal eigenvalue. Note that the neighborhood of any vertex of an AT4-graph lies in \mathcal{M} . Parameters of graphs from \mathcal{M} were described earlier. We find intersection arrays of small AT4-graphs and of strongly regular graphs corresponding to them.

Keywords: strongly regular graph, AT4-graph, locally \mathcal{M} -graphs.

A.A. Makhnev, Dr. Phys.-Math. Sci., Krasovskii Institute of Mathematics and Mechanics, Ural Branch of the Russian Academy of Sciences, Yekaterinburg, 620990 Russia; Ural Federal University, Yekaterinburg, 620002 Russia, e-mail: makhnev@imm.uran.ru.

D.V. Paduchikh, Dr. Phys.-Math. Sci., Krasovskii Institute of Mathematics and Mechanics, Ural Branch of the Russian Academy of Sciences, Yekaterinburg, 620990 Russia; e-mail: dpaduchikh@gmail.com

Cite this article as:

A. A. Makhnev, D. V. Paduchikh. Small AT4-graphs and strongly regular subgraphs corresponding to them, *Trudy Inst. Mat. Mekh. UrO RAN*, 2016, vol. 22, no. 1, pp. 220–230.