Masters Thesis Defense

Modular and Lexical Matchings in the Middle Levels Graph

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Abstract: Classes of explicitly defined matchings in the middle levels bipartite graph induced by the Boolean lattice are investigated. The original motivation for an investigation into the Hamiltonicity of the middle levels bipartite graph came from the conjecture of Havel. Here, we collect some known results and present some new observations that indicate that, when disjoint, the 2-factors obtained from taking the union of parts of these matchings always contain short cycles.

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MATHEMATICS AND COMPUTER SCIENCE EMORY UNIVERSITY