

Complex uniformly resolvable decompositions of K_v

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*Dedicated to the good friend and colleague Lorenzo Milazzo
who passed away in March 2019.*

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Abstract

In this paper we consider complex uniformly resolvable decompositions of the complete graph K_v into subgraphs such that each resolution class contains only blocks isomorphic to the same graph from a given set \mathcal{H} and at least one parallel class is present from each graph of \mathcal{H} . We completely determine the spectrum for the cases $\mathcal{H} = \{K_2, P_3, K_3\}$, $\mathcal{H} = \{P_4, C_4\}$, and $\mathcal{H} = \{K_2, P_4, C_4\}$.

Keywords: Resolvable decomposition, complex uniformly resolvable decomposition, path, cycle.

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Kompleksne enakomerno rešljive razstavitve K_v

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Povzetek

V tem članku obravnavamo takšne kompleksne enakomerno rešljive razstavitve polnega grafa K_v na podgrafe, pri katerih vsak rešitveni razred vsebuje samo bloke, izomorfne istemu grafu iz dane množice \mathcal{H} , za vsak graf iz \mathcal{H} pa je prisoten najmanj en vzporeden razred. Popolnoma določimo spekter v primerih $\mathcal{H} = \{K_2, P_3, K_3\}$, $\mathcal{H} = \{P_4, C_4\}$ in $\mathcal{H} = \{K_2, P_4, C_4\}$.

Ključne besede: Rešljiva razstavitev, kompleksna enakomerno rešljiva razstavitev, pot, cikel.

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