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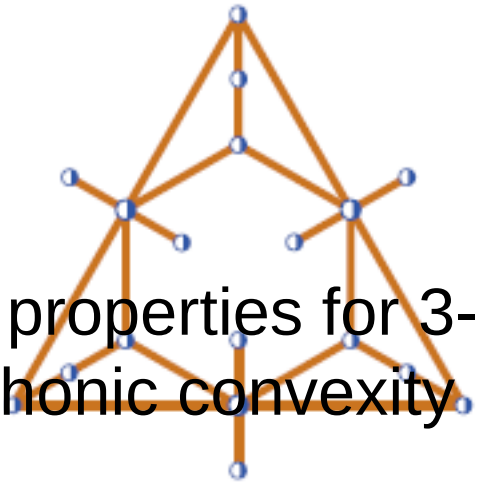

Separation properties for 3-Steiner and 3-Monophonic convexity in graphs

Content :

A convex set X in a graph with vertex set V is a half-space if $V-X$ is also convex.
A convexity has separation property (i) (S_2) if every pair of vertices belong to complementary half-spaces; (ii) (S_3) if for every convex set $A\subset V(G)$ and $b\in V(G)-A$, there exist complementary half-spaces A' and B' such that $A\subseteq A'$ and $b\in B'$;
(iii) (S_4) if for every pair $A,B\subseteq V(G)$ of disjoint convex sets, there exist complementary half-spaces A',B' in G such that $A\subseteq A'$ and $B\subseteq B'$.
In this talk we consider the above separation properties with respect to two new graph convexities and characterize those graphs for which the corresponding convexities satisfy properties (S_3) and (S_4). We also present some observations on the (S_2) property.

Primary authors : Dr. OELLERMANN, Ortrud (University of Winnipeg)

Co-authors : Dr. NIELSEN, Morten (Thompson Rivers University)

Presenter : Dr. OELLERMANN, Ortrud (University of Winnipeg)

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