

Frame matroids with a distinguished frame element

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A matroid is frame if it may be extended such that it possesses a basis B (a frame) such that every element is spanned by at most two elements of B . This gives frame matroids natural graphical representations as biased graphs.

We characterise the inequivalent graphical representations of 3-connected frame matroids that have a fixed element ℓ in their frame B . One consequence is a polynomial time recognition algorithm for frame matroids with a distinguished frame element.

Primary author: DAVIES, James (Cambridge)

Co-authors: RODRÍQUEZ, Cynthia; GEELLEN, Jim (University of Waterloo)

Presenter: DAVIES, James (Cambridge)