

ABSTRACT

Some Functions on Graph Polynomials

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The computation of F -polynomials is an NP-hard problem. This thesis looks at recursively constructed graphs, F -graphs and derives a method to obtain the F -polynomial of an F -graph from the F -polynomial of the graph from which it is constructed. In particular, different attachments are investigated and the functions are derived for different F -polynomials.

Keywords: F -polynomial; F -graphs; F -graph functions; Thistle function; Attachment functions; Suspended graphs; Matching polynomial; Star Polynomial; Path polynomial; Clique polynomial.