

Characterization of 3-Foldable Words

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Plane trees have been used as a modeling tool in molecular biology, as the capacity for RNA to fold onto itself can be abstracted by wrapping a sequence w , called a word, around a plane tree. Using a general model of how complementary nucleotides bond to each other, words can be “folded” around plane trees such that complementary letters are matched as half-edge labels. This talk explores the graph theoretic question of what words have exactly three valid foldings by characterizing them and investigating the plane trees that they fold around.

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