

# A model for the Kauffman polynomial

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**Abstract:** The scope of the talk is to introduce a model for the well-known two-variable Kauffman polynomial invariant for knots and links, via trivalent planar graphs. After giving the definition of the Kauffman polynomial and describing our new approach for obtaining it, we will construct a representation of the braid groups into a certain algebra given by generators and relations and use it to arrive to yet another definition of the Kauffman polynomial. If time permitting, we will show how our model yields an invariant for trivalent graphs embedded into 3-dimensional space.