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Algebraic Systems Biology: A Case Study for the Wnt Pathway.

We study the algebraic variety arising from the shuttle model of the Wnt signaling pathway. Here the variety is described by a polynomial system in 19 unknowns and 36 parameters. Current methods from computational algebraic geometry and combinatorics are applied to analyze this model; this talk will focus on the matroidal perspective. (Received August 11, 2015)