

From chemical reaction networks to Descartes' rule of signs

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Abstract:

Polar curves in the context of plane curves is a classical subject, but still with many problems to be solved. A great step was made by Casas-Alvero in the 80's in understanding the equisingularity class (or, which is the same, the topological type) of the polar of a general member of a given equisingularity class of plane branches. Since then nothing new appeared until the analytic classification of plane branches was available. In this talk we will present some results about the variation of the topology of polar curves in terms of the analytic classification of curves. This is a joint work with F. M. Iglesias and M. E. Hernandez.