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**Grzegorz A Rempala\***, Medical College of Georgia, 1469 Laney Walker Blvd, (Pavilion I)  
AE-1005, Augusta, GA 30912. *Algebraic Statistical Model for Inferring Biochemical Reactions  
Network.*

Algebraic statistical model is a set of polynomial equations mapping the set of parameters into a probability simplex. The idea is useful for finding MLEs via direct inspection of all zeros of the score equations and has been applied for instance to certain comparative genomics problems as well as to developing extensions of the Fisher exact test in contingency tables. The talk shall present yet another application of algebraic statistical models which is related to statistical inference for biochemical reactions and possibly also useful in discovering genetic networks. (Received January 28, 2009)