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Abdul Salam Jarrah* (ajarrah@vbi.vt.edu), Virginia Bioinformatics Institute, Virginia Tech,
Blacksburg, VA 24061. *Polynomial Dynamical Models for Biological Systems.*

A polynomial dynamical system (PDS) of dimension n over a finite field K is a function $F = (f_1, \dots, f_n) : K^n \rightarrow K^n$. In this talk we present a new approach for top-down modeling of biological systems as PDSs. Then we present results on analyzing the structure of the dynamics of some systems F only from the structure of the local functions f_1, \dots, f_i . (Received August 23, 2005)