

# Local Integrability and Linearizability of 3D Lotka-Volterra Systems

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We consider the problem of local integrability of three dimensional Lotka-Volterra systems at the origin. In two dimensions, the problem has been the subject of a number of investigations. In three dimensions, the possible mechanisms underlying integrability are more complex and the problems arising are computationally much harder. We report on recent work which gives necessary and sufficient conditions for integrability in the case of  $(a : -b : c)$ -resonance where  $a + b + c \leq 4$ . We also consider the applicability of the monodromy method to integrability problems for these systems.