1145-34-316 **Zhivko S. Athanassov*** (zhivko@math.bas.bg), G. Bonchev Str. 8, Sofia, 1113. *Some Asymptotic Properties of Ordinary Differential Equations.*

For the initial value problem $x' = f(t,x)$, $x(t_0) = x_0$, we discuss the relationship between the asymptotic behaviour of a solution and the "zero" of the right-hand side, where we denote the "zero" by $y(t)$. Thus, for a given domain of the definition of f, $y(t)$ is that unique function for which $f(t, y(t)) = 0$, $t \geq t_0$. For scalar differential equations some rather general general assumptions hold. The results for oscillatory solutions are more properly characterized as stability or boundedness results rather than asymptotic properties of the solution $x(t)$. For systems of differential equations we make corresponding assumptions. The stability properties of the scalar case have analogues in n-dimensions. Asymptotic properties of systems are presented as corollaries to the results on stability. (Received September 25, 2018)