A nonlinear system of differential equations with distributed delays

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It is well-known that the environments of most natural populations change with time and that such changes induce variation in the growth characteristics of population which is often modelled by delay differential equations, usually with time-varying delay. The purpose of this article is to derive a numerical solution of the delay differential system with continuously distributed delays based on k-step methods ($k = 1, 2, 3, 4$) and quadrature formulas. Some numerical results are presented compared to the known ones.