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Kamel M. Al-Khaled* (kamel@just.edu.jo), Department of Math and Stat, Faculty of Science and Arts, Jordan University of Science and Technology, Irbid, 22110, Jordan. *Sinc and Solitary Wave Solutions to the Generalized Benjamin-Bona-Mahony-Burgers Equations.*

In this paper, we consider the generalized Benjamin-Bona-Mahony-Burgers equations (abbreviated BBMB). A variety of exact solutions for the MMBM equations are developed by means of the tanh method. A Sinc-Galerkin procedure is also developed for solving the MMBM equations. Sinc approximations to both derivatives and the indefinite integrals reduce the system to an explicit system of algebraic equations. It is shown that Sinc-Galerkin approximations produce an error of exponential order. A comparison between the two methods for the solution of BBMB equation is analyzed for their solutions. The study outlines the significant features of the Sinc method.

Keywords: Sinc-Galerkin method, Tanh method, Nonlinear PDEs, Numerical methods. (Received July 27, 2019)