1077-35-1442　　　　**Magdy G, Asaad*** (`mgamil@mail.usf.edu`), 13373 Arbor pointe circle, apt 102, Tampa, FL 33617. *The Grammian and Pfaffian solutions to the (3+1)-dimensional non-linear partial differntial equations.*

The Pfaffian technique is used to handle the (3+1)-dimensional *KP*, *BKP*, *Jimbo-Miwa* and *Ma-Fan* equations. New exact solutions in the Pfaffian and Grammian forms are derived by means of Pfaffian derivative formulas and identities. A group of sufficient conditions consisting of linear partial differential equations with variable-coefficients is presented. Bilinear Bäcklund transforms are furnished for the equations. As an application of the BTs, new Pfaffian solutions, traveling wave solutions and rational solutions are explicitly computed. Examples of Pfaffian solutions are made and a few particular solutions are plotted.