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**Julienne Kabre\*** (juliennekabre@gmail.com), 1320 Deagleway Drive Apt H, Fairborn, OH 45324, and **Jonah A Reeger** (jonah.reeger@afit.edu), Department of Mathematics and Statistics, Air Force Institute of Technology, 2950 Hobson Way, WPAFB, OH 45433. *Radial Basis Functions Generated Finite-Difference Method for the Korteweg-de Vries Equation.*

The Korteweg-de Vries equation (KDV) is a third order non-linear Partial Differential Equation(PDE) which solutions are traveling waves called solitons. A numerical method namely radial basis functions generated finite-difference (RBF-FD) integrating factor method was applied and the numerical solutions of the KDV equations were compared with the analytical solutions for 1, 2 and 3 solitons . Hyperviscosity was used for stability of the RBF-FD method in the case of irregular nodes. (Received January 17, 2018)