

1037-35-166

H.Y. Tian* (haiyan.tian@usm.edu), Department of Mathematics, University of Southern Mississippi, 118 College Dr. #5045, Hattiesburg, MS 39406. *An effective meshless method with polynomial and trigonometric bases for solutions of partial differential equations.* Preliminary report.

An effective meshless method using polynomial and trigonometric bases for approximating particular solutions and fundamental solutions of elliptic partial differential equations is discussed. The method is extended to solving time-dependent problems. (Received January 31, 2008)