

1020-35-152

Bongsoo Jang* (bjang1@kent.edu), Dept of Mathematics, Kent State University at Ashtabula, 3300 Lake Road West, Ashtabula, OH 44004. *Solutions to the non-homogeneous parabolic problems by the extended homogeneous Adomian decomposition method.*

New modified Adomian decomposition method is presented, namely the extended homogeneous Adomian decomposition method(HADM), to solve non-homogeneous multi-dimensional parabolic problems. The effectiveness of the extended HADM is verified through the several illustrative examples. (Received August 25, 2006)