1056-45-1025 **Jang Bongsoo*** (bsjang@unist.ac.kr), School of Mechanical & Advanced Material Eng, Ulsan National Institue of Science, and Technology(UNIST), Ulsan Metropolitan, South Korea. *Solving two-dimensional linear and nonlinear Volterra integral equations by the differential transform method.*

We present some fundamental properties of the differential transform method(DTM) for the several kernel functions in two-dimensional Volterra integral equations. The product and quotient type's kernel functions are considered. All proofs are derived by the simple properties for the DTM. Several illustrative examples are demonstrated to show the effectiveness of the DTM for solving two-dimensional Volterra integral equations. (Received September 20, 2009)