

# Parameter-Dependent Volterra Summation Equations

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The direct method for numerically solving Volterra integral equations of the second kind involves replacing integrals with sums using a quadrature rule, resulting in parameter-dependent Volterra summation equations.

Known results on the asymptotic behaviour of Volterra summation equations due to Appleby, Györi, Horváth, Reynolds and others are extended to parameter-dependent equations, and applied to the DM method.

This is joint work with Prof. Eleonora Messina (The University of Naples Federico II) and Prof. Antonia Vecchio (CNR - Naples).