

YMC2004 POSTER ABSTRACT

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Title: Least Squares Properties of the Lanczos\' Derivative and Higher Order Lanczos\' Derivatives

Description:

The Lanczos\' generalized derivative, developed by Cornelius Lanczos, is a proper extension of the normal derivative. We show that this derivative satisfies a least squares property. We used this result to construct higher order Lanczos\' derivatives. Properties of Legendre polynomials and summability kernels play a prominent role in this construction.