

1015-41-149

Daniel Waterman* (fourier@adelphia.net), 7739 Majestic Palm Drive, Boynton Beach, FL 33437, and **Brian Hualing Xing**. *On the convergence of interpolating polynomials.*

We continue an investigation of Zygmund (sections 5 and 6 of Chapter X of *Trigonometric Series*, 2nd edition) into the convergence of trigonometric interpolating polynomials. He showed that an analogue of the Dirichlet-Jordan theorem holds for the polynomials derived from functions of bounded variation. This result was obtained by the application of a Tauberian theorem of Hardy for $(C,1)$ -summability. We show that this result can be obtained directly from the definition of bounded variation. The method employed allows us to extend the result to functions of harmonic bounded variation (HBV). We show that this result is best possible in the sense that HBV is the largest W - class for which the Dirichlet-Jordan theorem holds. (Received February 02, 2006)