Abstract

Let $f$ be a real valued function defined in $[0, 1]$, with values known at intermediate points such that the first derivatives of $f$ at all nodes are also known at intermediate points. In this paper, we construct an interpolatory quartic spline $s$ which interpolates the function $f$. Unique existence and convergence of this spline are also established. This type of construction is known to have found aesthetic utility in finding areas under or bounded by polynomial curves.

References

- Saxena, A., and Singh, Kulbhushan Lacunary Interpolation by Quintic splines, Journal of
Using a Quartic Spline Function for Certain Birkhoff Interpolation Problem


Index Terms

Computer Science
Applied Mathematics

Keywords
Lacunary interpolation  spline  diagonal dominance