APPROXIMATION AND GLOBAL SMOOTHNESS PRESERVATION PROPERTIES OF THE NONLINEAR INTERPOLATION OPERATORS OF MAX-PRODUCT KIND

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The first aim of this note is to associate to the Lagrange interpolatory polynomials on various systems of nodes (including the equidistant and the Jacobi nodes), continuous piecewise rational interpolatory operators of the so-called max-product kind, uniformly convergent to the function f, with Jackson-type rates of approximation. The second aim of the paper is to obtain partial global smoothness preservation properties for the max-product Lagrange interpolation operator on the Chebyshev nodes of second kind plus the endpoints, and for the max-product Hermite-Féjer interpolation operator on the Chebyshev nodes of first kind.