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R N Mohapatra* (ramm@mail.ucf.edu), Mathematics Department, 4000 Central Florida Blvd., Orlando, FL 32816. *Polar Derivatives for Rational Functions and Bernstein Type Inequalities.*

In this paper we discuss some ideas for extending the concept of polar derivative for rational functions. We shall consider some possible definitions. We shall show that for self-inversive polynomials we obtain the expected result. We shall review some recent work in this context. (Received August 19, 2005)