

1106-VL-1374 **David C. Carothers*** (carothdc@jmu.edu), Dept of Mathematics and Statistics, James Madison University, MSC 1911, Harrisonburg, VA 22807. *Polynomial differential equations and removable singularities*. Preliminary report.

We use basic Gröbner basis techniques to provide an alternative characterization for a class of analytic functions considered by Harley Flanders (*Functions not satisfying implicit, polynomial ODE*, J. Differential Equations 240). This class includes functions such as f with $f(t) = \frac{e^t - 1}{t}$, $f(0) = 1$. Implications and further applications emerging from this characterization will be considered. (Received September 15, 2014)