

1106-34-1124 **Roger J Thelwell*** (thelwerj@jmu.edu), Dept. of Math and Stats, MSC 1911, Harrisonburg,
VA 22807. *Differential equations through the lens of power series*. Preliminary report.

Nonlinear Ordinary and Partial Differential Equations lie at the core of many current problems in mathematics. Recasting highly nonlinear problems as quadratic systems (a technique rediscovered and exploited by Parker and Sochacki) allows series to provide numeric and theoretic insight and intuition to these difficult problems. This talk will explore several of the many problems for which series methods are powerful tool. (Received September 10, 2014)