

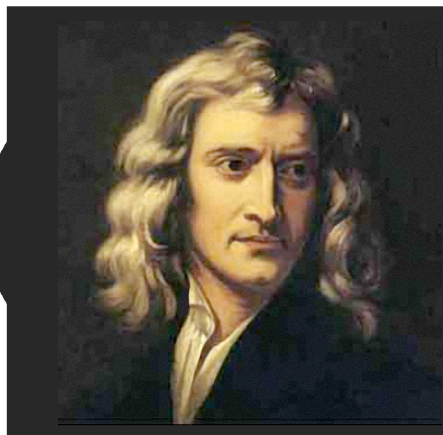
The Oliver Club

www.math.cornell.edu/~oliver/

Michael Singer, North Carolina State University

Differential Groups and the Gamma Function

I will present a leisurely introduction to a Galois theory of linear difference equations where the Galois groups are linear differential groups, or groups of matrices whose entries are functions that satisfy a fixed set of polynomial differential equations. These groups measure the differential dependence among solutions of linear difference equations. I will show how this theory can be used to reprove Hölder's Theorem of 1887 that the Gamma function satisfies no differential polynomial equation, as well as new results concerning differential dependence of solutions of higher-order difference equations. This is joint work with Charlotte Hardouin.



Thursday, October 16, 2008
at 4:25 PM in 406 Malott Hall

Refreshments will be served at 3:55 PM in the Mathematics Department lounge (532 Malott Hall).