LINEAR DIFFERENTIAL EQUATIONS AND HURWITZ SERIES.

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ABSTRACT

We will look at solutions of linear homogeneous differential equations using Hurwitz series, a “cousin” of formal power series. We first give explicit recursive expressions for solutions of such equations. These solutions, in the case of constant coefficients, can be described by an “intertwining” of Hurwitz series. We will also give examples of Galois-type groups associated to the solutions of these equations. Moreover, we will give explicit formulas to compute these groups. We require neither that the underlying field be algebraically closed nor that the characteristic of the field be zero.

Wednesday, 4 April 2012
4:00 pm
Smith Hall 204
Tea and refreshments will be served at 3:45pm.

http://math.newark.rutgers.edu/~xiaowwan/Colloquium/