



Speaker: Gerson Petronilho
Universidade Federal de Sao Carlos, Brazil

Tuesday, July 12, 2016
2:45 PM
258 Hurley Hall

Title: An abstract Cauchy-Kovalevsky type theorem for the k - abc -equation

Abstract:

The initial value problem for a 4-parameter family of nonlocal and nonlinear evolution equations with data in a space of analytic functions is solved by using a power series method in abstract Banach spaces. In addition to determining the power series expansion of the solution, this method also provides an estimate of the analytic lifespan expressed in terms of the norm of the initial data, thus establishing an abstract Cauchy-Kovalevsky type theorem for these equations.