CCSU
DEPARTMENT OF MATHEMATICAL SCIENCES

COLLOQUIUM

Friday, April 15
2:00 – 3:00 PM
Maria Sanford, Room 101

UNCOUPLING OF DIFFERENTIAL EQUATIONS

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Abstract: We consider a differential equation $\dot{z} = Cz + H(z)$, where C is a linear bounded operator on a Banach space Z and H is a Lipschitz function with $H(0) = 0$ and Lipschitz constant δ. We discuss optimal conditions on the Lipschitz constant and a gap of the spectrum of C that guarantee that the differential equation can be uncoupled as a system of the form $(\dot{x}, \dot{y}) = (Ax, By) + \Big(F\big(x, \Phi(x)\big), G(\Psi(y), y)\Big)$.

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