1116-VM-1676   **Chris McCarthy*** (`cmccarthy@bmcc.cuny.edu`), Department of Mathematics, Borough of Manhattan Community College, City University of New York, New York, NY 10007. *Modeling Adsorption Kinetics (Bio-remediation of Heavy Metal Contaminated Water).*

Heavy metals, such as Cobalt, Copper, and Zinc, are often present in industrial waste waters. These pollutants can cause environmental degradation and pose health risks. It is possible to use spent tea leaves to filter heavy metals from contaminated water. The spent tea leaves are available in large quantities as a result of the industrial production of tea beverages. The heavy metals bond with the surfaces of the tea leaves (adsorption). Our interdisciplinary lab group (Chemistry, Environmental Engineering, and Mathematics) is conducting research on this process.

My talk will focus on modeling the kinetics of the adsorption and filtering process using differential equations, stochastic methods, and recursive functions. (Received September 22, 2015)