CCSU DEPARTMENT OF MATHEMATICAL SCIENCES COLLOQUIUM

Friday, September 28 3:00 – 4:00 PM Maria Sanford, Room 101

PARAMETER ESTIMATION AND THE GERMAN TANK PROBLEM

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Abstract: The German tank problem involves using a random sample to estimate the maximum value of a discrete uniform distribution. Its name comes from an application in WWII, where American and British intelligence attempted to determine monthly German tank production using the serial numbers taken from captured tanks. The estimates they obtained using statistical methods turned out to be far more accurate than other intelligence estimates, which grossly overestimated tank production. In addition to benefitting the Allied war effort, this was a big win for using statistical and mathematical techniques to solve a real-world problem. In this talk, we will explore several approaches and look for a "best" solution. The talk is aimed at a general audience, and all will have the opportunity to put themselves in the shoes of intel operatives trying to solve this problem. Do you have what it takes to fight evil and save the free world?