

1145-O1-1373 **Satyanand Singh*** (ssingh@citytech.cuny.edu). *An Enticing Simulation in Ordinary Differential Equations that predict tangible results.*

In this case study the distance traveled by a mass in an under damped system was simulated with the Maple software. This is an important problem in physical and quantum systems in mathematics and physics. The results touched upon an interaction between calculus and differential equations and illustrate a nice approach for collaboration in small student groups. This case study challenged students to conjecture on solutions, simulate them and prove them theoretically while they derived unexpectedly elegant closed form expressions and generalizations. This approach provided a medium for rich discussions, enhanced student success and retention and propelled some students into graduate programs. (Received September 21, 2018)