

The Math/Stats Colloquium Department of Mathematics and Statistics San José State University



## Daniel Ostrov

## Santa Clara Univ. Optimal Decisions For Multiple Financial Goals NOVEMBER 6, 2019, MH320

Abstract: We all have multiple financial goals (paying for retirement, a mortgage, college tuition, a shiny new 85" TV, etc.). But when is it best to pay out money to fulfill one of our goals versus forgo it so as to have a higher chance of fulfilling more important goals later? And how do we determine which financial portfolio is wisest given our current state of financial affairs and our future goals? Monte Carlo simulation is the method used in industry to try to answer these questions, but it's deeply flawed. Instead, we will show how to answer these questions quickly and definitively using dynamic programming. This is joint work with Sanjiv Das in SCU's Department of Finance and Deep Srivastav and Andy Radhakrishnan at Franklin Templeton Investments.

Background: One course in statistics.

About the speaker: Dan Ostrov is a Professor in the Department of Mathematics and Computer Science at Santa Clara University. In his research, he has used a variety of applied mathematical techniques to better understand both physical and economic phenomena, including a number of questions arising in the field of financial mathematics.

> SNACKS IN MH331B AT 2:30 PM TALK STARTS AT 3:00 PM

For more information, see our full schedule at:

http://www.timhsu.net/colloq/