

# Undergraduate Colloquium in Mathematics

## Thursday, Oct. 6<sup>th</sup> 2-3 PM

### STV 219

#### Cryptographic Protocols

Sunil Chebolu, ISU

How is your credit card information on Amazon protected? How can you convince someone that you have solved a Sudoku puzzle without showing them your solution? How can you toss a coin with a friend who lives in a different city on the telephone? How can you find out if you got a better grade than your friend on the final without revealing your grade or finding their grade?

Answers to such intriguing and ostensibly unsolvable problems have been solved by mathematicians using clever protocols. In this talk I will discuss some of these protocols and the mathematics behind them.



