# Title Page

The paper that I will be presenting today is “Inferring the Interplay Between Network Structure and Market Effects in Bitcoin”. This paper was published in the New Journal of Physics in 2014 and it was wrote by Daniel Kondor, Istvan Csabai, Janos Szule, Marton Posfai, and Gabor Vattay.

# Presentation Overview

# Paper Overview

The main research question this paper attempts to solve is “aim to identify relevant changes in network structure over time and to uncover the relation of network structure and macroeconomic indicators of the system”. Their main data source is Bitcoin’s public transaction network. They used principal component analysis to identify important features in the variation of the network over time.

# Bitcoins

Bitcoin is a form of cryptocurrency that is created and held electronically. It is decentralized as no one controls it. Every machine that mines Bitcoin make up the network so no one person has power over the network. This currency isn’t printed and is produced by people and computers around the world solving mathematical problems. Bitcoin is a finite currency. There are only a finite number of Bitcoins available, 21 million to be exact, so people can’t produce more Bitcoins to de-value the currency. Bitcoins are produced via “mining” using computational power in a distributed network. “Miners” are rewarded for the “mining” blocks. The reward however halves every 210,000 blocks. About 77% of the total blocks have been mined and the current reward is 12 Bitcoins per block. This network of “miners” also process transactions made with Bitcoin, making it a standalone payment network. Bitcoin stores details of every single transaction that ever happened on the network in a general ledger in the form of a blockchain. Everyone knows how much bitcoins are stored at a given address. Users can use multiple addresses to protect their identity.