I have written an academic paper called “Token Exchange Games” which develops a formal mathematical model of a ledger using a combination and of graph theory and linear algebra.

Using the research, I am able to explain crypto-token related behaviour as well as more complex behaviour within economies. I am also able to give a reasonable argument (and a formal proof) of why monetary systems evolve spontaneously. Examples of token exchange games, such as the circles crypto-token, and the lightning network are also presented. I also treat the interaction of multiple ledgers, and develop several metrics for making sense of the behaviour of agents and tokens across ledgers.

A brief summary article is presented here:

Medium – 3 Apr 19

Token Exchange Games

Last year I worked on a crypto-token project that is different to most token systems and currencies: The token was issued in rounds and…

Reading time: 4 min read

And the complete paper is presented here:

http://media.withtank.com/889e65f256/vnaicker_token_exchange_games_24_05_2018.pdf

There is still a fair amount of checking etc. to be done on the paper and I am happy to take feedback.