



UAA College of Engineering
UNIVERSITY of ALASKA ANCHORAGE



UAA Professional Development Seminar Series

Security Costs in Bitcoin and Other Cryptocurrencies

Presented by Sebastian Neumayer,
Assistant Professor, University of Alaska
Anchorage

Bitcoin uses around 0.25% of the world's total electricity production. This power is used to protect the Bitcoin network against attackers' attempts to spend their Bitcoin more than a single time. We will discuss various costs associated with guarding against these double-spending attacks, such as physical electronic waste, time spent waiting for transaction finality, as well as energy costs. We will also compare these costs to other cryptocurrencies that use different consensus mechanisms.

Sebastian Neumayer is an Assistant Professor of Computer Engineering at UAA. He received his Ph.D. in Electrical Engineering and Computer Science from MIT. His thesis dealt with the survivability of network infrastructures after disasters and physical attacks. He also spent five years working at MIT's Lincoln Laboratory in the Cyber Security and Information Sciences Division, where he focused on developing security metrics that accurately estimate risk for prevalent network threats. Along with his teaching responsibilities, Dr. Neumayer is continuing his research on the reliability of networks during both physical and cyber-attacks. He is also interested in all things Bitcoin/cryptocurrency, and even has a project to augment jewelry with Bitcoin and other digital assets. He welcomes anyone to reach out to him regarding digital currencies.

Friday, November 1, 2019

11:45 am-12:45 pm

UAA College of Engineering, EIB 211