Blockchain and Cryptocurrencies Seminar

 COMMENTARY ON BLOCK CHAIN AND CRYPTO CURRENCIES

Technion EE, Ittay Eyal

Admin, Plan, Requirements

Winter 2019-20, Mondays 10:30-12:10, Meyer 353
Goals

Yes:
1. Blockchains, cryptocurrencies, smart contracts
2. Paper reading
3. Presentation

Phase I: Introduction (lectures)
Phase II: Seminar format

No:
• Financial advice
Blockchains, cryptocurrencies, and smart contracts

Basics:
- Security and Privacy
- Distributed systems
- Cryptography
- Game theory

Recent papers
Oakland (S&P), CCS, NDSS, USENIX Security, SOSP, NSDI, FC, BITCOIN, PODC, DISC... also preprints (w/ permission)
not: White papers (exceptional cases w/ permission)
not: Weakly related contributions containing the word Blockchain

Paper choice mechanism will be announced when relevant
Paper Reading

Read next week’s paper and write a concise (up to page) review.

Older papers for phase I

- Summarize paper’s contribution (1 par)
- List pros and cons (2-3 points)
  - Correctness, Novelty and topic significance, clarity, elegance, completeness
- Propose future directions
  - What would you do next?
  - How would you go about it?
Presentation (1/2)

• Background (signatures, hashing functions, consensus, etc.)
• Context – prior art, maybe followups, non-academic
• Contribution
  • Present as authors would, be ready to answer questions
• Concerns
Presentation (2/2)

• Use good slides
  • Yours Ok
  • Original / other also Ok
  • Ok not to use slides

• Concise slides
  • 3-4 bullets per slide
  • 3-4 words per bullet

• Use graphics
Disclaimer

• Booming market
  • Cryptocurrencies
  • ICOs
  • Companies

• No financial advice here
  • Neither positive nor negative
  • Not by me, not by you
Grade, Registration

- Grad course; Excellent undergrads w/ permission
- Ok to sit, better register
- Mandatory attendance
- Grade structure:
  - Presentation: 60%
  - Paper reports: 30%
  - Participation: 10%

1. Register for mailing list:
   http://tinyurl.com/049011

2. Sign up for presentation.
   http://webee.technion.ac.il/people/ittay
Grade, Registration

- Something close to heart
- If possible – directly relevant to your work

2. Sign up for presentation.
http://webee.technion.ac.il/people/ittay
Resources

• Bitcoin and Cryptocurrency Technologies
  Narayanan, Bonneau, Felten, Miller, Goldfeder; Princeton, 2015
  https://piazza.com/princeton/spring2015/btctech/resources

• Mastering Bitcoin
  Antonopoulos; O’reilly, 2014
  http://chimera.labs.oreilly.com/books/1234000001802

• ZK-capital newsletter
  https://zkcapital.substack.com/