**Recent Publications by FinTech@Cornell Affiliates and Fellows**

**on FinTech, Digital Economics, and Business Data Science**

(Reverse chronological order)

[**Clockwork Finance: Automated Analysis of Economic Security in Smart Contracts**](https://eprint.iacr.org/2021/1147.pdf)

K. Babel, P. Daian, M. Kelkar, and A. Juels

*IEEE S&P (2023)*

Topics: Smart Contracts, DeFi

[**Forsage: Anatomy of a Smart-Contract Pyramid Scheme**](https://www.arijuels.com/wp-content/uploads/2021/07/Forsage.pdf)

T. Kell, H. Yousaf, S. Allen, S. Meiklejohn, and A. Juels

*Financial Cryptography and Data Security (2023)*

Topics: Smart Contracts, DeFi, Pyramid schemes

[**Information Cascades and Threshold Implementation: Theory and an Application to Crowdfunding**](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3030573)

Will Cong, Yizhou Xiao

*Journal of Finance (*Jan 2023)

Topics: FinTech, Crowdaction, Entrepreneurship

[**Overcoming the Coordination Problem in New Marketplaces via Cryptographic Tokens**](https://works.bepress.com/halaburda/34/)

Hanna Halaburda, Yannis Bakos

*Information Systems Research (Dec 2022)*

Topics: Blockchain, Cryptographic Tokens, Network economics

[**Bitcoin and beyond**](https://www.annualreviews.org/doi/abs/10.1146/annurev-financial-111620-011240)

Kose John, Maureen O'Hara, Fahad Saleh

*Annual Review of Financial Economics* (Nov 2022)

Topics: Bitcoin, Blockchain, POW & POS

[**The Microeconomics of Cryptocurrencies**](https://works.bepress.com/halaburda/48/)

Hanna Halaburda, Guillaume Haeringer, Joshua S Gans, Neil Gandal

*Journal of Economic Literature (Sep 2022)*

Topics: Blockchain, Cryptocurrencies

[**Token-Based Platform Finance**](https://www.sciencedirect.com/science/article/pii/S0304405X21004414)

Lin William Cong, Ye Li, Neng Wang

*Journal of Financial Economics* (June 2022)

Topics: Tokens, Blockchain

[**Consumers as financiers: Consumer surplus, crowdfunding, and initial coin offerings**](https://ideas.repec.org/a/oup/rfinst/v35y2022i3p1105-1140..html)

Jeongmin Lee, Christine Parlour

*Review of Financial Studies* (March 2022)

Topics: Crowdfunding, ICOs

[**Digital Currencies: The US, China, And The World At A Crossroads**](https://www.hoover.org/research/digital-currencies-us-china-and-world-crossroads)

Darrell Duffie and Elizabeth Economy

*Hoover Press (Mar 2022)*

Topics: Blockchain, Digital Currency, International cooperation

[**Cryptocurrencies and Decentralized Finance (DeFi)**](https://www.brookings.edu/wp-content/uploads/2022/03/SP22_BPEA_MakarovSchoar_conf-draft.pdf)

Igor Makarov and Antoinette Schoar

*Brookings Papers on Economic Activity, March 2022.*

Topics: DeFi, Crypto, Regulation

[**ICO Success and Post-ICO Performance**](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3287583)

Evgeny Lyandres, Berardino Palazzo and Daniel Rabetti

*Management Science* (Feb 2022)

Topics: ICOs, Data Quality, Blockchain

[**Initial coin offering (ICO) success and post-ICO performance**](https://pubsonline.informs.org/doi/abs/10.1287/mnsc.2022.4312)

Evgeny Lyandres, Berardino Palazzo, Daniel Rabetti

*Management Science* (Feb 2022)

Topics: ICOs, Tokens

[**Payment system externalities**](https://onlinelibrary.wiley.com/doi/abs/10.1111/jofi.13110)

Christine Parlour, Uday Rajan, Johan Walden

*Journal of Finance* (Feb 2022)

Topics: Payment Processing, Outsourcing Propensities

[**Common risk factors in cryptocurrency**](https://onlinelibrary.wiley.com/doi/abs/10.1111/jofi.13119)

Yukun Liu, Aleh Tsyvinski, Xi Wu

*Journal of Finance* (Feb 2022)

Topics: Asset Pricing, Cryptocurrencies

[**The Future of Money: How the Digital Revolution is Transforming Currencies and Finance**](https://futureofmoneybook.com/)

Eswar Prasad

*Harvard University Press (2021)*

Topics: Blockchain, FinTech

[**SquirRL: Automating Attack Discovery on Blockchain Incentive Mechanisms with Deep Reinforcement Learning**](https://www.ndss-symposium.org/ndss-paper/squirrl-automating-attack-analysis-on-blockchain-incentive-mechanisms-with-deep-reinforcement-learning/)

Charlie Hou, Mingxun Zhou, Yan Ji, Phil Daian, Florian Tramer, Giulia Fanti, Ari Juels

*NDSS* (Dec 2021)

Topics: Blockchain, Reinforcement learning, Mining attacks

[**Blockchain Architecture for Auditing Automation and Trust-building in Public Markets**](https://ieeexplore.ieee.org/document/9130419)

Sean Cao, Will Cong, Meng Han, Qixuan Hou, and Baozhong Yang

*IEEE Computer (Aug* 2021)

Topics: Blockchain, Auditing

[**Risks and returns of cryptocurrency**](https://academic.oup.com/rfs/article/34/6/2689/5912024)

Yukun Liu, Aleh Tsyvinski

*Review of Financial Studies* (June 2021)

Topics: Crypto, Asset Pricing

[**CanDID: Can-Do Decentralized Identity with Legacy Compatibility, Sybil-Resistance, and Accountability**](https://www.computer.org/csdl/proceedings-article/sp/2021/893400a645/1oak9d0lhEk)

Deepak Maram, Harjasleen Malvai, Fan Zhang, Nerla Jean-Louis, Alexander Frolov, Tyler Kell, Tyrone Lobban, Christine Moy, Ari Juels, Andrew Miller

*IEEE S&P* (May 2021)

Topics: Private Keys, Decentralization

[**Technology and Finance**](https://cepr.org/system/files/publication-files/139468-barcelona_4_technology_and_finance.pdf)

Darrell Duffie, Thierry Foucault, Laura Veldkamp, and Xavier Vives

*CEPR Press* (Apr 2022)

Topics: FinTech, Payment systems, Data policy

[**Decentralized Mining in Centralized Pools**](https://academic.oup.com/rfs/article/34/3/1191/5815571)

Lin William Cong, Zhiguo He, and Jiasun Li

*Review of Financial Studies* (March 2021)

Topics: Mining Pools, Blockchain, Proof of Work, Bitcoin

[**Tokenomics: Dynamic Adoption and Valuation**](https://academic.oup.com/rfs/article/34/3/1105/5891182)

Lin William Cong, Ye Li and Neng Wang

*Review of Financial Studies (March* 2021)

Topics: Asset Pricing, Blockchain, FinTech, Tokenomics

[**When Permissioned Blockchains Deliver More Decentralization Than Permissionless**](https://works.bepress.com/halaburda/52/)

Hanna Halaburda, Yannis Bakos, Christoph Mueller-Bloch

*Communications of ACM* (Feb 2021)

Topics: Blockchain, Crypto-ecosystems, Decentralization

[**Initial Coin Offerings, Speculation, and Asset Tokenization**](https://doi.org/10.1287/mnsc.2020.3796)

Jingxing (Rowena) Gan, Gerry Tsoukalas, Serguei Netessine

*Management Science, Dec 2020*

Topics: ICOs, Tokenization

[**BDoS: Blockchain Denial of Service**](https://dl.acm.org/doi/10.1145/3372297.3417247)

Michael Mirkin, Yan Ji, Jonathan Pang, Ariah Klages-Mundt, Ittay Eyal, Ari Juels

*ACM CCS* (Nov 2020)

Topics: Proof of Work, Crypto, Blockchain, Bitcoin, DoS & BDoS

[**Flash Boys 2.0: Frontrunning, Transaction Reordering, and Consensus Instability in Decentralized Exchanges**](https://ieeexplore.ieee.org/document/9152675)

Philip Daian, Steven Goldfeder, Tyler Kell, Yunqi Li, Xueyuan Zhao, Iddo Bentov, Lorenz Breidenbach, Ari Juels

*IEEE S&P* (Oct 2020)

Topics: Blockchain, Smart Contracts, Priority Gas Auctions

[**Initial coin offerings: Financing growth with cryptocurrency token sales**](https://academic.oup.com/rfs/article/33/9/3925/5610546)

Sabrina Howell, Marina Niessner, David Yermack

*Review of Financial Studies* (Sep 2020)

Topics: Initial Coin Offerings, ICO Token Exchanges, Growth

[**Tokenomics: Dynamic Adoption and Valuation**](https://academic.oup.com/rfs/article/34/3/1105/5891182)

Lin William Cong, Ye Li, Neng Wang

*Review of Financial Studies (*Aug 2020)

Topics: Cryptocurrency, Digital Platform

[**Token-weighted crowdsourcing**](https://pubsonline.informs.org/doi/abs/10.1287/mnsc.2019.3515)

Gerry Tsoukalas and Brett Falk

*Management Science* (Aug 2020)

Topics: Blockchain, Tokens

[**Token-Weighted Crowdsourcing**](https://doi.org/10.1287/mnsc.2019.3515)

Tsoukalas, G. and B. Falk

*Management Science* (Aug 2020)

Topics: Tokens, Crowdsourcing, Strategic voting

[**Blockchain Architecture for Auditing Automation and Trust Building in Public Markets**](https://arxiv.org/pdf/2005.07627)

Sean Cao, Lin William Cong, Meng Han, Qixuan Hou, Baozhong Yang

*IEEE Computer* (June 2020)

Topics: Auditing, Blockchain, Smart Contracts, Ethereum

[**Blockchain Disruption and Smart Contracts**](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2985764)

Will Cong and Zhiguo He

*Review of Financial Studies* (Apr 2020)

Topics: Blockchain, FinTech, Competition

[**When FinTech Competes for Payment Flows**](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3544981)

Christine A. Parlour, Uday Rajan and Haoxiang Zhu (Mar 2020)

Topics: FinTech, BigTech

[**Trading and arbitrage in cryptocurrency markets**](https://www.sciencedirect.com/science/article/abs/pii/S0304405X19301746)

Igor Makarov, Antoinette Schoar

*Journal of Financial Economics* (Feb 2020)

Topics: Cryptocurrency, Bitcoin

[**Understanding Smart Contracts as a New Option in Transaction Cost Economics**](https://works.bepress.com/halaburda/45/)

Hanna Halaburda, Natalia Levina, and Semi Min

*International Conference on Information Systems* (Dec 2019)

Topics: Smart Contracts, Blockchain, TCE

[**Cryptocurrencies: Stylized Facts on a New Investible Instrument**](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3182113)

Albert Hu, Christine A. Parlour and Uday Rajan

*Financial Management* (Dec 2019)

Topics: Cryptocurrencies, Bitcoin, ICO

[**The Blockchain Folk Theorem**](https://academic.oup.com/rfs/article/32/5/1662/5427771)

Bruno Biais, Christophe Bisiere, Matthieu Bouvard and Catherine Casamatta

*RFS* (May 2019)

Topics: Blockchain, Proof-of-work, Distributed Ledger, Multiplicity of Equilibria