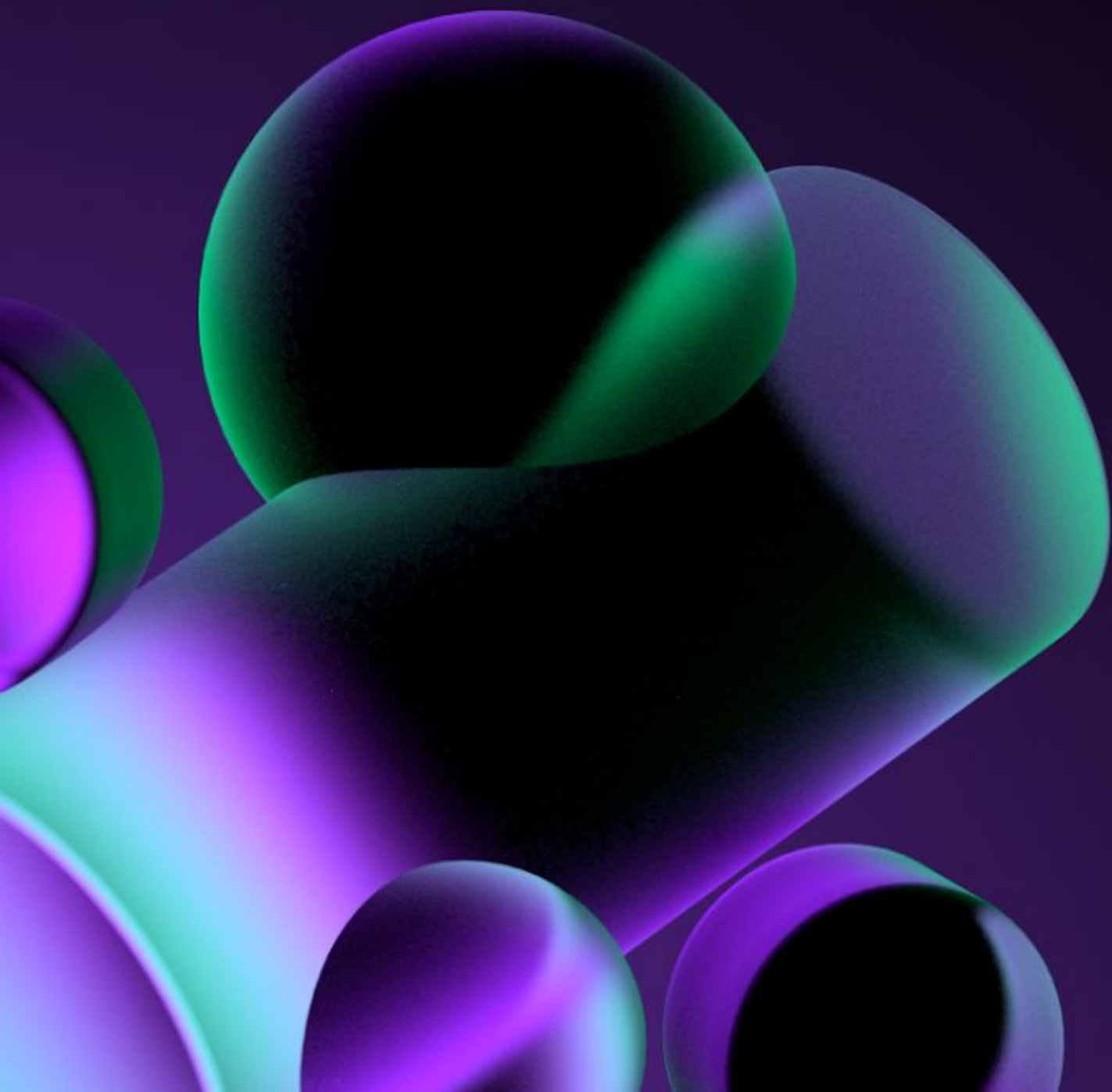


Summer School of Solana

LECTURE 1

Introduction to Solana

Introduction



Speakers

Tibor Tribus



- Solana auditor, team lead @ Ackee Blockchain
- Surfer
- Discord: tribus_te
- Twitter: @TiborTribus

Speakers

Vladimír Marcin



- Solana auditor @ Ackee Blockchain
- Tech lead @ Trdelnik
- Discord: marcinv
- Twitter: @vlado_marcin

Organisation

Andrea Nováková



- Community Manager @ Ackee Blockchain
- Even better surfer than Tibor 🙌
- Discord: novakand
- Twitter: @novakand1

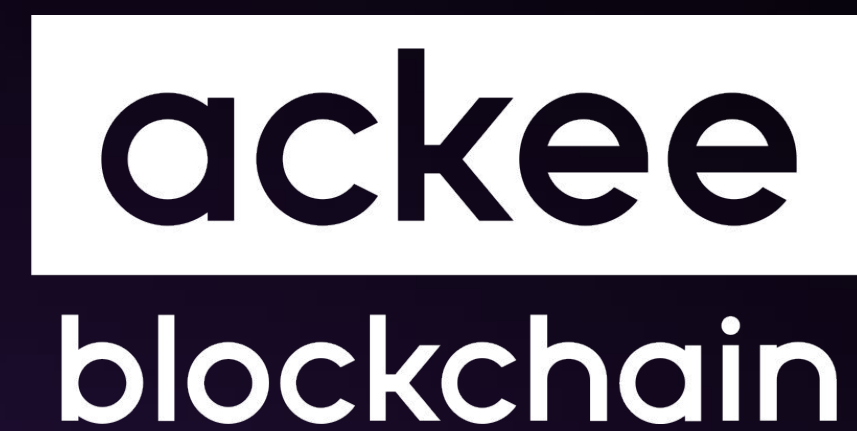
Speakers

Josef Gattermayer, Ph.D.



- Co-founder, CEO @ Ackee Blockchain
- Assistant Professor @ CTU in Prague 🎓
- Not a surfer 🤔
- Discord: pepus_cz
- Twitter: @jgattermayer

Ackee Blockchain



<https://discord.gg/x7qXXnGCsa>
[@AckeeBlockchain](#)
<https://ackeeblockchain.com>

- **Blockchain security company**
- **Auditing teams**
 - Ethereum team
 - Solana team
- **Open source**
 - Woke
 - Trdelnik
- **Education**
 - Blockchain course at CTU in Prague
 - School of Solidity
 - School of Solana

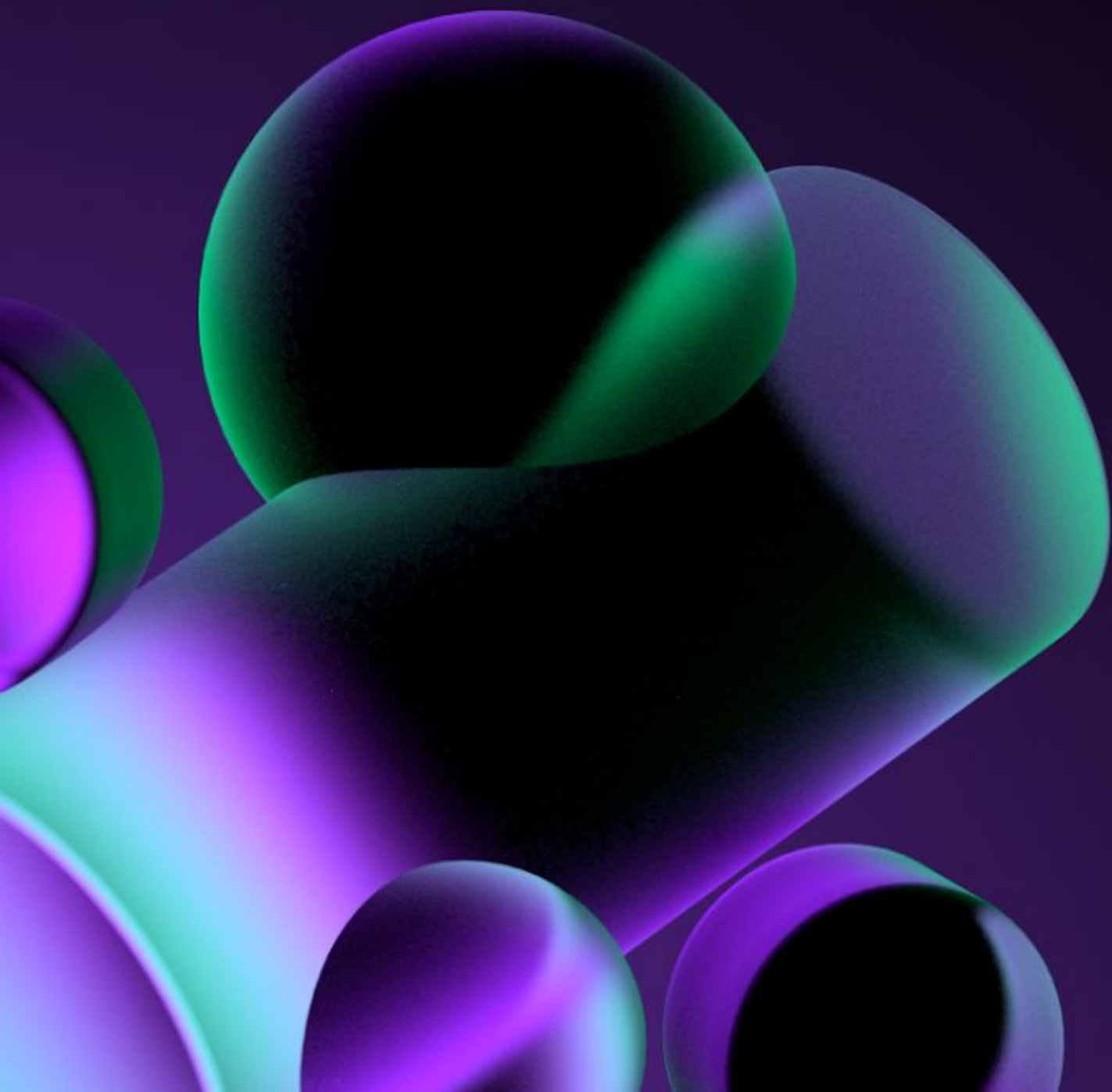
We work with



See you soon, future builders!

- Even Solana needs audits (since Wormhole)
- Typical auditing pipeline ~ 3 months
- Reach us at hello@ackeeblockchain.com 🙌

About the course



Thanks for your interest!

- 713 developers applied
- 124 will attend live lectures (17%)
 - We want live interactions! 🙋
- 148 will attend recorded lectures (38%)
 - Discuss on Discord in 🙋 | classroom channel
 - Thanks to community lecturers!

What this course is not about

- Introduction to Blockchain course
- Exhaustive Rust programming course
- How to get rich in 9 weeks

What this course is all about

- Introduction to Solana key concepts
- Brief introduction to Rust
- Programming ~~smart contracts~~ programs on Solana
- How to write Secure programs on Solana

Prerequisites

- **Basic familiarity with a CLI**
- **Basic programming knowledge in any language**
- **Basic overview of what blockchain is**

Study groups

- Live lessons 🎓
- Recorded lessons 🎥
- Public lessons (no certification)

Certification requirements

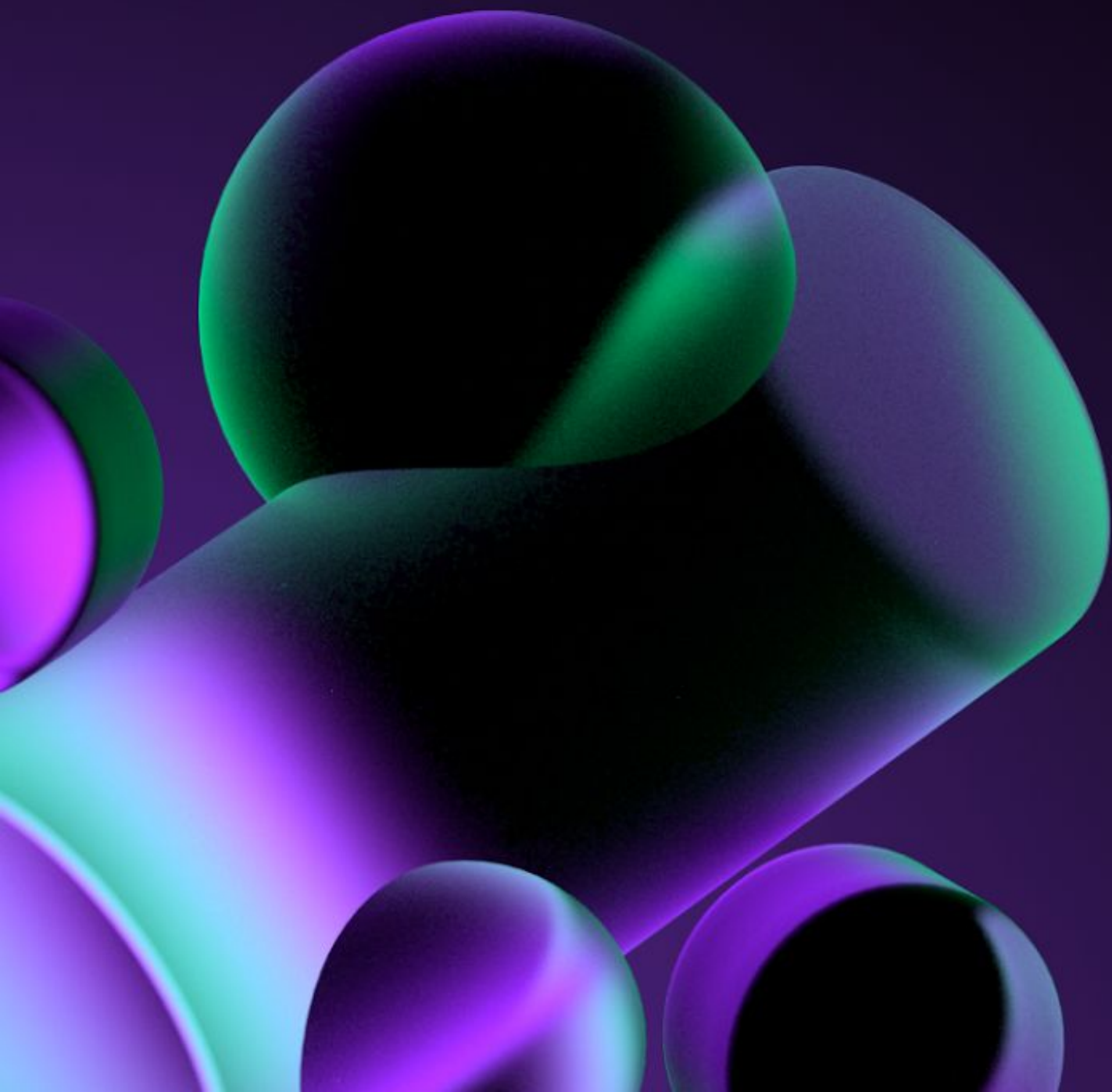


- **8 lectures, easy question after each**
 - up to 2 absences / wrong answers
 - deadline Sunday EOD (UTC)
- **One final task**
- **Ackee Blockchain certified Solana foundations**
- **NFT**

Where you can meet us IRL

- Solana Hacker House in Barcelona
- Solana Breakpoint Lisboa

Solana



Solana



- Founded by Anatoly Yakovenko in 2017
- The Solana mainnet-beta went live officially in March 2020
- Native token SOL
- Ethereum killer

Solana offers

- **Scalability**
 - ~~50,000~~ transactions per second
- **Decentralization**
 - Nakamoto coefficient 25
- **Inexpensive execution**
 - 10 USD for 1 million transactions (0.00001 \$ / tx)

Why is Solana so fast?

- You can find the answer in Solana Handbook
 - 30 pages introduction to Solana by Ackee Blockchain
 - Created for Summer School of Solana 💜

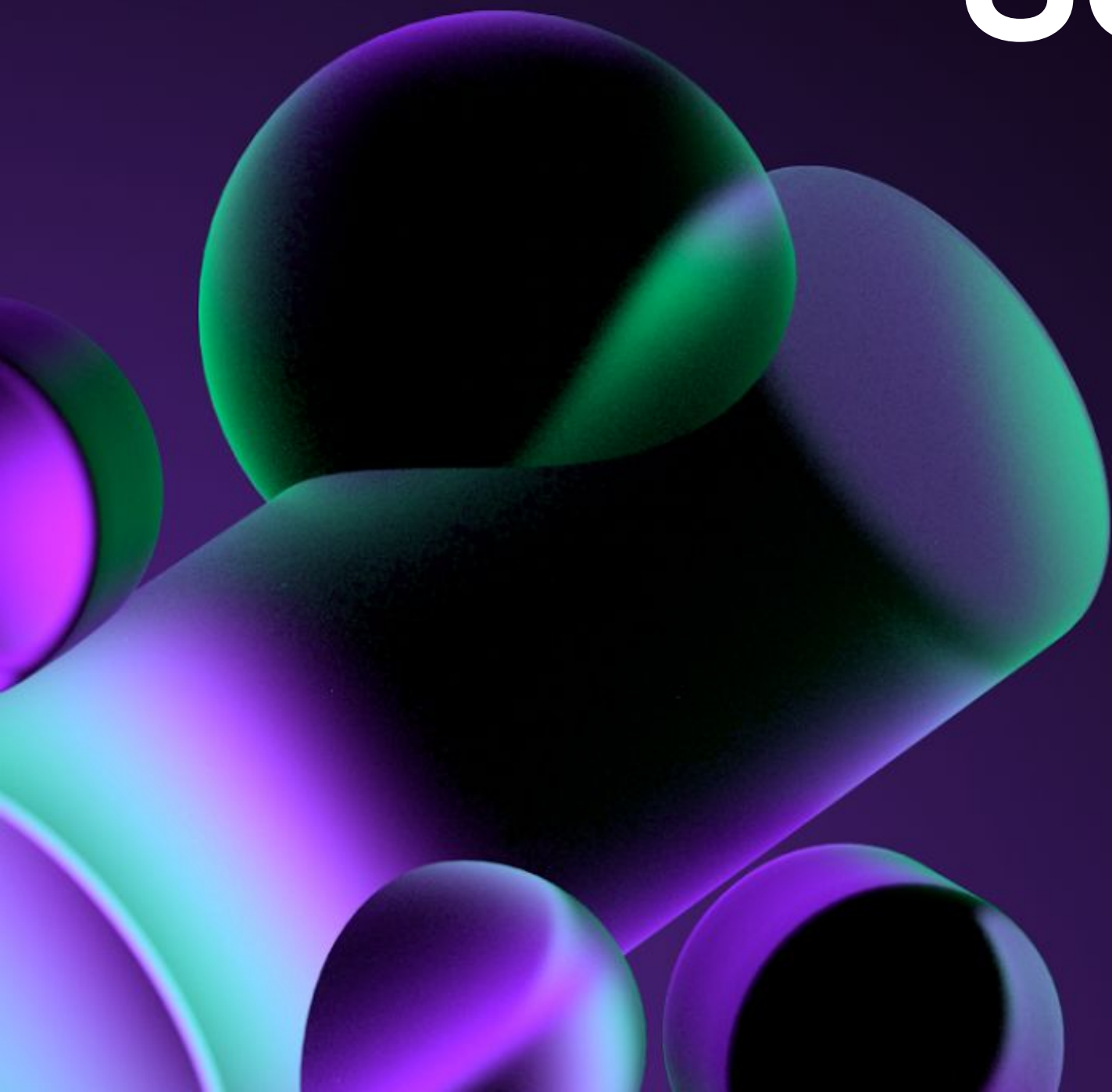
Get it here 📖

<https://ackeeblockchain.com/solana-handbook.pdf>

Solana's key features

- Proof of History
- Tower Byzantine Fault Tolerance
- Turbine - block propagation
- Gulfstream - mempool
- Sealevel - runtime
- Pipelining
- Cloudbreak
- Archivers

Solana bigger picture



Solana x Ethereum



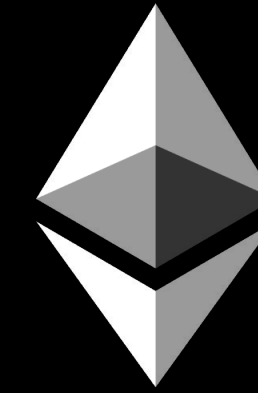
**Proof of Stake with
PoH**

400ms

Stateless

Rust

~50k TPS



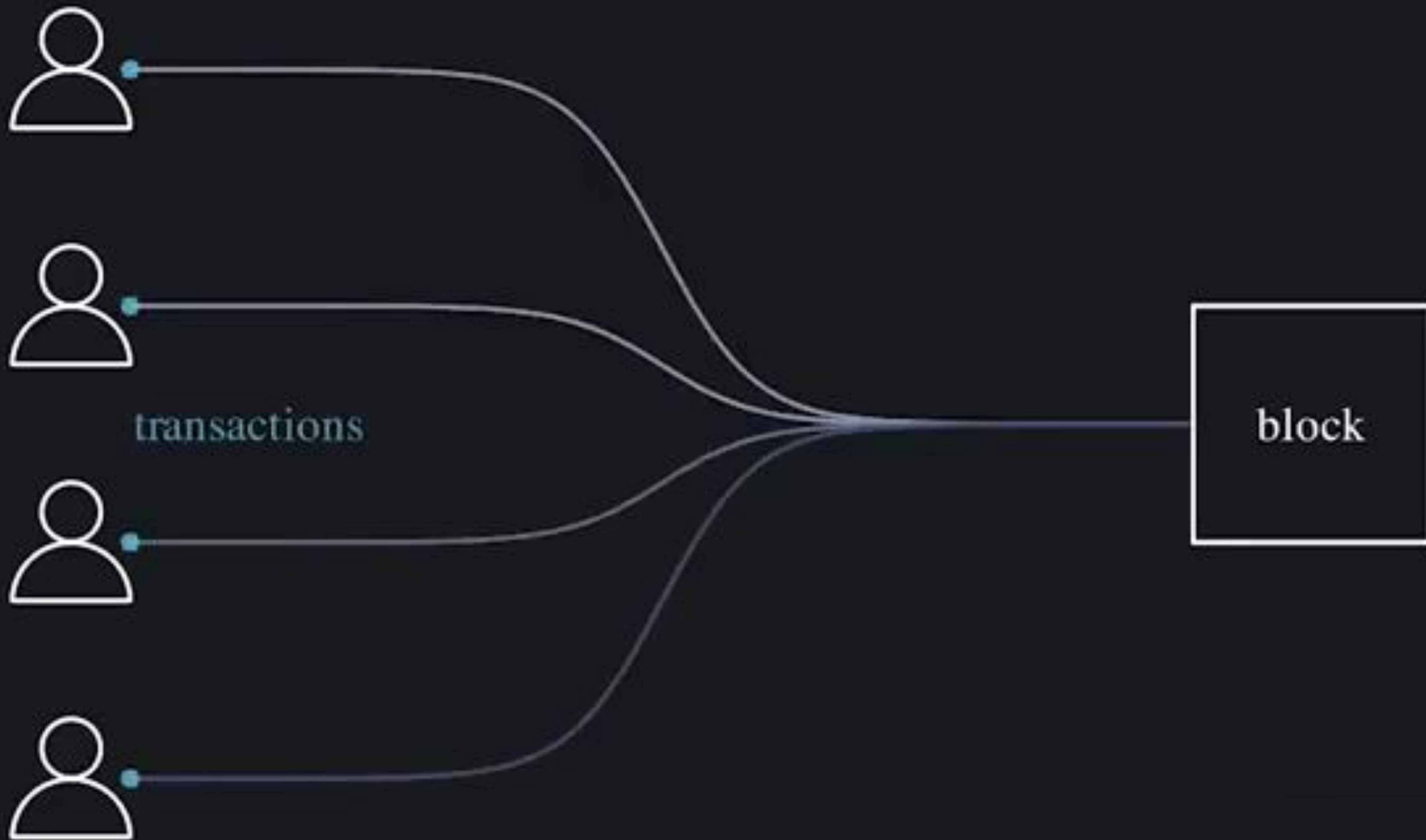
Proof of Work

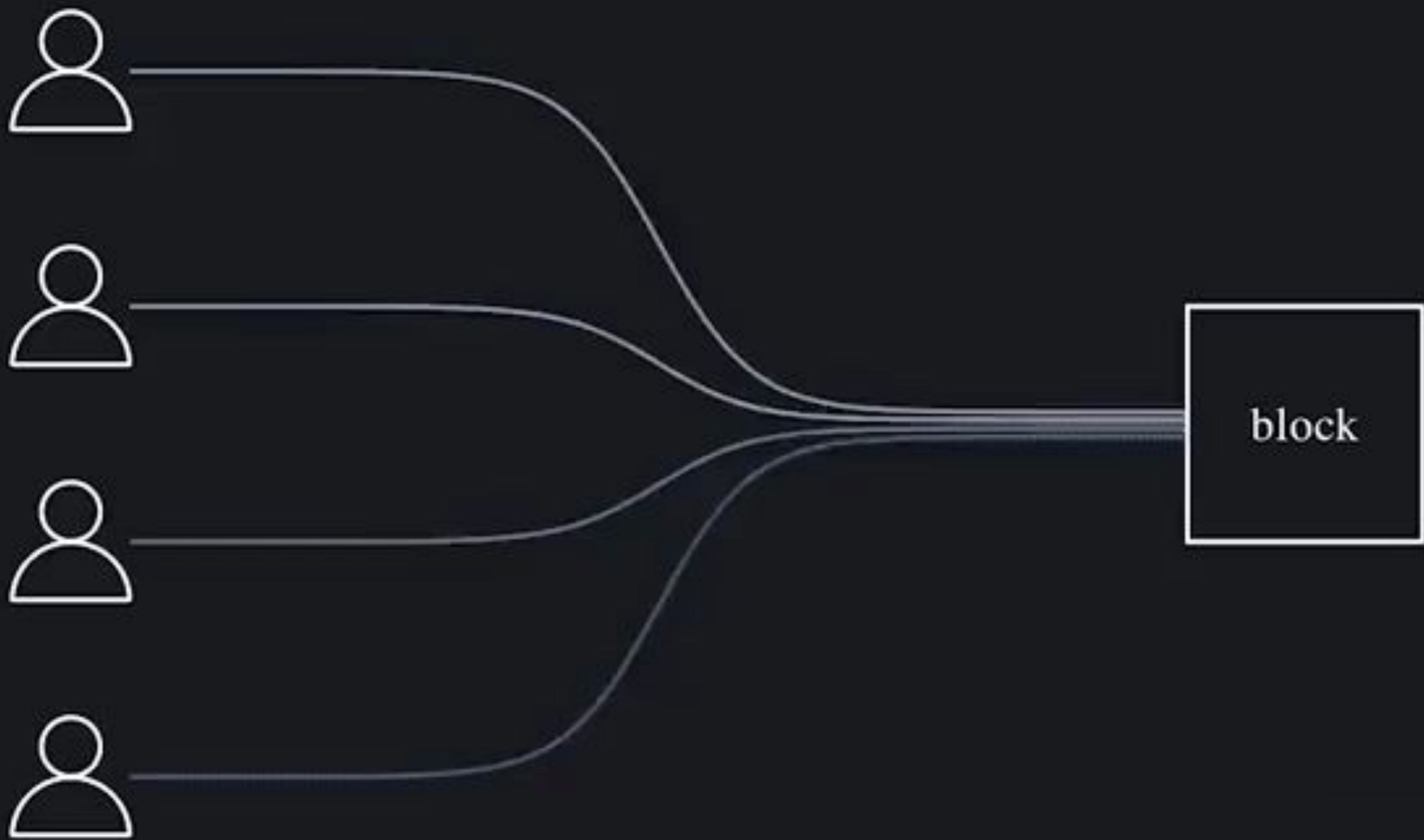
13s

Stateful

Solidity

15TPS





dylan $\xrightarrow{\$3}$ *raj*

Dylan: \$13

Raj: \$15

alice $\xrightarrow{\$1}$ *bob*

Alice: \$5

Bob: \$10

dylan $\xrightarrow{\$3}$ *raj*

Dylan: \$13

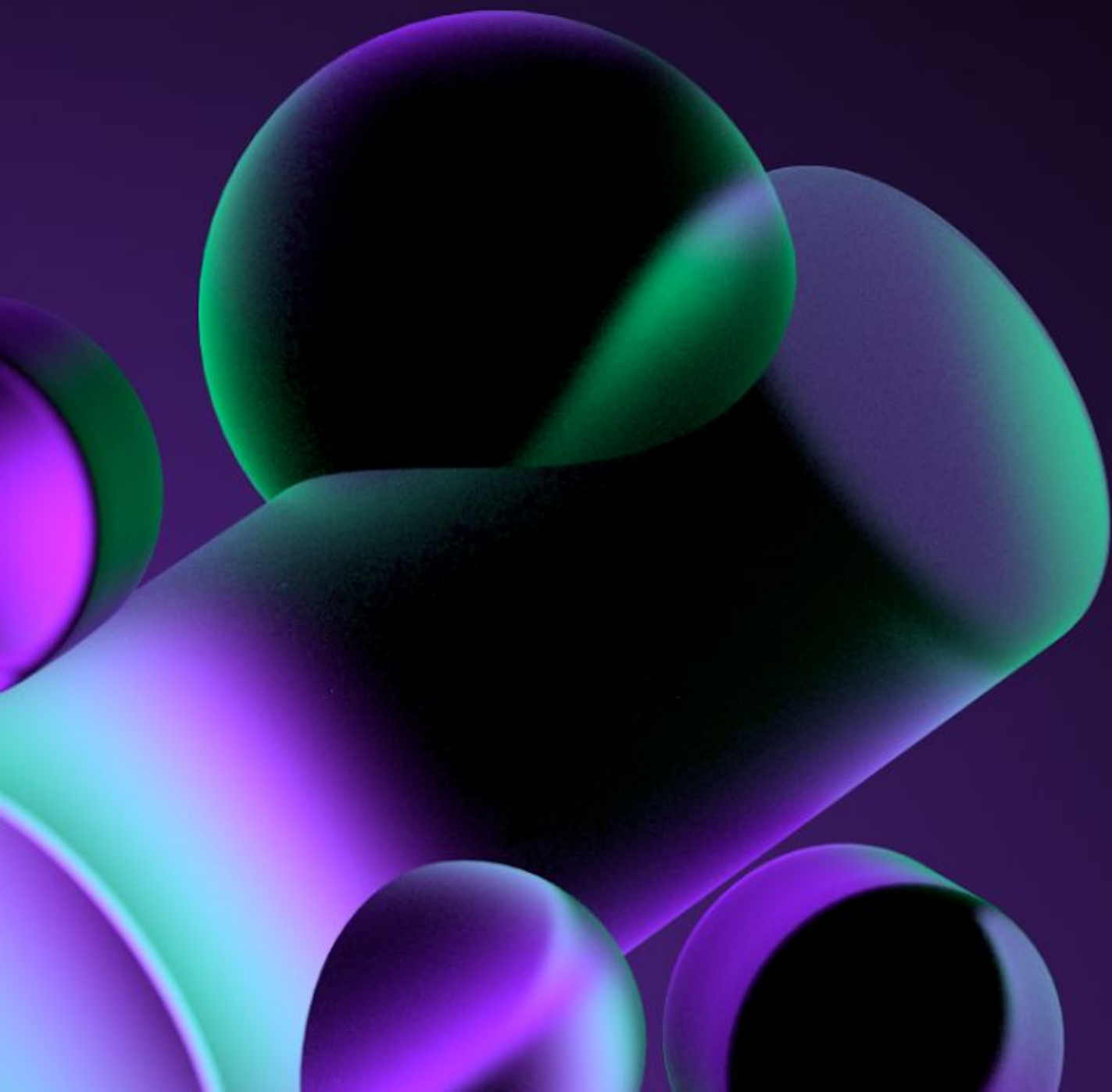
Raj: \$15

alice $\xrightarrow{\$1}$ *bob*

Alice: \$5

Bob: \$10

Hands on example





Thank you

See you next time!