

# FEDOR SAKHAROV

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## ABOUT ME

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I am a Software Engineer with background in Systems Software development, Networking, Information Security and Blockchains. For the past 6+ years I have been writing code in Rust. Currently my main interest outside of work is the field of Zero Knowledge, SNARKs.

## EXPERIENCE

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### Senior Software Developer, Matter Labs

Apr 2023 — Present

- Rust software developer in zkSync project
- Working with the Platform team on projects such as Withdrawal Finalizer, VM, EIP4844 support.
- Provisioning of the production systems and oncall duties.

Technologies: Rust, PostgreSQL, RocksDB, ZK, GKE, Prometheus, Grafana, Performance

### Core Software Developer, Parity Technologies

Dec 2018 — Apr 2023

- Worked on libp2p implementation in Rust.
- Worked on the previous version of Parachain Consensus code for Polkadot.
- Implemented the skeleton and several subsystems with the current Parachain Consensus.
- Built a framework in Rust for massive chain integration testing in Kubernetes with rust: gurke.
- Helped maintain cachepot.
- Lead the team effort to release a new version of cold wallet. parity-signer.

Technologies: Rust, Networking, libp2p, Parachain Consensus, Cold Wallets, Kubernetes, CachePot Build Server, CI, CD, Load Testing.

### Software Engineer, Waves Platform

Sep 2018 — Dec 2018

- Started the development of the Waves Blockchain node implementation in go: gowaves.

Technologies: Go.

### Software Engineer, SONM

Jun 2018 — Aug 2018

- Worked on the implementation of SONM: decentralized fog computing marketplace.

Technologies: Go, Docker, Ethereum, Solidity, CI, CD.

### Senior Software Engineer; Team Lead, Positive Technologies

Oct 2015 — Jun 2018

- Implemented a high-speed traffic capture and analysis for the Application Firewall project.
- Implemented various features within the in-house fork of the NGINX web server.
- Lead an R&D team.
- Researched topics in Blockchains and AI.
- Presented AI research at DEFCON 26 in Las Vegas: youtube.
- Presented research on EVM bytecode reversing at r2con: youtube.

Technologies: EVM, C, NGINX, AF\_PACKET, PF\_RING, libnuma, PostgreSQL.

### Senior Software Engineer, Group-IB

Feb 2014 — Oct 2015

- Started the development of the new product with IDS/IPS capabilities.
- Took the project to production.

- Supervised the first production installations within the clients' ecosystems.

Technologies: C, Linux Kernel, Suricata, AF\_PACKET, PostgreSQL, Logstash.

## **Systems Software Engineer, Security Code**

**Feb 2012 — Feb 2014**

- Developed in-house HIDS solution within Linux Kernel.
- Helped with launching first versions of the in-house IDS solutions.

Technologies: C, Linux Kernel, Suricata, AF\_PACKET, PF\_RING, Qt.

## **Researcher, Moscow State University,**

**Mar 2009 — Jan 2012**

- Performed Research & Develop work on different project.

## **EDUCATION**

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### **Moscow State University, Master of Science**

**2005 — 2011**

- Studied at the Department of Computational Mathematics and Cybernetics
- Thesis: Improving the fine-grained security control within the Linux Kernel [github](#).
- Taught a class on Haskell.
- Taught Fundamentals of Information Security.

## **CURRENT PROJECTS**

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### **Implementing Protocols in ZK**

- The goal is to self-educate in the topics in Zero Knowledge.
- Implementations of the protocols from [Proofs, Arguments and Zero Knowledge](#) book by Justin Thaler in Rust: [blog\\_posts](#).

## **PAST PROJECTS**

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### **Radare2**

- Was a contributor to the [radare2](#) Open Source reverse engineering framework written in C.

## **SKILLS**

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- Code: Rust, C, Golang.
- Tools: GH Actions, Docker, Shell, Kubernetes.