# AMOS ELMALIAH

Delancey, New York, United States of America 13752

amosel@gmail.com ◆ (929) 309-5026 ◆ amosel.me ◆ t.me/amosny ◆ twitter.com/amosel ◆ github.com/amosel ◆ linkedin.com/in/amosel

## EDUCATION

**The Institute of Sonology**                                                                                          **The Hague, Netherlands**
*Sound synthesis, Algorithmic Composition in Computer Music*                                  Sep 2001 – Jun 2002
- **Courses**: Sound synthesis, Algorithmic Composition, Psychoacoustics, Music psychology

**Hogeschool van Beeldende Kunsten, Muziek en Dans**                                            **The Hague, Netherlands**
*ArtScience in Digital Communication and Media/Multimedia*                                    Sep 2002 – Jun 2008
- **Courses**: Live Electronic Music, Software and hardware for digital signal processing and performance interfaces

## WORK EXPERIENCE

**Nine Realms**                                                                                                                    **US, Remote**
*Principal Engineer*                                                                                                          Jun 2025 – Present
- Oversaw and established review of top security companies under a new initiative to lead Thorchain's ThorSec, focusing on strategic partnership and redefining KPIs to restore protocol reliability
- Expanded ThorSec's role and scope, addressing gaps in risk ownership and institutional memory
- Led cryptography-focused initiative including evaluation of TSS schemes (FROST, DKLS, GG20) for THORChain and stealth projects, and initiated collaboration with teams including Near-One and Coinbase
- Supported various Thorchain features such as memoless transactions and Router v6
- Leading architecture exploration for Bitcoin-to-Canton bridge, focusing on enabling BTC as institutional-grade collateral within permissioned DLT environments
- Designed and evaluated decentralized custody models combining TSS (FROST, DKLS, GG20) with Canton's "decentralized party" and topology transaction mechanisms
- Bridged Web3 cryptographic trust models with TradFi requirements (custody, margining, repo flows), aligning MPC-based systems with regulated financial infrastructure constraints
- Prototyped DAML-based asset model (promissory note / UTXO-backed token) supporting transfer, splitting, and redemption flows under threshold authorization
- Drove research on deposit address generation strategies (HD derivation vs memoless / OP_RETURN), including security tradeoffs with FROST and Taproot
- Collaborated with Digital Asset and institutional stakeholders (e.g. DRW context) to define requirements for BTC-backed collateral, settlement latency, and capital efficiency
- Identified architectural gaps in Canton (lack of native m-of-n primitives, reliance on topology layer), and initiated ADR-driven approach to formalize system design

**Osmosis Foundation**                                                                                                          **US, Remote**
*Staff Engineer*                                                                                                            Feb 2023 – Jan 2025
- Spearheaded development of WebAuthn attestation validation for Osmosis smart account system, revolutionizing secure passwordless authentication
- Pioneered research into MPC wallet signing automation for Polaris platform
- Led architectural improvements and quality initiatives through effective mentorship and thorough code reviews
- Established strong team collaboration through regular knowledge sharing and pair programming sessions
- Successfully drove migration of frontend logic to backend systems, enhancing data consistency
- Championed SOLID principles adoption, significantly improving codebase maintainability

**Holonym Foundation**                                                                                                          **US, Remote**
*Software Engineer*                                                                                                      Nov 2022 – May 2023
- Architected integration of complex cryptographic functions into React Native
- Successfully implemented Circom's witnesscalc and rapidsnark groth16 prover as native Expo modules
- Developed Zokrates Rust ZK library integration for Expo platform
- Key contributor to Secure MPC Encryption Network implementation
- Successfully led team transition to RUST and TypeScript
- Delivered critical features for full-stack Node.js/TypeScript platform
- Provided expert guidance on advanced state management patterns

**DaoStack**                                                    **US, Remote**

*Lead Software Developer* — Oct 2021 – Oct 2022

- Directed development of commongood.it Web3 fundraising platform
- Engineered full-stack Web3 solutions using Solidity, assembly-script, React, Next.js and Ethers.js
- Led successful database architecture redesign for common.io
- Provided strategic protocol design guidance across multiple projects

**Cedar software Inc**             **New York City**

*Owner* — Aug 2014 – Present

- Delivered high-quality native mobile and React Native solutions
- Implemented comprehensive full-stack solutions using Node.js and React.js
- Successfully developed major iOS applications for prominent clients including Beme Inc, NYFW, and The Orchard Inc

**Starbyt**             **Tel Aviv, Israel**

*CTO* — Jan 2018 – Jun 2020

- Led development of web and mobile solutions for international clients
- Successfully managed and scaled offshore development team of 7
- Innovated music DSP solutions for industry clients

**MediaBrix/Receptiv**             **New York City**

*Lead Mobile Developer* — Oct 2012 – Jan 2014

- Engineered robust JavaScript bridge for native mobile SDK
- Directed development across iOS, Android, and Unity platforms
- Successfully implemented MRAID specifications in SDK
- Integrated multiple major ad networks including Flurry and Burstly

**Rewind Me Inc**             **New York City**

*App Developer* — May 2012 – Sep 2012

- Developed SDK serving millions of weekly users
- Engineered efficient multi-threaded background download system
- Optimized iOS CoreData performance through EDL improvements
- Implemented thread-safe caching system for partial objects

**Oddcast**             **New York City**

*Mobile Developer* — Jun 2010 – Jun 2011

- Designed and developed innovative iOS applications
- Successfully launched multiple apps on Apple App Store
- Integrated advanced facial recognition capabilities

**iFog**             **Tel Aviv, Israel**

*iOS Developer* — May 2008 – Dec 2010

- Achieved 250,000+ downloads within first quarter
- Ranked among top 10 most downloaded apps
- Developed sophisticated OpenGL and CoreAnimation implementations

**UIMUI**             **Tel Aviv, Israel**

*Multi-disciplinary Developer and Creative Professional* — Mar 2004 – Dec 2010

- Developed and deployed successful mobile applications
- Provided expert UX consultation and rapid prototyping
- Created advanced max/msp audio synthesis systems
- Developed experimental sound design tools
- Built innovative video performance systems

## LEADERSHIP & ACTIVITIES

**NixOS**             **NYC, USA**

*Community Contributor* — May 2012 – Sep 2012

**Tech Stars**             **NYC, USA**

*Mobile Development Expert* — May 2012 – Sep 2012

**DCTV**             **New York City**

*Technical Instructor* — Feb 2008 – Jun 2008

- Led comprehensive Final Cut Pro workshops
- Delivered advanced Motion graphics training
- Instructed professional Color grading courses
- Facilitated Soundtrack Pro sessions
- Provided expert After Effects instruction

**Bezalel Academy of Art and Design Jerusalem**                    **Jerusalem, Israel**
*Interactive Media Department Mentor*                              Dec 2009 – Jun 2011

**Bezalel Academy of Art and Design Jerusalem**                    **Herzliya, Israel**
*Media Innovation Lab Mentor*                                     Dec 2009 – Jun 2011

## SKILLS, LANGUAGES, INTERESTS

- **Languages**: English (Full Professional), Hebrew (Native Speaker), Dutch (Elementary), German (Elementary)
- **Zero-Knowledge Systems**: Zokrates, Circom
- **Web3 Development**: Solidity, TheGraph, Foundry, Hardhat, Ethers.js, viem/wagmi
- **Full-Stack Development**: Node.js, Express, MongoDB, Firebase, AWS, G-Cloud, Serverless, GraphQL Yoga, GraphQL, Apollo
- **Frontend Engineering**: JavaScript, TypeScript, React.js, Next.js, Astro, Mobx, Redux
- **Mobile Development**: React Native, iOS, Android, Fastlane
- **Programming Languages**: TypeScript, JavaScript, Rust, Swift, Objective-C, C++, Java
- **Interests**: Spirituality, Yoga, Jazz Guitar, Interactive Art, Cooking

## REFERENCES

- **Gilad Haimov**: "Had the privilege of working with Amos on developing a complex crypto-investments blockchain project. Amos has exceptional technological skills, and his ability to learn on the job, navigate new knowledge domains, as well as lead and manage were felt and appreciated by all. He is smart, proactive, result-oriented and responsible and a great asset to any company."

- **Ric Neil**: "Amos and I worked together at Mediabrix. He created the SDK that I had game teams integrate. There are many types of engineers that can do this work, but Amos is the best, because his work is like art. His attention to detail and determination to make things perfect only made my job easier. He is one of the rare engineers that I have worked with that works with you in the trenches to deliver the right thing at the right time, right now. Not only that but he is also a great dinner companion and has such a passion for life and friendship it makes you glad to be on the planet with him."

- **Sai Kong**: "EXPERT mobile developer. Recommended."

- **Hila Dar**: "Amos is sharp, dedicated, professional and great with getting things done. My students find his ideas fresh and inspiring, admire his knowledge and experience and produce great value from his simple and practical solutions. Although having no formal Computer Engineering education, his teaching definitely shows his hard-gained garage crafts."

"Who shapes the container shapes the flow. This document was last updated on 2026-03-24 using LaTeX Typst.

3 / 3