



Alin Popa

Fintech CTO
Quantum Researcher
Teaching Assistant

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About me

I am a university lecturer, PhD researcher, and CTO with a strong passion for advanced technologies. With expertise in quantum communications, I have contributed to pioneering projects like the Romanian National Quantum Communication Infrastructure (RoNaQCI). As CTO of a private equity fund, I drive innovation in FinTech, Web3, and AI. My work has been recognized in both academia and industry, with multiple publications, awards, and contributions to cutting-edge research.

Skills: *quantum computing and communications, QKD, cryptography, C/C++, C#, Java, PHP, Python, React, JavaScript, VBA, Entity Framework, TypeScript, ASP.NET, NodeJS, CSS, SCSS, SASS, AWS, Azure, Terraform, Haskell, Prolog, data science, statistics, computer vision, autoencoders, pyTorch, convolutional neural networks, NestJS, Angular, Ethereum, Solidity, Hardhat, EthBrownie, Chainlink VRF, OpenZeppelin ecosystem, Web3.js, SQL, Postgres, Neo4J, git, Linux, technical leadership, management.*

Professional Experience

- 2022-Today** Chief Technology Officer & Founding Partner Parable VC / Assetize
Venture studio and micro-to-small cap private equity fund (>\$180M total asset value), co-created with Charles Plenet de Badts de Cugnac (founder TMRW, Room3D, RealtyOS, AiredTV), Cyrus Hodes (co-founder Stability AI), Cevat Yerli (co-founder Crytek) and others.
- 2021-2023** Freelance Blockchain Developer Upwork
50+ jobs as a Top Rated freelancer, including whelps.io (first provably-random evolving NFTs on Ethereum which sold out for \$1.5M), MasterBrews projects (as lead smart contract engineer), KoinGames BattlePass, Kiko's Mints & Bakes. Lead testing engineer for Avalaunch (\$30M marketcap at the time).
- 2021-2023** Machine Learning Research Engineer Arnia Software
Researched and developed computer vision algorithms for product recognition and retrieval, classification, and automated attribute labelling. Researched NeRF models for 3D scene reconstruction.
- 2017-2021** Intern → Software Engineer → Senior SE Softwire Technology LTD
Managed, developed, and maintained large-scale cloud infrastructures in AWS ecosystem. Designed and implemented a software pipeline for automated video annotation using speech recognition. Built various functionalities for web apps on frontend and backend, impacting 50,000+ users. Worked closely with: BBC, Channel5, Kantar, DavidLloyd Clubs, Redburn Atlantic, Department for BEIS at UK Govt. Managed company relationship with several client departments. Managed an intern to ensure technical progress.
- 2013-2017** Freelance Software Engineer Elance & Upwork
Designed, developed, and extended various projects. Built simulators for assembly and FPGA circuitry in C with CUI and OpenGL GUI with low level interfaces to drivers, ports, and kernel-level features.

Teaching & Research

- 2023-Today** Researcher in EU-funded project RoNaQCI
Researcher and part of the coordination team at Romanian National Quantum Communication Infrastructure, largest terrestrial QKD network in EuroQCI. Author of the Romanian QKD standardization initiative, first post-quantum videoconference secured by QKD in Romania, the architecture and development of the RoNaQCI QKD Network Monitoring solution.
- 2017-Today** University Teaching Assistant POLITEHNICA Bucharest
Teaching the "Quantum Communications & Cryptography" course since 2023 and "Computer Programming and Programming Languages" since 2024. Have taught seminars/labs on C programming, logic circuits, algorithm analysis, programming paradigms, Linux OS. Part of the coordination team of the Quantum Computing MSc Program, the first of its kind in Romania and 3rd in Europe. Earned 1st teaching assistant by student feedback in the faculty in 2023-2024.

Education

- 2020-2024** Ph.D. in CompSci (Summa Cum Laude) POLITEHNICA Bucharest
Thesis: *Advancements in Quantum Communications: Security, Utility, Performance, and Adoption*
- 2018-2020** M.Sc. in Financial Computing POLITEHNICA Bucharest
Graduation Grade: 10/10
- 2014-2018** B.Sc. in Computer Science and Engineering POLITEHNICA Bucharest
Graduation Grade: 10/10
- 2010-2014** Intensive Informatics High School "Mihai Viteazul" National College

Top 5 Publications

- 2024** "The Future of QKD Networks", arXiv:2407.00877
- 2024** "Optimal key forwarding strategy in QKD behaviours", Nature Scientific Reports
- 2024** "SkySwapping: Entanglement resupply by separating quantum swapping and photon exchange", Future Generation Computer Systems
- 2023** "QGP-VPN: QKD enhanced VPN solution for general-purpose encrypted communications, RoEduNet
- 2018** "Instant payment and latent transactions on the Ethereum Blockchain", RoEduNet

Awards

- 2017** Imagine with Orange prize for smart territories startups @ Innovation Labs
- 2017** 3rd Place @ NXP Linux Embedded Challenge
- 2013** Best Experimental Work @ National Physics Olympiad
- 2011** 1st Place @ CNI Urmasii lui Moisiil National Informatics Contest
- 2010** Mention @ International Mathematics Archimedes Contest
- 2009** Special Mention @ National Chemistry Contest Raluca Ripan
- 2007** Silver Medal @ National Mathematics Olympiad