# MARTÍN FERHATOVIĆ

*Senior Project Manager – Quantum Infrastructure*

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| **Profile**  Results-driven Project Manager with over 14 years of experience leading complex technical initiatives in quantum networking, telecommunications, and hybrid cloud infrastructure. Adept at translating scientific research into scalable technology incubation projects, with a proven record of delivering high-impact programs on time and within budget. Expertise in managing cross-functional teams, technical documentation, and partnering with academic and industry research groups to drive innovation. Strong background in networking systems, lab-based hardware integration, and quantum computing platforms including Azure Quantum and Azure Quantum Elements. Recognized for bridging the gap between research vision and engineering execution across startups and enterprise R&D environments.  **Skills**  Technical & Engineering, Project & Program Management, Leadership & Communication, Analytical & Research  **Languages**  English — Native  Spanish — Fluent – heritage speaker  German — Intermediate – B1, self-taught  **Awards**  Delivered first working prototype of a quantum repeater network node (2023) | 2023-01-01  Reduced entanglement distribution latency by 38% compared to baseline models; now being evaluated for national quantum testbed inclusion.  Led lab integration of hybrid classical-quantum network switch (2020) | 2020-01-01  Enabled simultaneous classical and quantum signal routing over same fiber, with <5% interference (published in IEEE Quantum Engineering).  Reduced project cost overruns by 67% across 8 projects (2017–2020) | 2020-12-01  NetFusion Technologies  Implemented adaptive risk-tracking model adopted as best practice at NetFusion.  Managed full lifecycle development of 3 major telecom infrastructure upgrades | 2020-12-01  Totaled $9.1M investment, delivered on schedule, supported 1.2M end users.  First internal PM to use Azure Quantum for network simulation | 2022-01-01  QuantNova Labs  Cut simulation time from 14 to 3.5 hours per topology; project won internal Innovation Award (2022).  **Certifications**  Project Management Professional (PMP) | 2017-01-01  PMI  Microsoft Certified: Azure Quantum Developer Associate | 2022-01-01  Microsoft  Cisco Certified Network Professional (CCNP) – Enterprise | 2014-01-01  Cisco  **Interests**  Quantum outreach education  Amateur radio: Licensed: KC6QXM  Open-source quantum software contributions  Hiking in the Sierras  Photography of experimental lab setups | **Experience**  **Senior Project Manager – Quantum Infrastructure at QuantNova Labs**  01 Jan 2021 – Present  Lead project manager for quantum networking incubation initiatives within a high-potential R&D unit focused on next-generation secure communication systems.   * Spearheaded the definition and development of a quantum key distribution (QKD) testbed in collaboration with UC Berkeley’s Quantum Institute, resulting in a working prototype connecting two campus data centers via 40km of dark fiber (completed Q3 2023). * Documented 25+ functional specifications for quantum repeater nodes, entanglement routing protocols, and network interface units, providing engineering teams with implementable technical blueprints. * Coordinated with a third-party photonics startup (PhotonStream Inc.) to co-develop and integrate quantum transceivers, reducing integration timeline by 30% through weekly technical syncs and milestone tracking. * Spent 2–3 days weekly in the lab setting up and validating quantum entanglement sources, single-photon detectors, and control systems; personally managed calibration of 14 critical components across two test environments. * Leveraged Azure Quantum Elements to simulate quantum network topologies and error correction models, increasing predictive accuracy of network stability by 45%. * Managed a $3.2M incubation budget, delivered all milestones under 5% variance, and reported biweekly to executive stakeholders and external funding partners.   **Project Manager – Network R&D at NetFusion Technologies**  01 Jun 2016 – 01 Dec 2020  Led technical execution of advanced networking projects, including hybrid optical and quantum-ready infrastructure upgrades.   * Directed a cross-functional team of 9 engineers to upgrade backbone network architecture to support quantum-ready signaling protocols, enabling future integration with quantum processors. * Partnered with NIST-affiliated researchers to define network latency and synchronization requirements for quantum state transmission, resulting in a published technical white paper (2019). * Managed telecom networking projects across 5 U.S. data hubs, operating under strict SLA with 99.998% uptime achieved across all phases. * Designed and implemented network monitoring systems using Python scripts and Azure-hosted dashboards, reducing fault detection time from 45 to 8 minutes. * Authored 18 product specifications for network interface cards and multiplexer firmware, reviewed by product managers to guide next-gen development. * Reduced project delivery cycle by 22% by introducing agile sprints and automated documentation workflows.   **Network Systems Engineer → Team Lead, Research Integration at TelCore Dynamics**  01 Aug 2011 – 01 May 2016  Began as a Network Systems Engineer and promoted to a leadership role managing integration between research prototypes and commercial network systems.   * Designed and deployed scalable multi-protocol label switching (MPLS) networks for 15 enterprise clients, reducing packet loss by up to 60% and improving throughput. * Transitioned into a hybrid technical-project role (2013), facilitating collaboration between TelCore’s research group and engineering teams on quantum-safe encryption trials. * Led a 6-person team to integrate post-quantum cryptography (PQC) algorithms into existing optical transport systems; project completed 3 weeks early with zero critical bugs. * Conducted weekly lab sessions validating PQC-enabled routers under real-world load conditions using testbed equipment from Keysight and Tektronix.   **Intern – Optical Networks Lab at National Institute for Advanced Networking (NIAN)**  01 May 2010 – 01 Aug 2010  Supported lab research on high-capacity fiber optic networks, performing data collection and preliminary signal analysis.   * Performed signal integrity tests on 100Gbps optical links, logging results for publication in a peer-reviewed conference paper. * Assisted in setup and calibration of OTDR (Optical Time-Domain Reflectometer) equipment.   **Education & Training**  **M.S., Quantum Physics & Engineering**  Stanford University  01 Jan 2008 – 01 Dec 2010  **B.S., Electrical Engineering (with focus on Photonics & Networks)**  North Carolina State University  01 Jan 2004 – 01 Dec 2008  Result: 3.7/4.0  **Publications**  **Technical white paper on network latency and synchronization requirements for quantum state transmission | 2019-01-01**  NIST-affiliated researchers  Defined network latency and synchronization requirements for quantum state transmission in collaboration with NIST-affiliated researchers.  **Peer-reviewed conference paper on 100Gbps optical links | 2010-08-01**  NIAN  Signal integrity tests on 100Gbps optical links performed and logged for publication.  **IEEE Quantum Engineering publication on hybrid classical-quantum network switch | 2020-01-01**  IEEE  Led lab integration of hybrid classical-quantum network switch enabling simultaneous routing with <5% interference.  **References**  References available upon request. |