Yorgos Sotiropoulos

Research Software Engineer
Athens, Greece
(+30) 6949285279 | strpls.g@gmail.com | www.yorgos.xyz | yorgossot | ystrpls

Experience

Entropica Labs
Singapore (Remote)

Quantum Software Developer
Nov. 2022 - Present

- Core developer of Loom [GitHub], an open-source Python library for quantum error correction research (private development repo).
- Co-designed and maintained CI/CD pipelines.
- Designed and executed fault-tolerance experiments on quantum hardware in collaboration with hardware partners.
- Represented company at conferences and technical collaborations with industry partners.

Entropica Labs
Singapore

Quantum Software Intern
Jul. 2022 - Sep. 2022

- Implemented fault-tolerant quantum computing schemes in Q#, optimizing for circuit compactness.
- Researched and synthesized scientific literature for the team.

Education

Applied Sciences Faculty, TU Delft
Delft, the Netherlands

MSc in Applied Physics
Sep. 2020 - Sep. 2022

- Physics for Quantum Devices and Quantum Computing Track
- Honours Programme
- GPA: 8.77

Physics Department, University of Patras
Patras, Greece

BSc in Physics
Sep. 2015 - Sep. 2019

- Theoretical Computational Physics and Astrophysics Track
- GPA: 8.8

Research Projects

Q.E.C. on distributed architectures using integrated photonic entanglement protocol
Delft, the Netherlands

MSc Thesis @ Borregaard Group, part of Fujitsu-QuTech collaboration project
Jun. 2021 - May. 2022

Supervisors: Johannes Borregaard, David Elkouss **Links**: [Report]

- Expanded atoms-in-a-cavity entangling gate protocol with integrated error detection to fiber-cavity networks.
- Developed a Python package [GitHub] for symbolic computation of quantum optical systems using SymPy.
- Benchmarked protocol performance against emission-based schemes.

Surface Code Decoding under Correlated Noise
Singapore

Research project for Honor's Programme @ Yale-NUS College, CQT (remotely)
Jun. 2021 - May. 2022

Supervisor: Ng Hui Khoon **Links**: [Report]

- Modelled correlated noise for Fault-Tolerant Surface Code simulations.
- Adapted existing Python/Numba codebase to improve decoding performance.

Honors & Awards

2020-2022	**MSc Scholarship**, "Onassis" Foundation	*Greece*
2021	**Award of excellence in Physics Department 2019**, State Scholarships Foundation (IKY)	*Athens, Greece*
2020	**Award of excellence in Physics Department**, University of Patras	*Patras, Greece*
2015-2019	**BSc Scholarship**, "Mentzelopoulos Andreas" Foundation	*Patras, Greece*
2015	**Award of excellence in Panhellenic Exams**, Eurobank	*Greece*

Skills

Languages Python, C++, MATLAB, Mathematica
Tools Git, GitHub Actions, Sphinx