

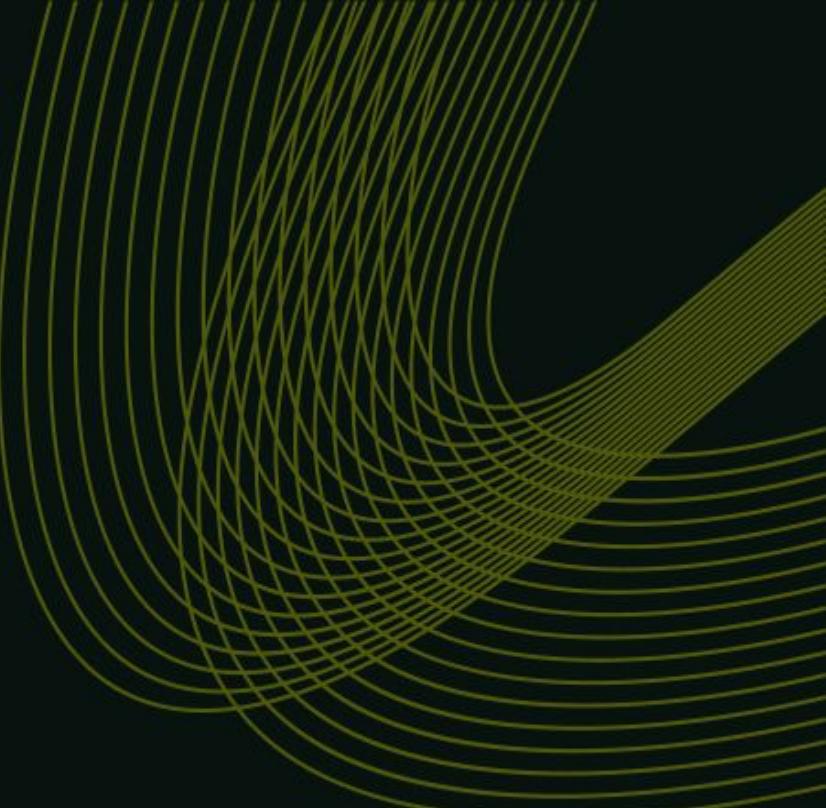
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JANUARY 2026



ANNUAL  
REPORT  
2025





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# MESSAGE FROM THE PRESIDENT

2025 gives me the privilege to reflect on what has yet again been the largest year for quantum technology. Private investment in 2025 surpassed \$10Bn, more than double the previous high water mark in 2024. We now see several large public quantum technology companies, increased acquisitions and dealmaking, new public initiatives and spotlight focus at the national level. Quantum technology ranked second, right after AI, on the list of 2025 Science and Technology Highlights released by the White House.

In 2025, we've also seen an openness to support new funding structures, with new Focused Research Organizations and the newly announced NSF Tech Labs program. This validates our view that new and independent organizations, with dedicated teams in a specific space, can go faster in new fields. Unitary Foundation has operated as a startup research organization from the beginning, and we are encouraged to see more partners adopting this approach.

If you want to feed a fire then you need to open breathing space between the logs to allow air in as fuel. At Unitary Foundation, we continue to build these open spaces through the microgrants, community programs, and open source software that draw in the talent to grow the quantum industry. In 2025, we hosted our largest unitaryHack yet, with 65% of participating hackers engaging in open source for the first time.

**Our mission is to lower the barriers to entry in quantum technology by building open, durable infrastructure that helps the field grow faster, and grow well.**

While quantum tech advances, it has done so alongside a remarkable acceleration in artificial intelligence. It remains striking that some of the world's most powerful foundation models are so widely accessible through cloud platforms, open source releases, and global communities of builders. Sci-fi might have you expect that such tech would only be available in a secret base, but these tools are being used by people all over the world to solve problems that matter to them, to express creativity, and to explore science and mathematics. Increasingly, they are also being used to help build quantum technology itself.

We will all benefit if quantum technology grows with this same openness: scaling responsibly, remaining accessible, and shaped to advance human flourishing through the fundamental rules of nature: quantum mechanics.

**William Zeng,**

**PhD**



# TOGETHER, WE THRIVE

Unitary Foundation thanks the following supporters for their commitment to open source quantum technology. Our community development work and research are made possible through the generosity and partnership of these foundations, companies and individuals. We are excited to work with all of them to grow the open quantum ecosystem around the world.

## Members

### Core Members

### IBM Quantum



### Supporting Members



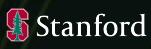
## Board of Directors

- William Zeng, PhD
- Nathan Shammah, PhD
- Travis Scholten, PhD

### Institutional supporters



### Research partners



## Staff



# THE FUND

*"While the funding is transformative, the access you get to experts as a grantee to be able to ask questions and learn makes such an incredible difference!"*

- Grantee Exit Survey Response



**Brian Goldsmith**  
UF Ambassador



**Misty Wahl Winsor**  
UF Advisor



**Eduardo Maschio**  
Micrograntee



**Carolina Arias Perdomo**  
Micrograntee

*"We greatly appreciated the active support from UF staff and the helpful discussions facilitated through the Discord channels."*

- Grantee Exit Survey Response

*"An incredible learning opportunity. Thank you to the UF microgrant program... for following up, for creating structure, and for connecting me with idols in my field, who were able to mentor my technical work while also supporting me in making the right career move after my PhD."*

- Katherine Van Kirk

*"The microgrant and the communication I've had from [UF] has helped me to feel a lot more comfortable in the work I'm doing, and has made me feel more part of a community trying to help one another than feeling like I'm a sole unit in a very atomized field."*

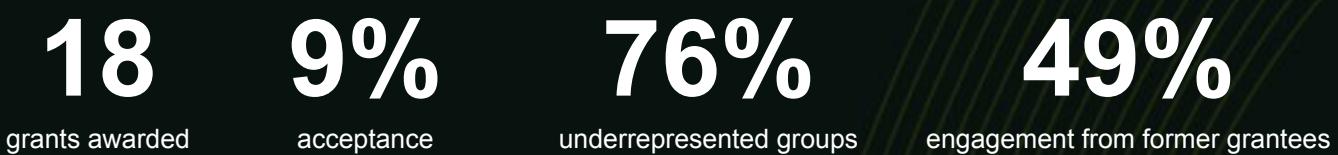
- Fenton Clawson

# MICROGRANTS

The Fund gives no-strings attached microgrants to explorers building the open source foundation for quantum technology. In 2025, 18 grants were awarded to grantees around the world. 76% of microgrants were awarded to individuals belonging to a historically underrepresented group in STEM, up from 51% in 2024.

Grantees also continue to participate in the community even after their microgrant period is over - in 2025, 49% of all former grantees engaged with UF through program participation, mentorship of new grantees, financial support, and more.

## 2025 Stats



**Represented countries:** Australia, England, Finland, Germany, Japan, The Netherlands, Scotland, US

## 2025 Grants Advisory Board

A special thank you to our 2025 Grants Advisory Board who joined the UF team in championing projects and mentoring grantees as they further the field of open source quantum computing.

- Daniel Mills, Quantinuum
- Elena Pena Tapia, IBM
- Jamie Friel, Oxford Quantum Circuits
- Misty Wahl, Q-CTRL
- Roger Luo, QuEra Computing Inc.
- Ryan LaRose, Michigan State University
- Ryan Schaffer, Amazon
- Sonika Johri, Coherent Computing Inc.
- Stephen DiAdamo, Qoro
- Ying Mao, Fordham University

## Micrograntees/Projects

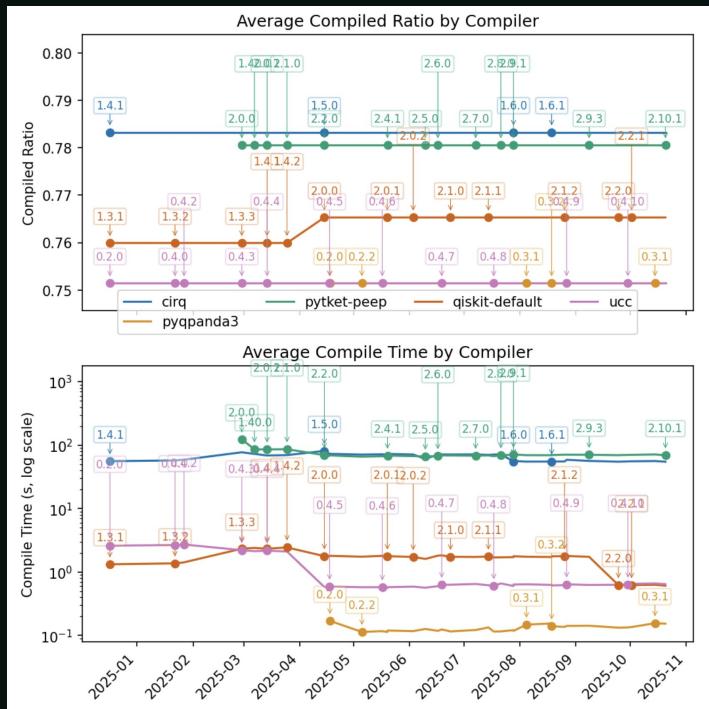
- To Fenton Clawson to further develop [FLiMESolve](#)
- To Katherine Van Kirk, Christian Kokail, Jonathan Kunjummen, Hong-Ye Hu, and Yanting Teng to develop an intuitive, open-source python package for the [derandomized shallow shadows](#) (DSS) algorithm
- To Le Vu Trung Duong, Vu Tuan Hai, and Pham Hoai Luan for [QIMAX](#)
- To Alejandro Montanez Barrera to further develop and test [LR-QAOA](#)
- To Konstantin Golovkin and Oxana Shaya to extend their project, [PauLie](#)
- To Sohum Thakkar to develop [Qubi](#)
- To Gennadi Ryan for [Python Piccolo](#)
- To Andi Gu and Pablo Bonilla for Fast Neural Decoders for Universal Logical Quantum Algorithms
- To John van de Wetering for Future-proofing PyZX
- To Yudong Cao, Shangjie Guo, Manuela Rivas Gómez, and Aleyna Küçükçolak for quantum\_factoring\_resource\_estimation
- To Shuwen Kan and Zefan Du for Pauli Atlas: Pauli-Based Computation Compiler for Quantum Error Correction
- Balint Pato for [PlangTN](#)
- Rakhim Davletkaliyev for Quantum Computing for Software Engineers
- To Maria Gragera Garces for HDH: Hybrid Dependency Hypergraphs for Distributing model agnostic quantum workloads. [The HDH library](#) introduces a novel intermediate representation for distributing quantum workloads across heterogeneous quantum networks
- To Jop Briët, Arjan Cornelissen, Francisco Escudero Gutiérrez, and Sander Gribling for designing quantum query algorithms on a laptop. This is a project to develop a software tool capable of generating optimal quantum query algorithms for approximating Boolean functions
- To Benny Zong Liu and Ilan Iwumbwe for [QuteFuzz](#), a solution for detecting potentially semantic changing bugs in quantum compilers, weeding out simple but critical errors that can be very time consuming to detect conventionally
- To Seun Omonije for [Qernel](#), an agentic command line interface (CLI) to prototype and share quantum code
- To Mingyu Sun for a project called “Efficient fidelity estimation” where they will build a package which implements a fidelity estimation protocol that extends the shadow-overlap certification protocol of Huang–Preskill–Soleimanifar to estimation. The package will offer a lightweight, hardware-friendly tool and integrates with Cirq, Qiskit, and more

Interested in applying with your project? [Learn more here!](#)

# THE LAB

Tools for discovery.

Access for all.

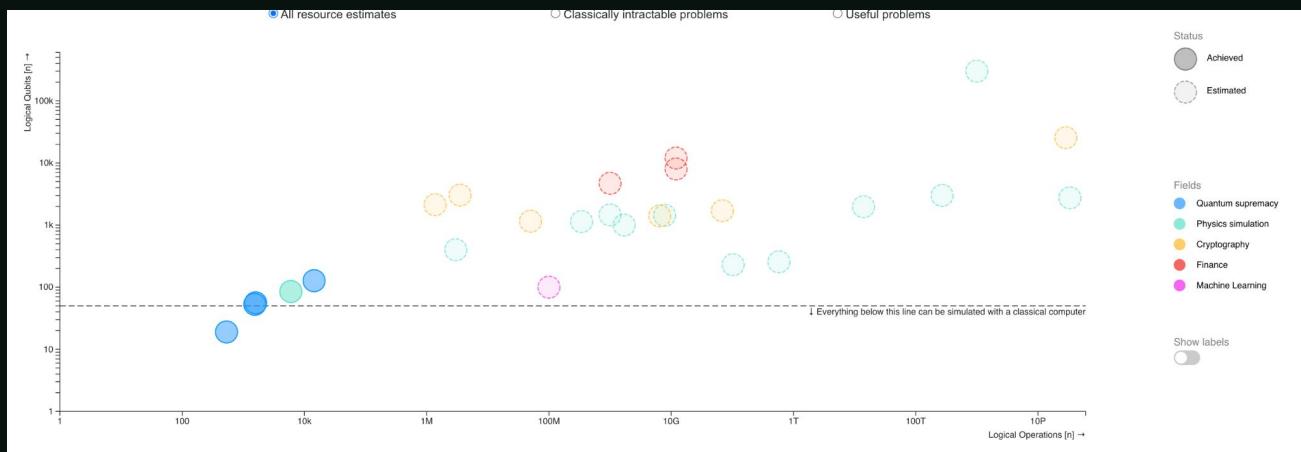


Graph from UCC

```
{
    'app_version': '0.6.0',
    'job_type': 'WIT',
    'platform': {'device': 'aer_simulator',
        'device_metadata': {'num_qubits': 31,
            'simulator': True,
            'version': '0.17.2'},
        'provider': 'local'},
    'results': {'expectation_value': {'uncertainty': 0.0006673812593654682,
        'value': 0.996337890625},
        'score': {'uncertainty': 0.0006673812593654682,
        'value': 0.996337890625}},
    'runtime_seconds': 0.009346791077405214,
    'suite_id': None,
    'timestamp': '2026-01-16T15:42:18.173736'}
```

Results:  
 expectation\_value: 0.996337890625 ± 0.0006673812593654682  
 score: 0.996337890625 ± 0.0006673812593654682

Code from Metriq-gym



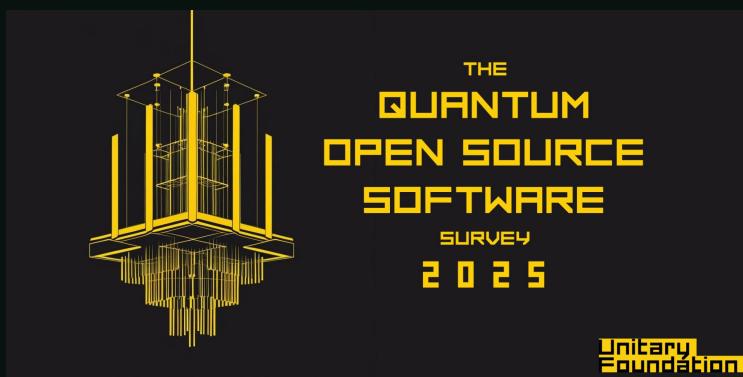
Graph from Metriq

# PUBLIC GOODS IN QUANTUM TECH

The Lab creates and maintains public goods for quantum sciences and technology.

## QOSS Survey

The more we understand about the needs and backgrounds of the quantum computing community, the more we can ensure the field's products and services are built to address their current and future needs. Each year, the QOSS Survey delivers a bottom up view of who we are, what we are working with, what we need, and how that is evolving.



**With over 1,400 respondents from 70+ countries, including developers, researchers, students, maintainers, business leaders and educators, the findings provide data points that can assist all stakeholders in the quantum ecosystem in their own roadmaps and development.**

Topics covered include Demographics, Experience, Cloud Services, Full-Stack Development Platforms, Compilers and Simulators, Software for Applications and Tools, User Experience, OSS Development and Research, and Community.

The survey can be accessed [at this link](#) with a short analysis from the UF team [here](#), and the anonymized data set is available on the [Unitary Foundation Github](#).

<h3>Learning, Mentorship &amp; Training</h3> <p>Requests for courses, tutorials, workshops, internships, or structured learning [25]</p>	
<p><b>Technical Feedback &amp; Suggestions</b> Comments on tools, software and survey design [16]</p>	<p><b>Accessibility &amp; Equity</b> Focus on inclusivity, affordability, and open access for students [12]</p>
<h3>Collaboration &amp; Community Building</h3> <p>Importance of collaboration, inclusivity, and support for newcomers [22]</p>	
<p><b>Appreciation &amp; Encouragement</b> Positive feedback and gratitude for the community [17]</p>	<p><b>Contribution &amp; Participation</b> Desire to actively contribute, participate and learn by doing [16]</p>
<p><b>Funding, Commercialization &amp; Sustainability</b> Challenges with grants, commercialization, and sustaining OSS contributions [6]</p>	

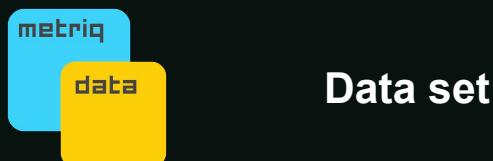
# BENCHMARKING

Independent benchmarking is growing as a vital part of our ecosystem. As hardware vendors continue to move along their development roadmaps, with the help of new software, hybrid workflows, AI, scientific and industry use cases are becoming a reality. Validation and reproducibility of these results, the ability to more easily compare and share these results, and the empowerment of a much broader community to participate in benchmarking will ensure our ecosystem can help more people and sooner.

In 2025, our team expanded its work in the benchmarking space to grow Metriq into a an end-to-end platform, which now integrates benchmark execution (metriq-gym), data collection (metriq-data), and a presentation layer (new Metriq website coming soon!)

The new metriq-gym runner is a new open source toolkit that includes reference implementations of benchmark protocols and allows smooth running of those cross-platforms.

## Metriq-Gym V0.5 released



## Metriq Presentations and Conferences

- 3rd TQCI Quantum Benchmarking [Workshop](#), Paris, France: Invited talk
- NYC Quantum Computing In Person [Meetup](#), NYC, NY: Invited talk
- IEEE Quantum Week & QCE [Conference](#), Albuquerque, New Mexico
- General session: Poster on Metriq Gym
- Standards & Benchmarks Workshop: Panel
- Sandia APQC [Workshop](#), Estes Park, Colorado: Poster
- Munich Quantum Software [Forum](#), Munich, Germany: Invited talk

- Benchmark suite including:
  - ◆ Bell-state effective qubits (BSEQ)
  - ◆ Wormhole-inspired Teleportation (WIT)
  - ◆ Quantum machine learning (QML) kernel
  - ◆ Mirror circuits
  - ◆ Linear-ramp QAOA (LR-QAOA)
  - ◆ Error per layered Gate (EPLG)
- Integrated QED-C application-level benchmark suite
- Cloud provider and Hardware vendors integrations
  - ◆ AWS
    - IQM
    - Rigetti
  - IonQ
  - IBM
- ◆ Quantinuum Nexus
- ◆ OriginQ
- ◆ Azure

# COMPIILATION

2025 was an especially important year for our work developing open source compilation resources for the field. We saw our error mitigating compiler Mitiq cross 350,000 downloads, and introduced UCC: the Unitary Compiler Collection, a new initiative to ensure compilation improvements can benefit as wide a range of users as possible during the NISQ era.

In recognition of our emphasis on compilation this year, we also began a partnership with [Merit Systems](#) to pay contributors to our UCC and Mitiq repositories. Learn more about the initiative (and how you can be a part of it) [here](#).

## UCC



**Ecosystem Problem:** Compiler improvements are often isolated in separate libraries or one-off repositories without integration into existing tools and there are high switching costs between quantum computing frameworks and hardware platforms.

**Our Solution:** The [Unitary Compiler Collection](#) (UCC) is a Python library for frontend-agnostic, high performance compilation of quantum circuits. UCC's goal is to gather together the best of open source compilation to make quantum programming simpler, faster, and more scalable.

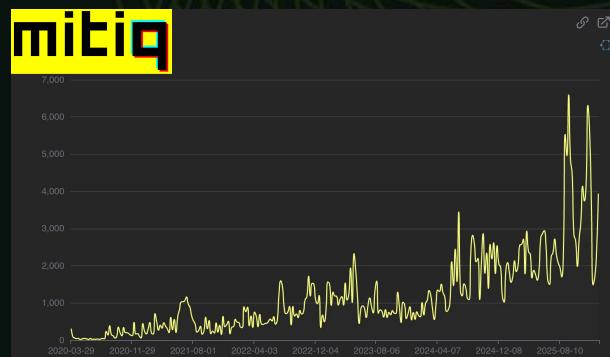
By leveraging [qBraid](#), UCC interfaces automatically with multiple quantum computing frameworks, including [Qiskit](#), [Cirq](#), and [PyTKET](#) and supports programs in OpenQASM 2 and [OpenQASM 3](#).

Additionally, to ensure that our work continues to be relevant and the most helpful to our community, we have also developed `ucc-bench` to benchmark and compare the performance of UCC and other various compilers currently available.

Over the last year, UCC has gained a strong group of dedicated contributors to push this effort forward. Thank you in particular to staff members Jordan Sullivan and Brad Chase for taking the lead on this important initiative! Learn more and find out how you can contribute on the [UCC project repo](#).

## Mitiq

Mitiq continues to be the leading error mitigation compilation tool in the field. Our thanks to the NSF POSE program, which has supported Mitiq's ecosystem development the past 2 years and has helped position it to be a cornerstone of the open source community for years to come. With an emphasis on this community, we now have over 350,000 downloads, 92 contributors, nearly 200 forks and 10 error mitigation techniques.



## Mitiq cont...

### Before/After POSE Grant

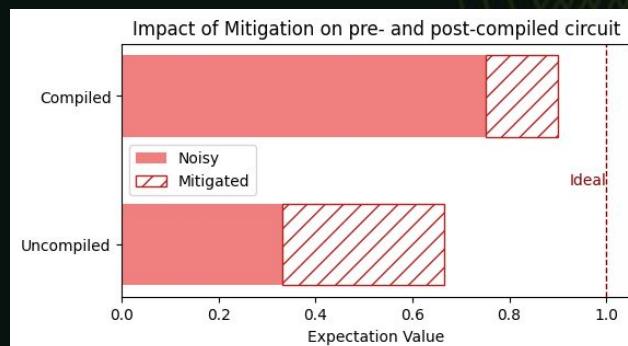
- Github stars are 403 in Q3 2025 up 50% from project start, 268 in Q2 2023 (25% YoY average increase in two years).
- Downloads from the Python Package Index (PyPI) are 350.000 in Q3 2025, up from 90,000 in Q2 2023 (a 300% increase) and a 76% increase YoY with respect to 2024.
- Code contributors on Github are 88 as of Q3 2025, up from 54 in Q2 2023 (+63% from project start), also finding a 26% year on year, since 2024.
- Paper citations for the Mitiq whitepaper on Google Scholar are 155 in Q3 2025, up from 70 in Q2 2023 (over 120% increase, with 44% increase YoY from 2024).

At the end of the POSE grant, Mitiq stands as the most used open source error mitigation compiler in quantum computing. As quantum computing promises disruptive applications to address a wider range of problems, it is currently hindered by errors in hardware: Mitiq has been designed to capitalize on recent and ongoing research in the field of quantum error mitigation to provide it as an easy-to-use compile pass. Mitiq can be used on any quantum computing device and supports as input, programs written according to various existing frameworks (different Python libraries). By enabling error mitigation as a simple step, Mitiq empowers a global community of users involved in developing various aspects of quantum computing applications, compilation, and algorithms. Mitiq supports a variety of techniques and can be thought of as a kind of “Swiss army knife” for quantum error mitigation and the benchmarking of such techniques. The POSE grant has enabled a solid support for the project to thrive and reach broader communities.

## Mitiq + UCC

While circuit compilation and error mitigation are often utilized independently, their true power lies in their synergy. By [integrating UCC with Mitiq](#), we have proven that combining circuit optimization with error mitigation yields superior results. Benchmarks show that [UCC is competitive with or leading other OSS compilers](#), providing the high-fidelity baseline necessary to maximize the impact of mitigation techniques.

This integrated workflow allowed us to reduce error in a performance benchmark from 64% to just 2%. You can find the full implementation details and data in [this Mitiq tutorial](#).



# ADDITIONAL RESEARCH & ECOSYSTEM TOOLING

## QLASS

In 2025, Unitary Foundation introduced QLASS: a package to compile quantum algorithms on photonic devices. The QLASS package was created as part of the Quantum Glass-based Photonic Integrated Circuits (QLASS) project funded by the European Union. You can use this VQE [demo notebook to get started](#), and find out more in the [glass paper, published in JOSS](#).

## JEFF

Unitary Foundation was delighted to expand its work in the open source compilation space and partner with Xanadu and Quantinuum to host Jeff: a structured, extensible, and simple interchange format for quantum compilers. Designed to foster collaboration and accelerate research by providing a common language for compilers to communicate. [Join the community on Github here!](#)



## Open source resource estimation for quantum decryption

We were thrilled to partner with Project11 to inaugurate working group towards an open source, reference implementation and resource estimation project for a QC breaking practically relevant encryption (e.g. 256-bit ECC). Partners in this work include:

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>→ Alexandru Paler, Aalto</li> <li>→ Ioana Moflic, Aalto</li> <li>→ Casey Duckering, QuEra</li> <li>→ Maddie Cain, Harvard =&gt; Google</li> <li>→ Kevin Obenland, PyLIQTR, Lincoln Lab</li> <li>→ Matt Harrigan, Google</li> <li>→ Vlad Gheorghiu, SoftwareQ, Waterloo</li> <li>→ Martin Ekera, KTH</li> </ul> | <ul style="list-style-type: none"> <li>→ Simon Devitt, UT Sydney</li> <li>→ Madhav Krishnan, UT Sydney</li> <li>→ Alan Robertson, UT Sydney</li> <li>→ Thinh Le, UT Sydney</li> <li>→ Yudong Cao, ex Zapata, BCG</li> <li>→ Will Zeng, UF</li> <li>→ Ben Castanon, UF</li> <li>→ Tom McCarthy, P11</li> </ul> |
|---|---|

## UF Staff Research

- [B. Lovitz, N. Johnston, V. Russo, J. Sikora](#) The complexity of perfect quantum state classification. arXiv preprint (2025), [[2510.20789](#)]
- [E. Pelofske, V. Russo](#), Digital Zero-Noise Extrapolation with Quantum Circuit Unoptimization. arXiv preprint (2025), [[2503.06341](#)]
- Tight bounds for anti distinguishability and circulant sets of pure quantum states, N. Johnston, V. Russo, J. Sikora [[Quantum 9, 1622, \(2025\)](#)][[2311.17047](#)].

## Microgrant-supported research

- [Balint Pato, June Vanlerberghe, Kenneth R. Brown](#) Hyper-optimized Quantum Lego Contraction Schedules. arXiv preprint (2025), [[2510.08210](#)]
- [J. Pablo Bonilla Ataides, Andi Gu, Susanne F. Yelin, Mikhail D. Lukin](#) Neural Decoders for Universal Quantum Algorithms. arXiv preprint (2025), [[2509.11370.06341](#)]
- T. J. Weaving, Contextual Subspace Chemistry: Practical Approaches to Quantum Computing for Electronic Structure. Thesis dissertation, University College London: United Kingdom, (2025). [https://discovery.ucl.ac.uk/id/eprint/10210608/2/weaving\\_phd\\_thesis.pdf](https://discovery.ucl.ac.uk/id/eprint/10210608/2/weaving_phd_thesis.pdf)
- E. T. Hockings, QuantumACES.jl: design noise characterisation experiments for quantum computers, Journal of Open Source Software, 10(107), 7707, (2025), [doi.21105/joss.07707](#)

# THE COMMUNITY

*"UnitaryHACK 2025 was an exciting and motivating experience. The open source spirit, combined with the quantum focus, made it truly unique."*

*"I must say that unitaryCON is my favorite conference, and it's because I share the passion of others for open-source quantum software. So meeting each year with them and seeing the amazing projects they are bringing to the community is special."*



*"I hope UF keeps organizing events like WERQSHOP. It was fantastic on the first try! We need more focused events like this in the quantum ecosystem."*

*"I realized that I'm only in quantum because of your grant program... Thank you [UF] for all you do and your tireless work to make the quantum ecosystem the best ecosystem."*

*"I found the interaction with other participants the most valuable part of unitaryCON. Specifically, I think the conference did a great job of having planned interactions, as well as more free form networking and discussions. Also, the excursion and social event were great! It allowed for time to get to know other attendees."*

# DISCORD & SUPPORTING PROJECTS

## Digital Community

- 22 Active Microgrant Project Channels
- 28 QOSS Channels
- 7 Weekly and Biweekly community events
- COMMUNITY MILESTONE = Crossed 5K Discord members
- 5,512 Discord members (+1k since 2024)
- [18,689](#) Followers across all social channels

## Community Calls/Office Hours

- [Qiskit](#) (Biweekly Mondays @ 10am ET)
- [UCC](#) (Tuesdays @ 12pm ET)
- [Piccolo.jl](#) (Tuesdays @ 12:30pm ET)
- [IONQ](#) (Wednesdays @ 4pm ET)
- [H-Hat](#) (Fridays @ 6am ET)
- [Mitiq](#) (Fridays @ 12:15pm ET)
- [QICK](#) (Fridays @ 5pm ET)



## Quantum Wednesdays

30

Quantum Wednesday talks

21

Invited talks

### Highlights:

- 2025-02-12 | Changhao Li, [Benchmarking Quantum Processor Performance at Scale](#)
- 2025-03-12 | Alejandro Montanez, [Evaluating the performance of quantum process units at large width and depth](#) (grantee talk)
- 2025-05-14 | Kaylea Champion and Matthew Gaughan, [The Science of \(Open Source\) Community](#)
- 2025-09-24 | Balint Pato, [Quantum Wednesday: PlaqTN, a Python library and web app for the quantum LEGO framework](#) (grantee talk)
- 2025-11-12 | Ioana Moflic, [Ultra-Large-Scale Compilation and Manipulation of Quantum Circuits with Pandora](#)

Check out all of the Quantum Wednesday speakers and topics (past, present, and future) on our [QW Repo](#).

# BLOG POSTS

## The Stats

**32**

Blog Posts

**4**

Invited Authors

**6**

Technical Papers

## Highlights: Technical + Field Advancement

Posted Date	Title
3.5.25	<a href="#">Introducing the Unitary Compiler Collection (UCC)</a>
6.5.25	<a href="#">Extending UCC simulation benchmarks with Hamlib</a>
6.18.25	<a href="#">Better Together: Mitiq meets UCC</a>
6.27.25	<a href="#">Optimizing the Molecular geometry of the Haber-Bosch Process with PennyLane**</a>
10.2.25	<a href="#">WERQSHOP 2025 Technical Report</a>

## Highlights: Community Engagement + Impact

Posted Date	Title
1.10.25	<a href="#">Announcing Unitary Foundation</a>
2.14.25	<a href="#">Lessons from Organizing Our First FOSDEM Devroom</a>
7.31.25	<a href="#">Community-Driven Quantum Compilation w/ UCC @ unitaryHACK 2025**</a>
8.6.25	<a href="#">Operating at the edge of failure: WERQSHOP 2025 Recap</a>
9.4.25	<a href="#">Getting paid for your open-source quantum work with Merit Systems</a>
9.30.25	<a href="#">A Recap on unitaryCON 2025</a>
10.17.25	<a href="#">From Micrograntees to Members: Announcing OrangeQS as UF's Newest Supporting Member!</a>
11.3.25	<a href="#">2025 Quantum Open Source Software Survey Results</a>
11.26.25	<a href="#">How Canada's Quantum Arcade Came To Be**</a>

\*\* Guest Authors



# unitaryHACK

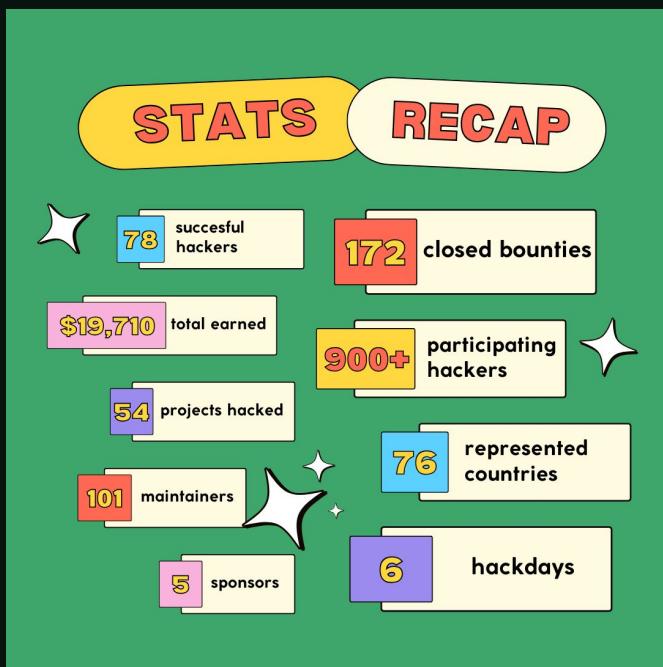
2025 welcomed the 5th edition of unitaryHACK, UF's annual hackathon, which ran from May 28 - June 11.

With the generous support of our members and event sponsors, unitaryHACK was able to further expand our deeply engaged, global, and continuously growing developer community, with **65% of this year's hackers claiming to have engaged in the open source computing world for the very first time.**

To further support our mission to make quantum tech more accessible, UF expanded our in-person HACKday initiative to 6 partners (from 3 in 2024) in the US, Portugal, Finland, Mexico, Switzerland, and Italy.

[Read more](#) about the participating projects, the winning hackers, and all of our unitaryHACK25 accomplishments. We're excited to work with everyone again at the next one!

## Stats

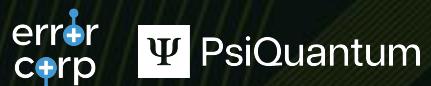


## 2025 Sponsors

### ADVOCATE Level



### CHAMPION Level



### ADDITIONAL Supporters

- [Unitary Foundation](#) and its Members:
- **Core Members:** [IBM Quantum](#), [DoraHacks](#), and [OQD](#)
- **Supporting Members:** [AWS](#), [Microsoft](#), [Pasqal](#), [QC Ware](#), [SandboxAQ](#), [Quantum Machines](#), and [Riverlane](#)

## Quotes

*"I have participated from the very first year of this hackathon and always found it a joy! It gave me confidence to further push the frontier not just in quantum but also other fields."*

*"The maintainers were extremely friendly, supportive, and patient."*

*"unitaryHack is a great opportunity to learn from open source projects and engage with their amazing maintainers. Kudos to the Unitary Foundation team - please keep organizing this wonderful event!"*

# IN-PERSON GATHERINGS

## Quantum Device Workshop

From May 19-22, 2025 UF helped support a team of students from UCLA to develop and run an inaugural Quantum Device Workshop, and it was a smashing success! Read more in the one organizer's guest post on UF's blog [here](#).

## WERQSHOP

On July 17-18, 2025 New York University and Unitary Foundation convened 60 people from across the quantum computing ecosystem to discuss the current state and future of error mitigation. The goal was to bring a relatively small group of people together who have a vested interest in the topic to teach, learn, and discuss what's next for our field.

**Where:** New York University (Special thanks to NYU for hosting!)

**When:** Summer 2025

**Who:**

### Invited Speakers

- [Zhenyu Cai](#) (Oxford)
- [Eli Chertkov](#) (Quantinuum)
- [Yongshan Ding](#) (Yale)
- [Sam Ferracin](#) (IBM)
- [William J. Huggins](#) (Google)
- [Jin Ming Koh](#) (Harvard)
- [Matae Leahy](#) (Algorithmiq)
- [Yihui Quek](#) (MIT)
- [Raam Uzdin](#) (HUJI)



### Organizers

- [Nate Stemen](#) (Unitary Foundation)
- [Nathan Shammah](#) (Unitary Foundation)
- [Greg Quiroz](#) (Johns Hopkins)
- [Ryan LaRose](#) (Michigan State)
- [Andrea Mari](#) (University of Camerino)
- [Pranav Gokhale](#) (Infleqtion)
- [Peter Orth](#) (Saarland University)
- [Misty Wahl](#) (Unitary Foundation)
- [Will Zeng](#) (Unitary Foundation)

### Local Organizers

- [Ben Castanon](#) (Unitary Foundation)
- [Veena Vijayakumar](#) (Unitary Foundation)
- [Javad Shabani](#) (NYU)

**Read more:** [technical report](#), [website](#)

## unitaryCON

From September 2–4, 2025, UF brought close to 100 community members together for our 3rd annual unitaryCON. A special thank you to IEEE Quantum Week for letting us co-locate and bring in new people to our community. And special thanks to University of New Mexico for being a sponsor and event partner.

**Where:** Albuquerque, New Mexico

**When:** Fall 2025

**Who:**

### Intro Speakers

- Will Zeng, Veena Vijayakumar, and Changhao Li from Unitary Foundation
- Robert Ledoux and Ivan Deutsch from the University of New Mexico
- Jake Douglass from Sandia National Laboratories.

### Featured Speakers

- Lukas Burgholzer from TUM & MQSC
- Tom Hartley from Riverlane
- Ryan Hill from qBraid
- Kai-Hsin Wu from QuEra
- Luciano Bello from IBM



### Lightning Talk Speakers

- |                     |                 |
|---------------------|-----------------|
| → Lia Yeh           | → Marlo Kuerner |
| → Catalina Albornoz | → Gennadi Ryan  |
| → Zefan Du          | → Elaine Wong   |
| → Christa Zoufal    | → Jiaqi Leng    |
| → Tim Chen          | → Ed Younis     |

**Read More:** A full recap of the event along with abstracts from each talk can be found in our recap [blog post](#).



### Event Sponsors



### UF Core Members

- [IBM Quantum](#), [DoraHacks](#), [Open Quantum Design](#)

### UF Supporting Members

- [AWS](#), [Microsoft](#), [QC Ware](#), [Quantum Machines](#), [Riverlane](#), [SandboxAQ](#)



unitaryCON 2025 was co-located with IEEE Quantum Week 2025

# TALKS & APPEARANCES

## Q1

- UF organized the quantum dev room at the 2025 Free and Open source Software Developers' European Meeting (FOSDEM) [\[blog\]](#)
- [Nate Stemen's talk](#): QuSoft seminar Friday 2/7, 11:00 @ CWI & WWW
- [APS Global Physics Summit 2025](#): Tuesday 03/18. Changao Li presented Metriq-gym to the physics community.



## Q2



- April 9, 2025 at Quantum Group @ UW Allen School, “On Error Mitigation and its sample complexity” by Nate Stemen
- May 13, 2025 at [International Conference on Quantum Computing](#), about the paper “Quantum amplitude estimation from classical signal processing” [[2405.14697](#)] by Farrokh Labib
- May 29, 2025 at [PyCon Italia](#), “Quantum computing without leaving Python behind” by Alessandro Cosentino
  
- June 4, 2025 at [Edge Esmeralda 2025](#), “An Intro to Unitary Foundation and the unitaryDESIGN program” by Ben Castanon
- June 18, 2025 at The Coding School’s [Early Quantum Career Immersion Program](#), “Building Out the Next Steps in Your Quantum Computing Journey” by Veena Vijayakumar
- June 25, 2025 at the [TQCI Quantum Benchmark conference](#), “Independent, systematic, reproducible and open-source quantum benchmarking with metriq-gym” by Nathan Shammah

## Q3

- Nate Stemen served on the organizing committee of the [Quantum Software 2.1 Workshop](#) at IEEE Quantum Week 2025 alongside colleagues at Xanadu, ORNL, and more
- Jordan Sullivan presented a UCC lightning talk and compilation panel during the Quantum Software 2.1 Workshop (linked above)
- Brad Chase and Jordan Sullivan presented talks on UCC and UCC-FT at the [International Workshop for Quantum Compilation](#) (IWQC)
- Changhao Li presented metriq-gym in [NYC Quantum Computing Meetup](#), [IEEE QCE](#) in New Mexico, and at Sandia National Labs' [APQC 2025 Workshop](#) in Colorado
- Ben Castanon presented Unitary Foundation's work at [Quantum World Congress](#) in DC last month
- Veena Vijayakumar spoke about quantum education and workforce development during a [virtual panel](#) hosted by the National Communication Museum in Australia



## Q4



- William Zeng spoke about Unitary Foundation at the 4th annual [NY Quantum Summit](#)
- Nathan Shammah spoke at the [Munich Quantum Software Forum](#) at the Technical University of Munich
- William Zeng and Ben Castanon spoke about Unitary Foundation at this year's [Mozilla Festival](#) in Barcelona
- Nathan Shammah at the [Pisa Quantum Festival](#)

# FINANCES



## Revenue

- We entered 2025 with **625K** in cash reserves
- We raised **\$ 1.39M** in grants and donations in 2025
- Unitary Labs Grants **\$ 1.01M**
- Membership & Donations **\$388K**

- Membership & Donations
- Unitary Labs Grants
- Cash reserves

\$ 2.0M

\$ 1.5M

\$ 1.0M

\$ 0.5M

\$ 0.0M

Revenue

## Expenditure

\$ 2.0M

\$ 1.5M

\$ 1.0M

\$ 0.5M

\$ 0.0M

Expenditure

- We forecast about **\$ 1.73M** expenditures in 2025.
- Unitary Labs **\$ 1.31M**
- Microgrants & Bounties **\$ 111K**
- Community Support & Events **\$141K**
- Non-Profit Operations **\$168K**

- Non-Profit Operations

- Community Support & Events

- Microgrants & Bounties

- Unitary Labs



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