Critical Comments on Quantum Computation

Comment by @LoneStargazer42 to the You Tube video:
https://www.youtube.com/watch?v=gBTS7JZTyZY&lc=Ugz6Bv-2ft7_RLXG54Z4AaABAg
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I received my PhD in quantum computing in 2015. 10 years ago we had the same headlines claiming that useable and scalable quantum computers are just around the corner. Everyone working in the field knew that this was just for the investors. There was some progress over the last decade. And I am quite surprised that the hype is still growing. Furthermore, it is impressive how many quantum-computing start-ups were founded during the last years and how much money was invested. ***Nevertheless, I don't know any physicist currently working in this field who thinks that quantum computers will be anything more than a niche product for very special problems****.*

The Lack of Honesty and Integrity in Quantum Computing

Alan Shields in

PolySavant | Inventor/Innovator/Founder, Z.E.R.O. Logic | Reversible Computing for the Next Generation of Chips | THE authority on...

November 28, 2025

There is a truth almost nobody in the quantum world will say out loud. Quantum computing does not have a technology problem. It has an honesty problem.

For forty years, the field has lived on a simple script:

- next year the qubits will get better
- next year error correction will scale

  - next year the million-qubit machine will be in sight
  - next year we will cross the magic threshold

But "next year" has been promised for decades, and the fundamentals have not changed.

- The physics is still the physics.
- There is still no stable universal qubit.
- There is still no functioning error corrected logical qubit.
- There is still no end to end useful computation.
- There is still no path to scalability that survives contact with coherence limits.

Everyone inside the field knows this. Almost none of them will say it.

Why?

Because the entire quantum ecosystem is held together by financial incentives.

- The grants.
- The startup valuations.
- The national security budgets.
- The consulting firms.
- The "quantum readiness" training packages.
- The conferences.
- The press releases.
- The seeds and Series A and Series B rounds that depend on hype, not hardware.

The result is predictable.

- A culture where exaggeration becomes normal.
- A culture where any criticism is treated as ignorance or heresy.
- A culture where insiders say one thing in private and another in public.
- A culture where researchers are punished for admitting the obvious: the architecture does not work.

It works like this:

- Universities exaggerate results to protect grant pipelines.
- Startups inflate capabilities because honesty kills fundraising.
- Journalists repeat claims they do not understand.
- Investors pretend to believe it because everyone else pretends too.
- Students get pulled into a field with no clear future.
- And the public is told that quantum is always five years away.

This is not science. This is an industry built on avoiding the truth.

The uncomfortable fact is simple.

If quantum computing were on track, we would have seen one single verified logical qubit by now.

Just one.

After four decades and hundreds of billions spent, that number is still zero.

That is not progress. That is evidence.

Yet the hype continues because the alternative is unthinkable for the people who rely on the illusion to survive. If governments cut funding, the labs go dark. If investors stop believing, the startups collapse. If the public understands the reality, the bubble bursts.

So instead of honesty, we get marketing. We get words like pre advantage, utility scale, pathfinding era, emergent capability, error tolerant mode, quantum ready. Not one of these terms corresponds to a real machine doing a real computation that classical hardware cannot do.

We get declarations that "breakthroughs" are happening every quarter. A qubit lasting a little longer. A chip with more noise suppression. A lab demo of coherence at rest that does not survive a single gate sequence. Every announcement framed as world changing while everyone in the field knows that none of it solves the physics.

The tragedy is that this dishonesty hurts everyone.

It hurts students who waste their brightest years chasing a dead architecture. It hurts governments who pour money into fantasies instead of real technologies. It hurts investors who never receive a return. It hurts the credibility of science. And it hurts the researchers forced to support a narrative they know is false.

This is not a call to abandon quantum physics. Quantum physics is real. Quantum algorithms are fascinating. Quantum theory is one of the greatest intellectual achievements in human history.