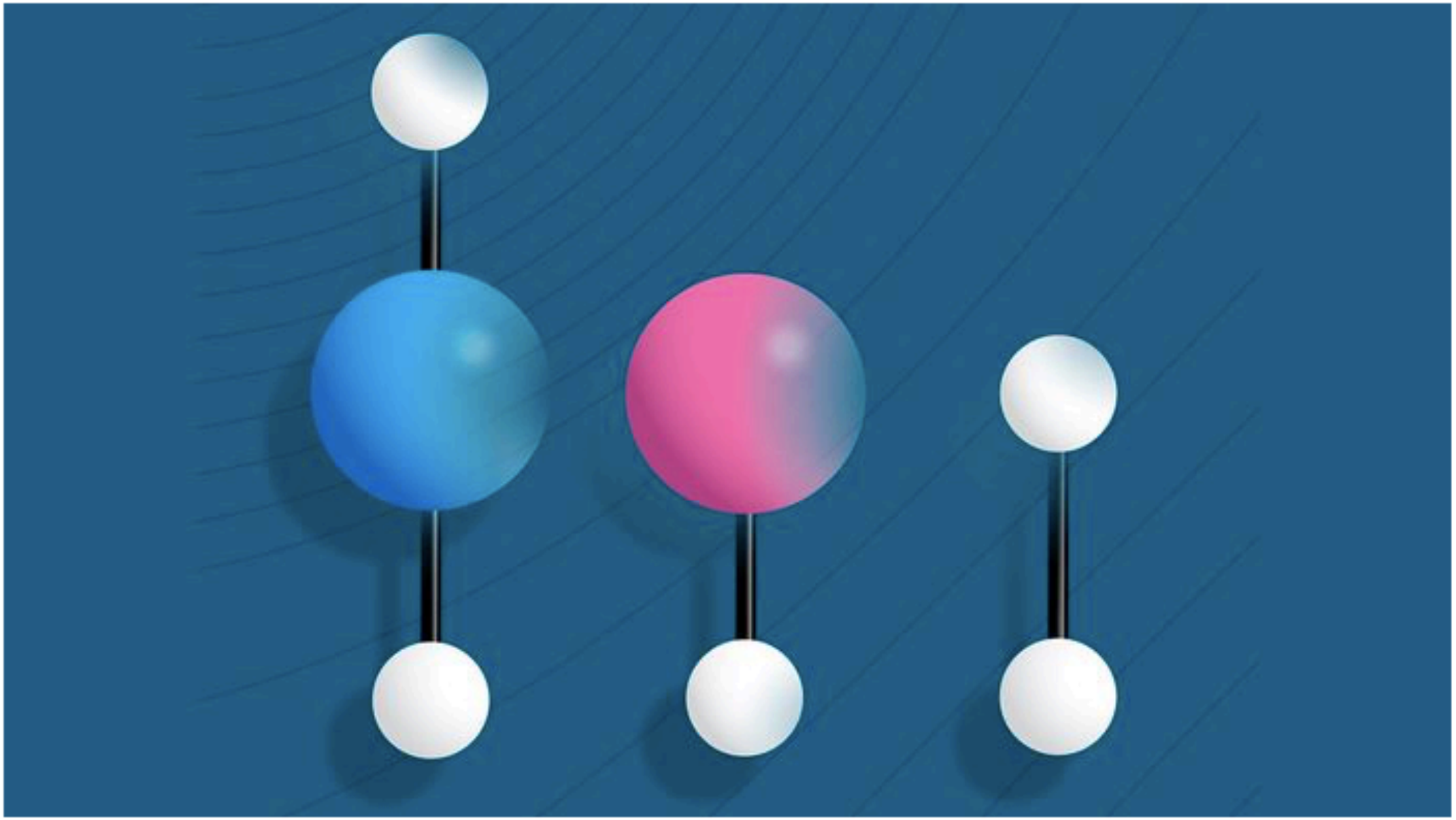
Qubit Programming

DAVIDLTH

What if we are all just a simulation?

"To simulate reality, in it lowest level, you would need a quantum computer" (Feynman, 1982)



A quantum computer has simulated beryllium hydride, lithium hydride, and hydrogen molecules (shown left to right), setting a world record. IBM RESEARCH

Quantum computer simulates largest molecule yet, sparking hope of future drug discoveries

By **Gabriel Popkin** | Sep. 13, 2017 , 1:00 PM

Rabi Oscillation | Spectroscopy | Q Optics | Casimir

Qubit Characterization

X, Y- Gate | Z- Gate | Gate Optimization | CU_f Gate

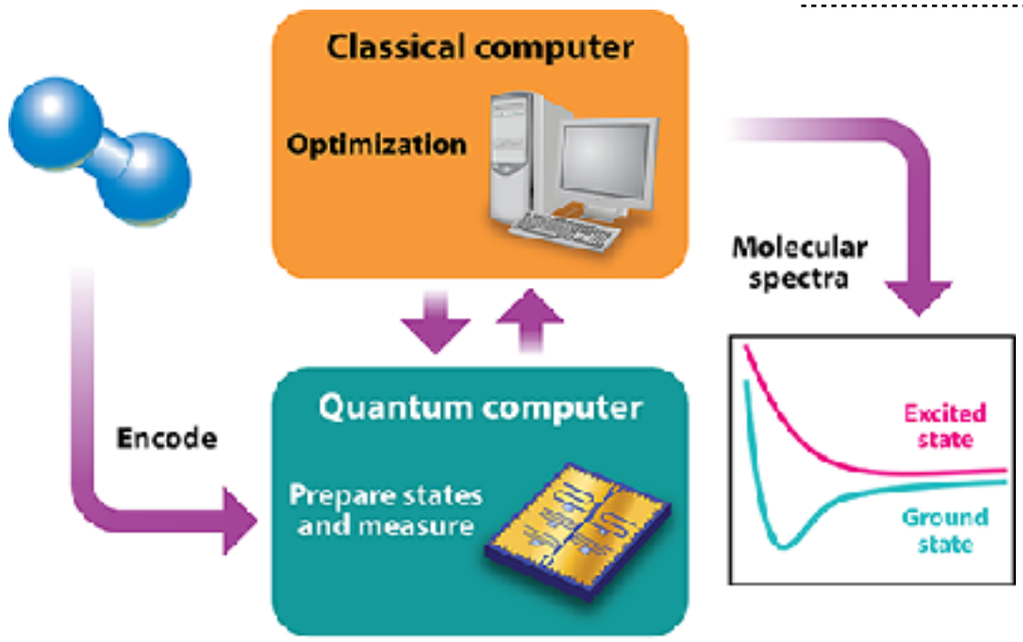
Gate Fidelity

Error Correction | Q Tomography | Randomized Benchmarking

Qubit Readout

Q Algorithm | VQE | QPE | Grover | CTC

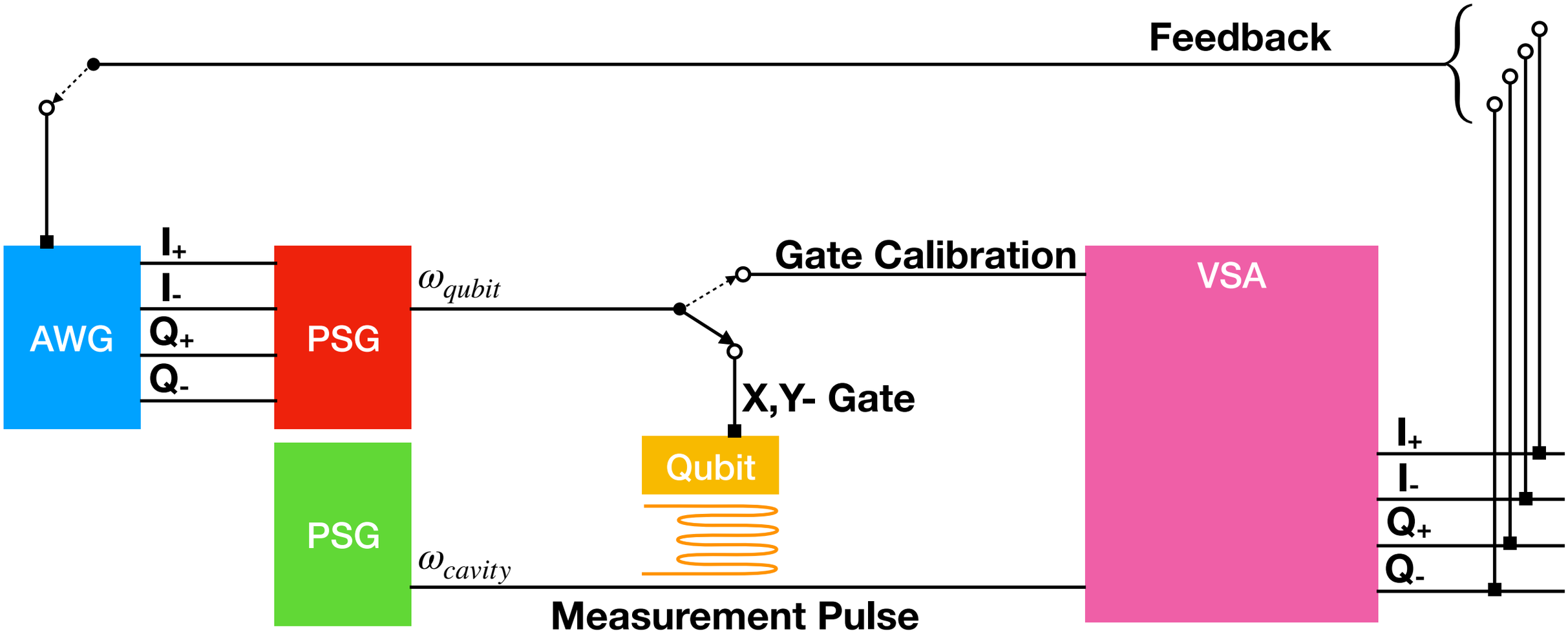
Qubit Programming



Q Chemistry / Biology

Q Machine Learning

Q Communication


Feedback
AWG
I+
I-
Q+
Q-
PSG
PSG
ωqubit
ωcavity
Gate Calibration
X,Y- Gate
Qubit
Measurement Pulse
VSA
I+
I-
Q+
Q-

Web Application (HTML)

User Interface

Input

Processing:
Python
Labview

Display

Infrastructure

Control
Parameters

Pulse Seq

IQ Data Stream

QPU Architecture

INSTRUMENTS + Qubit