FIGURE 2: QUANTUM HOMOMORPHIC ENCRYPTION CIRCUIT

ENCRYPTION **HOMOMORPHIC OPERATIONS** **BOOTSTRAPPING**
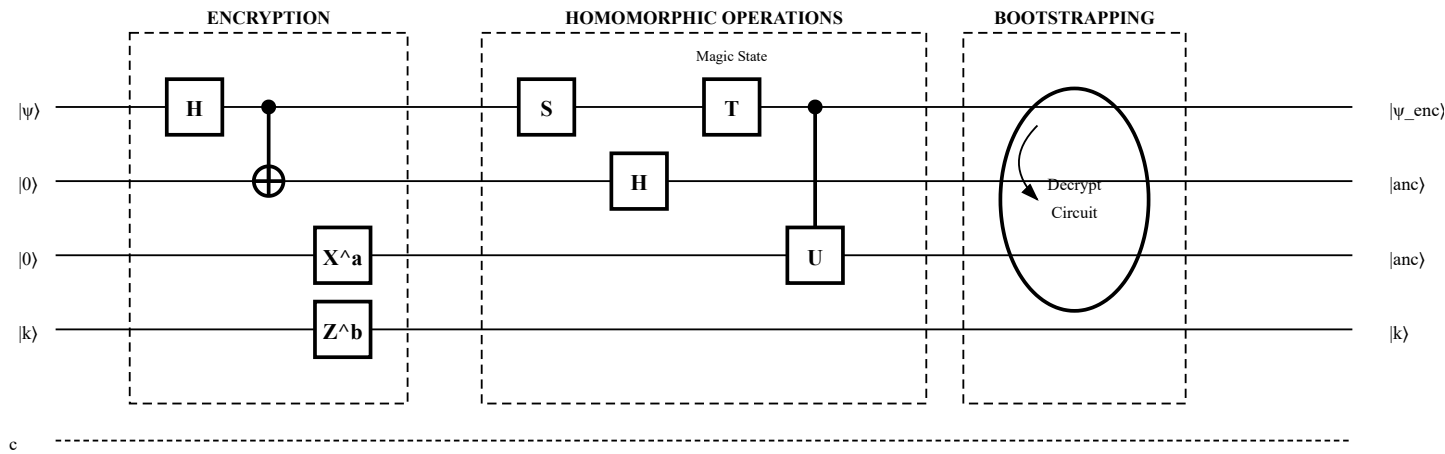
LEGEND:

Single-qubit gate

CNOT gate

Quantum wire

Classical wire

Encryption: $|\psi\_enc\rangle = X^a Z^b |\psi\rangle$ Homomorphic: $U(Enc(|\psi\rangle)) = Enc(U|\psi\rangle)$ Preserves: Superposition, Entanglement