DESY. QUANTUM Center for Quantum Technology and Applications | QUEST | Universität der Künste Berlin | KIT Karlsruher Institut für Technologie | itas

GALERIE @ UDK MEDIENHAUS
GRUNEWALDSTR. 2-5, 10823 BERLIN

DOORS OPEN AT 20:00

QUANTUM MUSIC CONCERT

10. JULY

EDUARDO RECK MIRANDA

11. JULY

BOB COECKE

RAKHAT-BI ABDYSSAGIN

10.JULY

eventbrite

FREE ENTRANCE

REGISTRATION
(NECESSARY)

11.JULY

eventbrite

PERFORMERS

THURSDAY 10. JULY

EDUARDO RECK MIRANDA

Quantum Loops and Broken Symmetries

An unprecedented solo concert of quantum computer music by **Eduardo Reck Miranda**, a composer and professor renowned for his pioneering work at the intersection of music, AI, and quantum computing.

Eduardo's music is not just inspired by quantum mechanics. Rather, it is created and performed using actual quantum computers. The concert will showcase computing systems developed at the Interdisciplinary Centre for Computer Music Research at the University of Plymouth, UK, in collaboration with partners. Highlights include a quantum cellular automata music generator, a live coding system called **Zen**, and PaulisMIDI, a **quantum AI** groove partner. The performance will also feature live interactions with *Starmon-7*, a **quantum computer** located at TU Delft in the Netherlands. The evening includes a short introduction to the compositions and systems and will be followed by a Q&A session with the composer.

The programme includes:
Moment States - for piano, electronics and quantum machine learning.
Heisenberg's Hammer - quantum computer music live coding.
I don't know how, but I will find a way - for violin and interactive quantum computer.

FRIDAY 11. JULY

BOB COECKE & RAKHAT-BI ABDYSSAGIN

This unique concert brings together the experimental energy of pioneering industrial band **Black Tish** with the virtuosic artistry of award-winning pianist and composer **Rakhat-Bi Abdyssagin** for an evening of truly avant-garde sound.
The performance features tracks by Black Tish, where guitar signals, captured through sensors, are sent in real-time to a *quantum synthesizer*—a world-first instrument where qubits, rather than traditional oscillators, act as the sound source. Their industrial soundscapes will sharply contrast with Abdyssagin's solo performances on grand piano, offering a dramatic musical interplay.

In the closing act, the two artists perform "Bell", a live musical emulation of a **quantum-entangled Bell pair** under incompatible measurements, inviting audience members to participate as "observers" in this artistic interpretation of quantum mechanics.

The programme includes:

- A demonstration of Coecke's **Quantum Guitar**.
- Presentation of ideas and insights from Abdyssagin's book *Quantum Mechanics and Avant-Garde Music: Shadows of the Void* (Springer Nature, 2024).