



ELTE
EÖTVÖS LORÁND
UNIVERSITY

Founded in 1635, ELTE is one of the largest and most prestigious public higher education institutions in Hungary. The students at ELTE are organized into nine faculties, and into research institutes located throughout Budapest. ELTE is affiliated with 5 Nobel laureates, as well as winners of the Wolf Prize, Fulkerson Prize and Abel Prize.

As a research university, researchers of the Faculty of Science actively participate in national, European, and global projects, conducting investigations across all areas of natural sciences, with particular emphasis on astrophysics, artificial intelligence research, quantum informatics, modern environmental science, and biochemistry. The university's broad scientific portfolio enables varied multi- and interdisciplinary research, resulting in special developments through collaboration among specialties.

CONTACT US

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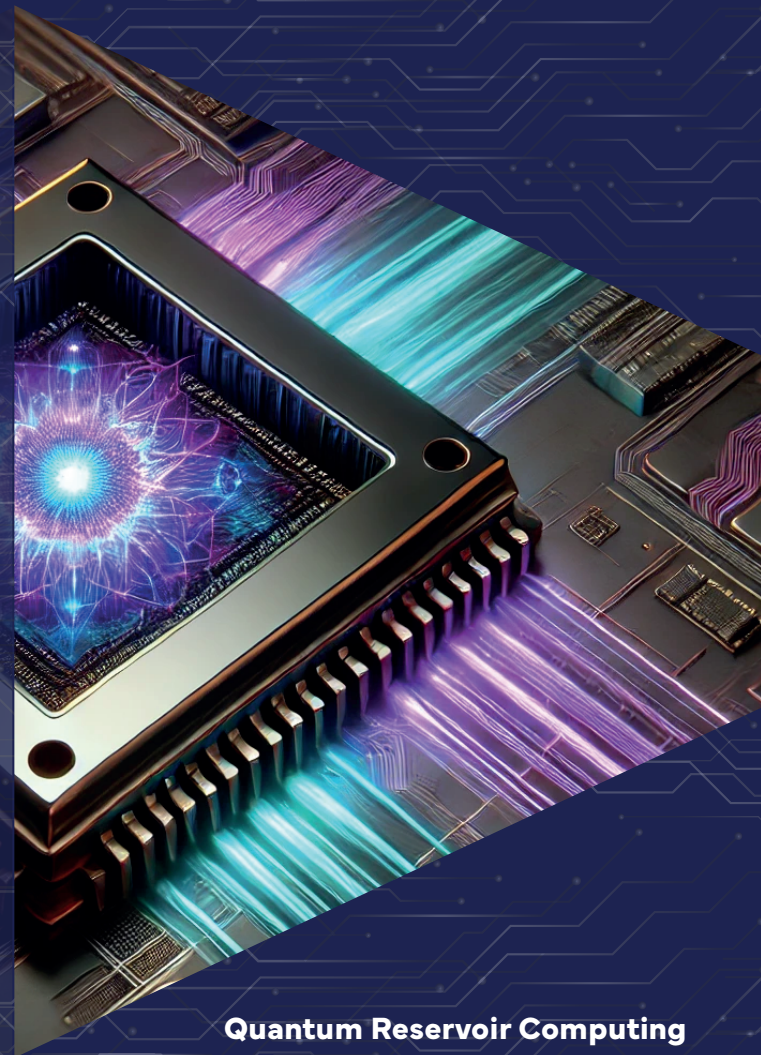


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QUEST



**Quantum Reservoir Computing
Powered by Silicon Carbide
Defect Qubits**

ABOUT QUEST

QUEST is a Horizon Europe Twinning project aimed at amplifying the scientific excellence and innovative capabilities of Eötvös Loránd University through collaboration with esteemed Twinning partners.

The project focuses on developing a quantum reservoir computing system leveraging silicon carbide defect qubits. This pioneering technology holds the potential to revolutionize computing by increasing computational speed and reducing energy consumption compared to traditional machine learning methods.

TWINNING PARTNERS



Sweden



EÖTVÖS LORÁND
UNIVERSITY | BUDAPEST

Hungary



UK



Aalto University
Finland



Luxembourg



Funded by
the European Union

RESEARCH

- Preparation of silicon carbide defects
- Fabrication of point defect qubits
- Spin-dynamics simulations
- Non-linear dynamics of complex point defect-spin reservoir systems
- Dynamics of sets of defect qubits
- Optically detected magnetic resonance (ODMR) measurements
- Analyzing qubit output data