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From: Faculty Research Development Office (FRDO)

Office of the Vice President for Research

Subject: Limited Competition: NSF, National Quantum Virtual Lab (NQVL), (NSF 23-604)

Quantum Science & Technology Demonstrations (QSTD): Pilot Phase

Date: 1/24/2024

Dear UNM Researchers,

This solicitation introduces the *National Quantum Virtual Laboratory* (NQVL) concept as an overarching, shared infrastructure designed to facilitate the translation from basic science and engineering to the resultant technology. The NQVL program aims to develop and utilize use-inspired and application-oriented quantum technologies. In the process, NQVL researchers will explore quantum frontiers, foster *Quantum Information Science & Engineering* (QISE) workforce education and training, engage in out-reach activities at all levels, and promote broadening participation, diversity, equity, and inclusion in QISE. The NSF recognizes that involving industry partners is essential.

Only proposals for Pilot phase QSTDs will be accepted at this time. Prospective PIs are required to contact the NQVL Program Officer(s) as soon as possible, but not later than two weeks before submitting a proposal to ascertain that the focus and budget of their proposal is appropriate.

QSTD projects will make up the scientific/engineering core of activities that will form the NQVL infrastructure. Participants are expected to proceed through all three project development phases: *Pilot*, *Design*, and *Implementation*. Each QSTD project is expected to define a quantum advantage goal and a projected pathway for achieving it. This pathway will focus on the design and integration of quantum systems co-designed with applications developed by a diverse user community. Through this process of systems design and prototyping, the project will connect underlying basic scientific knowledge to an application that is identified by this end-user community and fostered by direct interactions between these users, the systems engineers, and the basic science developers.

This is a limited competition. Each institution is limited to ONE application. The NSF expects to make 10 \$1 million/1-year awards. Please submit your 200-word statement of interest by NOON on Febuary 8, 2024 via UNM's InfoReady Review portal. This is a required step, and no late submissions will be considered. Should there be more than one PI interested, we will request 3-page preproposals and run a limited competition. For full details, go to https://new.nsf.gov/funding/opportunities/nsf-national-quantum-virtual-laboratory-nqvl. The NSF requires LOIs by April 9, 2024; the deadline for full proposals is June 11, 2024.

Should you have any questions please feel free to contact us at limited@unm.edu.

If you are affiliated with HSC, please contact HSC Limited Competition at <u>HSC-LimitedComps@salud.unm.edu</u> for more information.