

Operating and interconnecting qubit registers

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Holes in germanium have emerged as a compelling platform for quantum computing. The high-quality environment of germanium quantum wells enabled high-fidelity single and two-qubit gates using resonant and baseband control [1,2], as well as the operation of extended two-dimensional quantum dot arrays [3]. In this talk, I will present our recent advances in operating and interconnecting germanium qubit registers, as well as our efforts in building quantum dot arrays in three dimensions.

References

- [1] Hendrickx et al. Nature 2021.
- [2] Wang et al. Science 2024.
- [3] Borsoi et al. Nature Nanotechnology 2024.