

# Connecting and scaling semiconductor quantum systems

zoom:  
<https://epfl.zoom.us/j/85936312779>



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Stanford University

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zoom

At the core of most quantum technologies, including quantum networks, quantum computers and quantum simulators, is the development of homogeneous, long lived qubits with excellent optical interfaces, and the development of high efficiency and robust optical interconnects for such qubits. To achieve this goal, we have been studying color centers in diamond (SiV, SnV) and silicon carbide (VSi in 4H SiC), in combination with novel fabrication techniques, and relying on the powerful optimization techniques that we have been developing for design of photonics and quantum hardware. This approach enables implementation of scalable quantum systems despite imperfections in materials/fabrication, qubits, and instabilities in their environment.

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