

PhD defense, November 24th 2009, Grenoble



Quantum Dynamics in a Camelback Potential of a dc SQUID

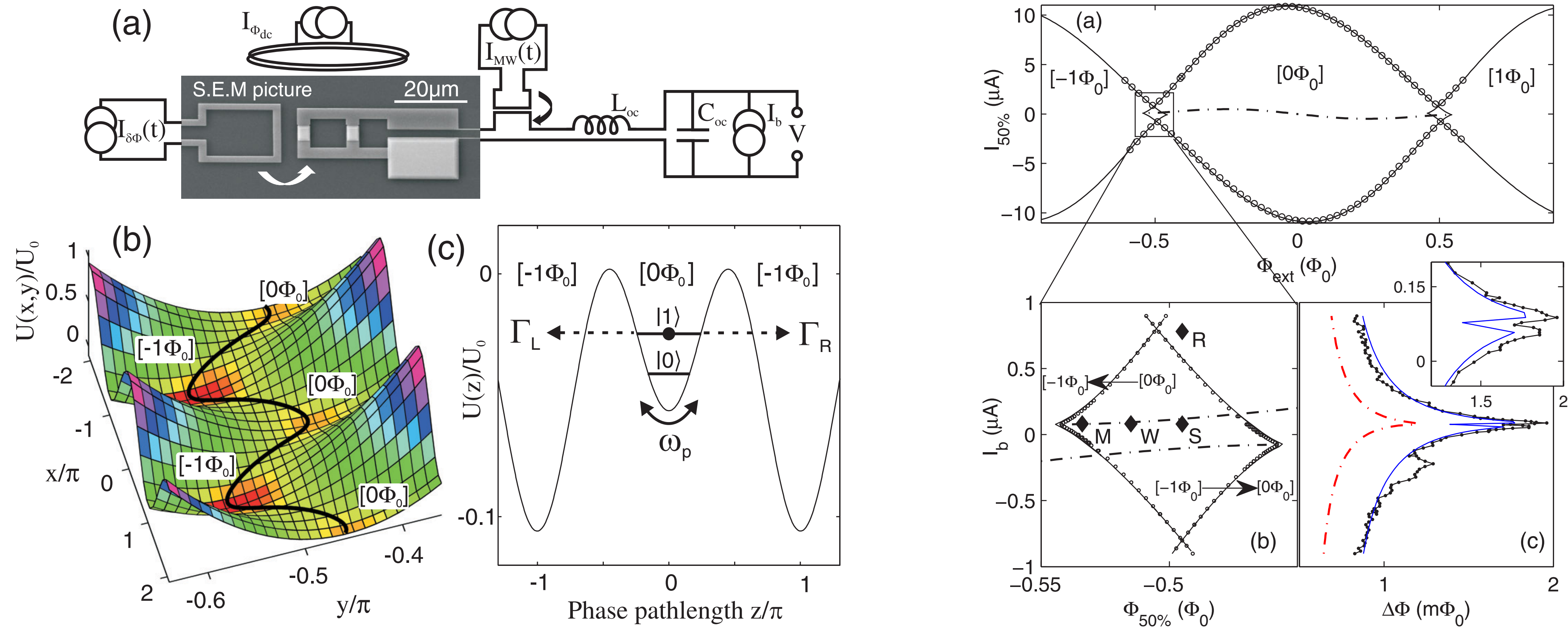
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R. Dolata, B. Mackrodt, and A. B. Zorin

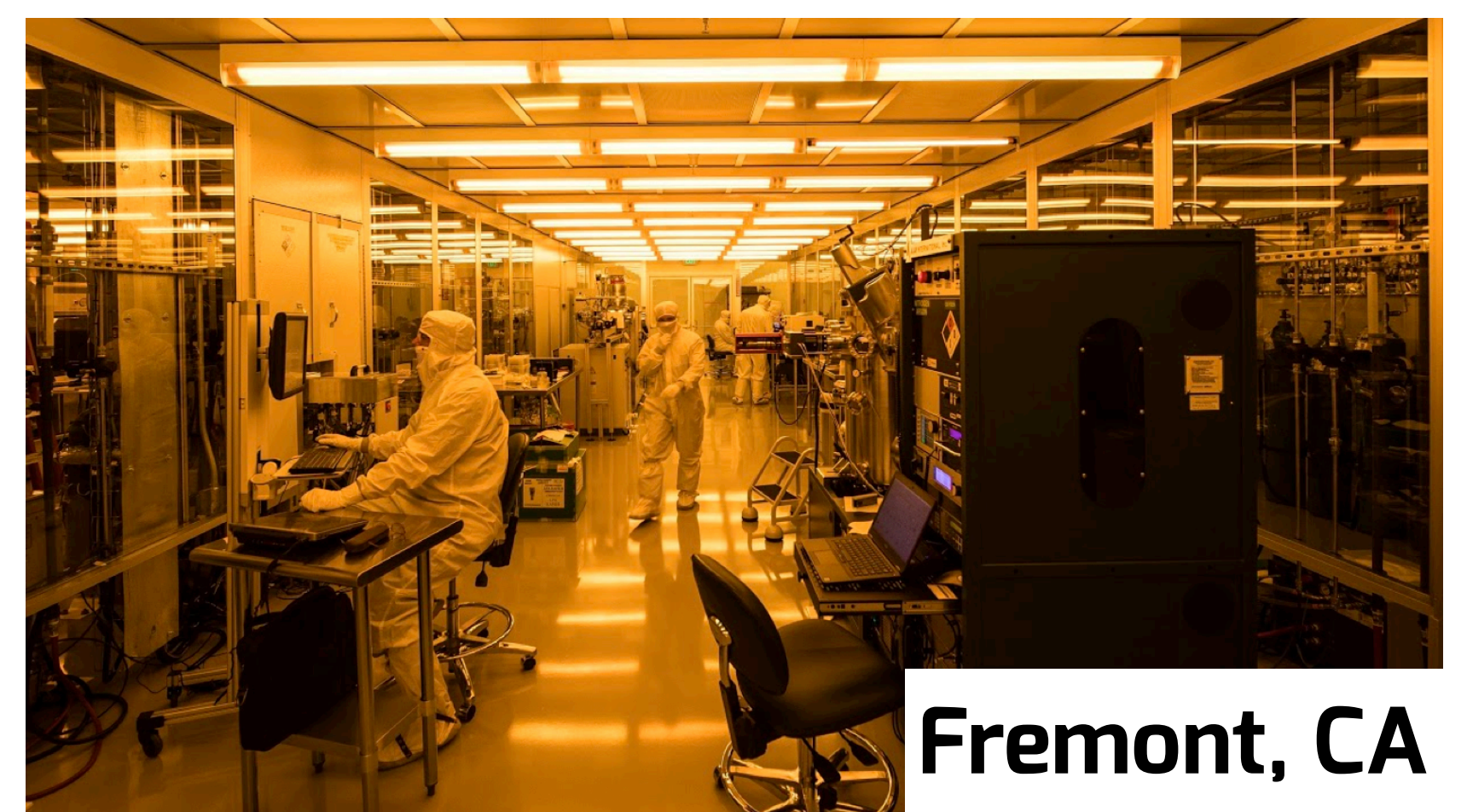
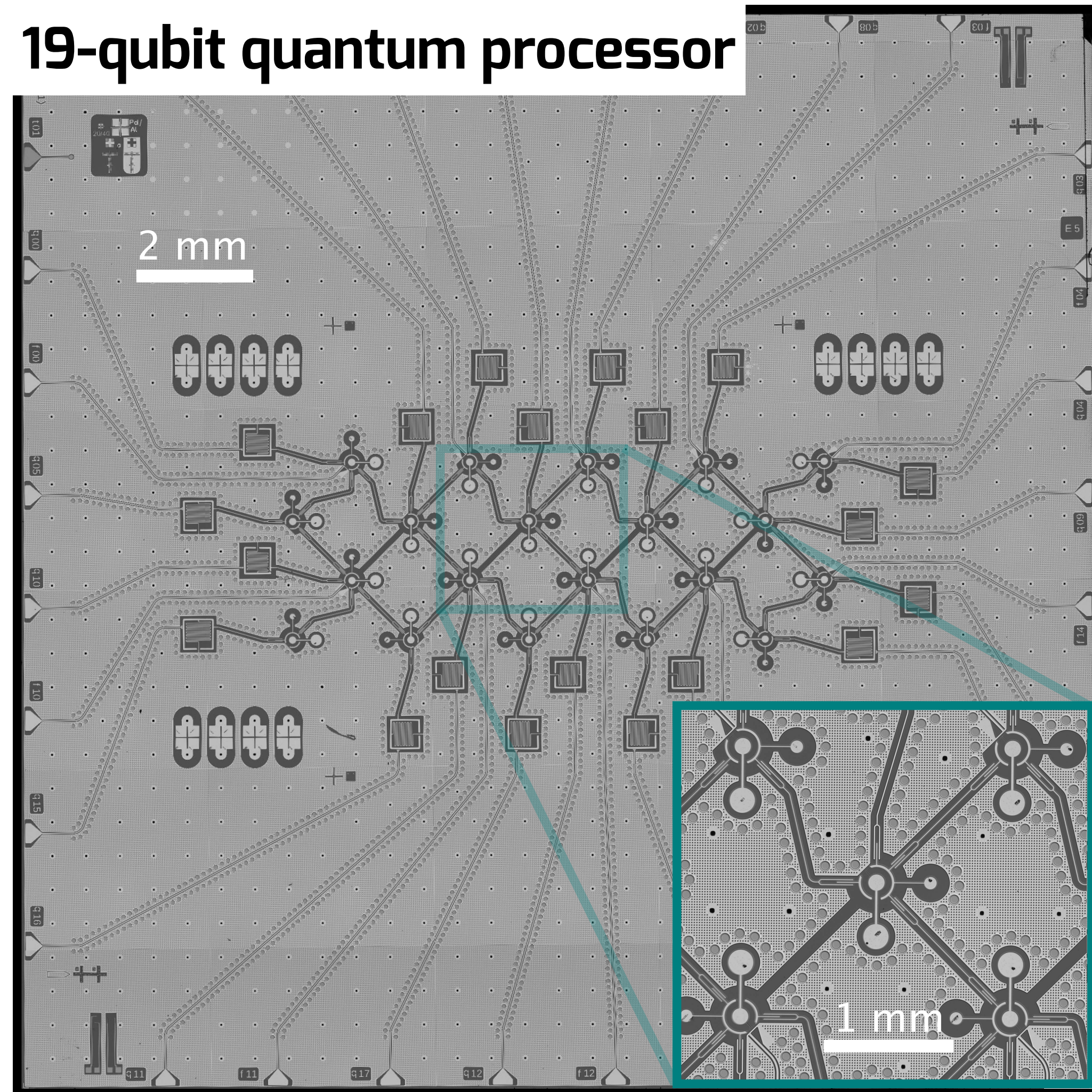
Physikalisch-Technische Bundesanstalt, Bundesallee 100, 38116 Braunschweig, Germany



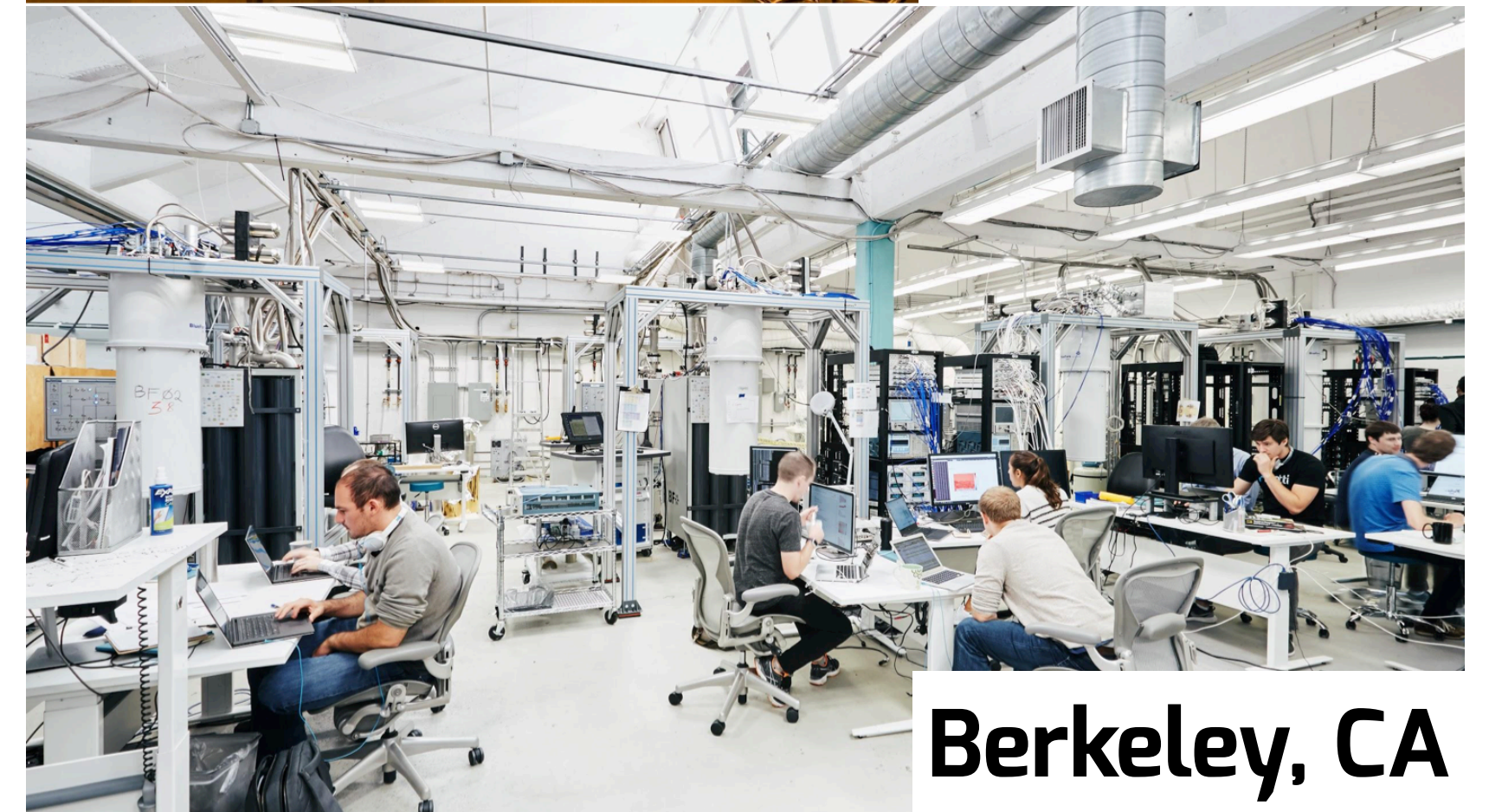
Macroscopic quantum tunneling in quartic and sextic potentials: Application to a phase qubit
ND and Frank Hekking, Phys. Rev. B 85, 104522 (2012)

Rigetti Computing: Full stack quantum computing

19-qubit quantum processor



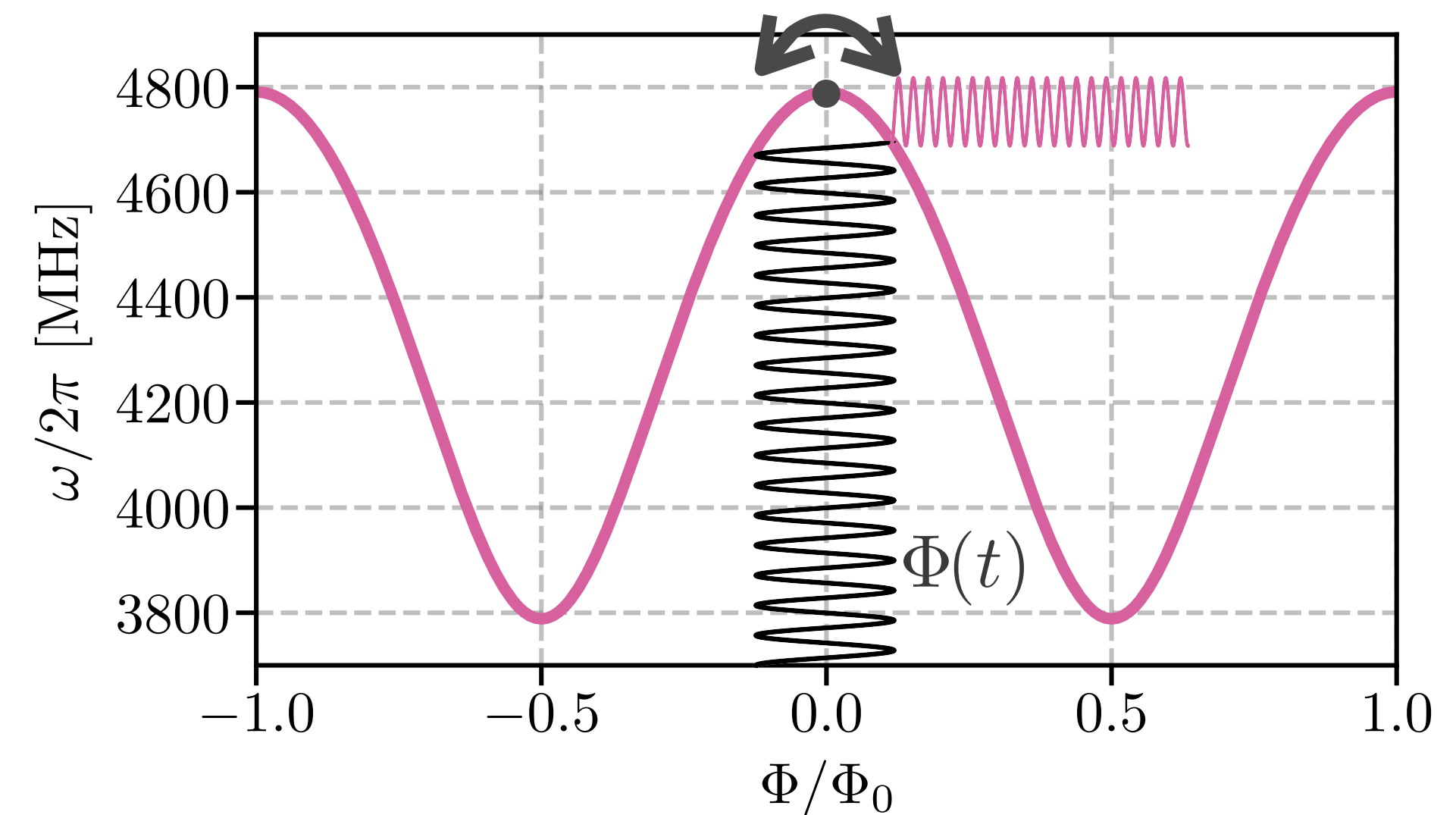
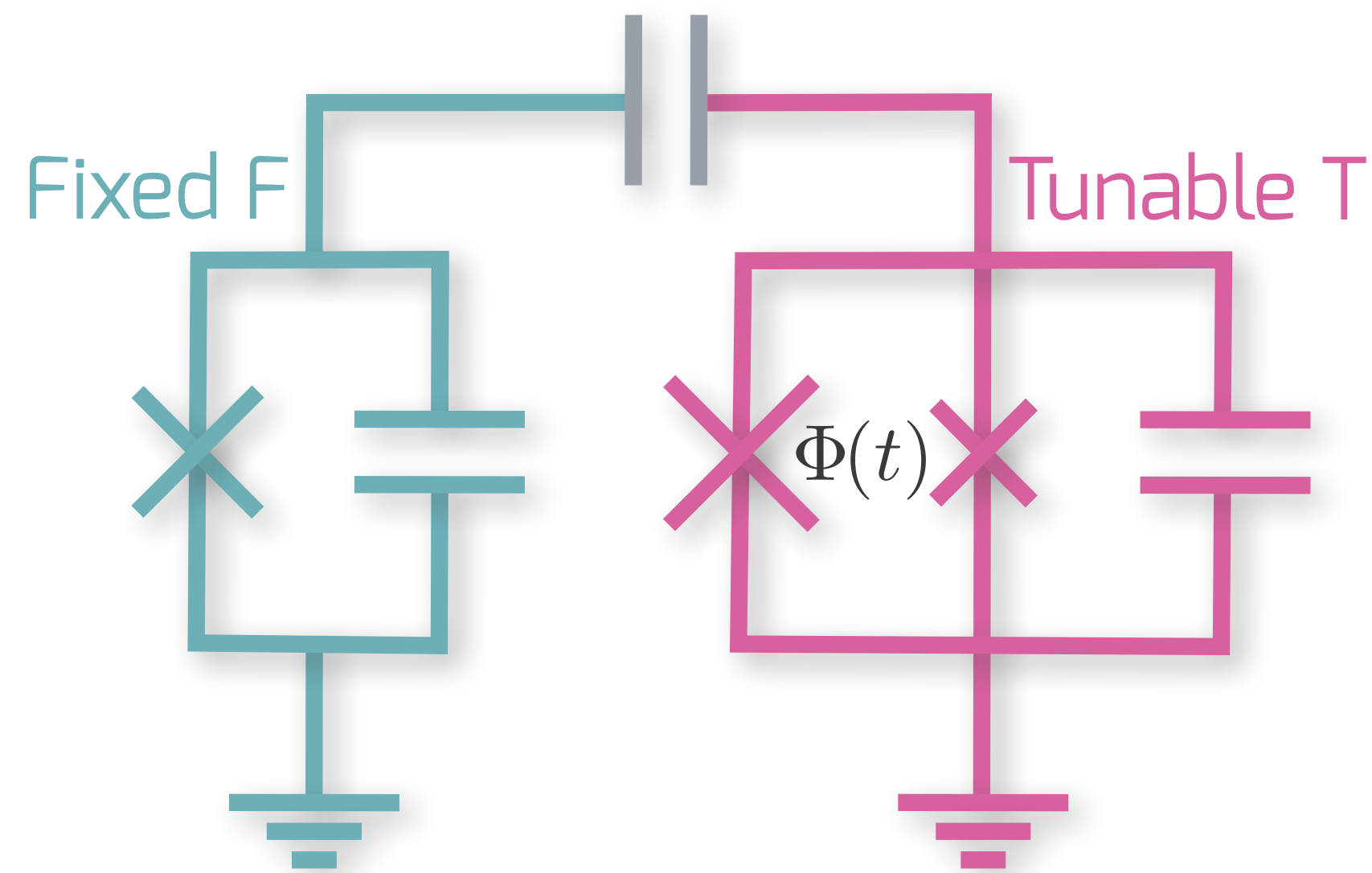
Fremont, CA



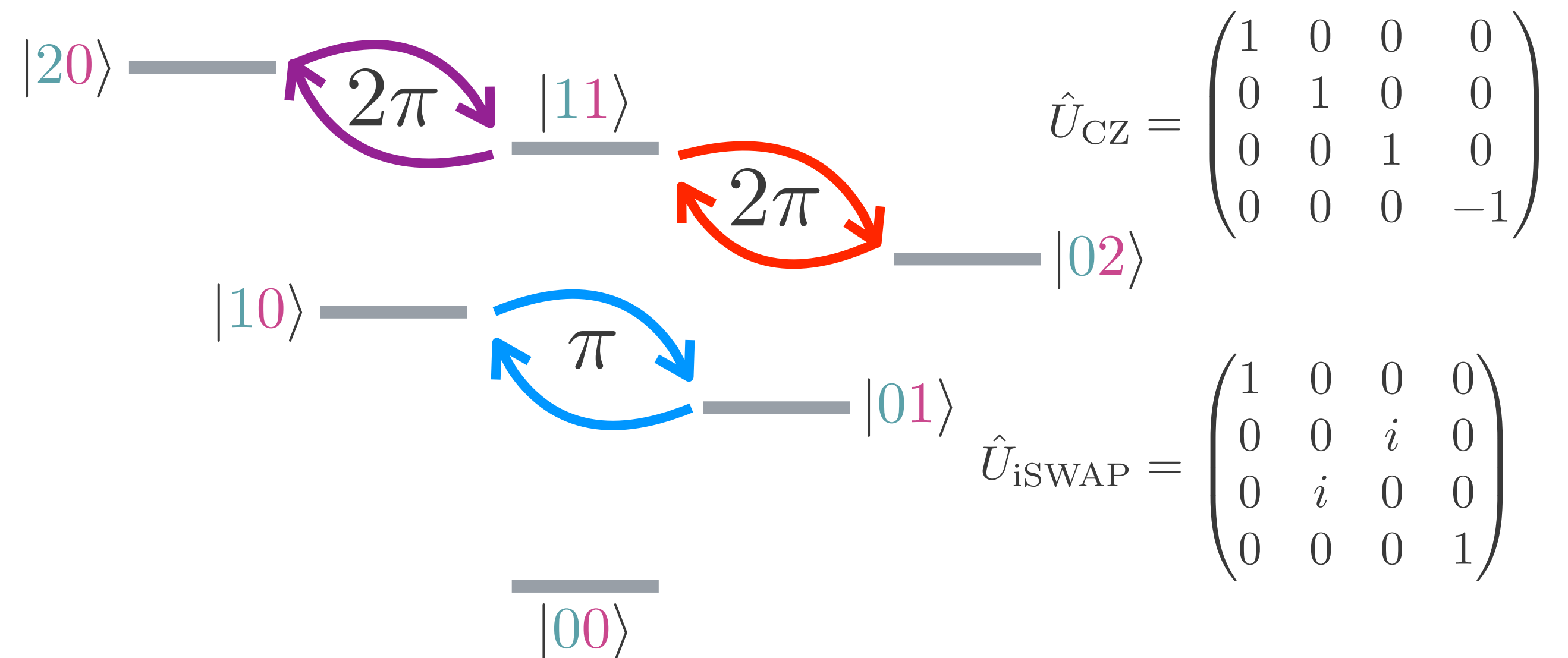
Berkeley, CA

A screenshot of the Rigetti Forest website. The page features a dark background with a forest scene at the bottom. The text reads: "rigetti" in the top left corner, followed by navigation links: "ABOUT", "CAREERS", "COMMUNITY", and "TRY FOREST". The main heading is "RIGETTI COMPUTING INTRODUCES Forest 1.2", with the subtitle "An API for quantum computing in the cloud". Below this are four icons representing "OPEN SOURCE SOFTWARE", "EXAMPLE ALGORITHMS", "SUPERCONDUCTING QUANTUM PROCESSORS", and "PYTHON DEVELOPMENT TOOLS". A "Try Forest" button is prominently displayed. The website URL "www.rigetti.com" is shown in the bottom right corner.

Parametrically-activated entangling gates



Analytical model: [arXiv:1706.06566](https://arxiv.org/abs/1706.06566)
 2-qubit demo: [arXiv:1706.06562](https://arxiv.org/abs/1706.06562)
 8-qubit proc: [arXiv:1706.06570](https://arxiv.org/abs/1706.06570)
 19-qubit proc: [arXiv:1712.05771](https://arxiv.org/abs/1712.05771)



Hybrid quantum-classical algorithm: clustering

