



- University of Virginia, University of Sydney
- Lead Investigator: Olivier Pfister
- Team:
 - Nick Menicucci (USyd- QC theory)
 - Joe Campbell (UVa - photodetection)
 - Israel Klich (UVa - CM/Q theory)
 - Olivier Pfister (UVa - QC expt)



- Research areas of interest:
 - One-way quantum computing
 - Quantum simulation
 - Continuous-variable quantum information
 - Quantum optics



- Summarize your unique qualifications and capabilities:
 - **Ultralarge scale quantum entanglement:**
(thousands of frequency-encoded qumodes)
x (thousands of time-encoded qumodes)
in a single OPO. [PRL 112, 120505 \(2014\)](#)
 - At room temperature
 - Deterministic encoding and processing
 - Quantum error correction is possible
[112, 120504 \(2014\)](#)

[PRL](#)



- Specific capabilities your group is seeking:
 1. **Ultralow-loss (<0.1 dB/m) integrated optics** (incl. nonlinear media, interferometers, fiber interfaces)
 2. **Photon-number-resolved, fast (<0.1 ns) photodetection**



Contact Information

- Olivier Pfister
- Professor of Physics
- University of Virginia
- opfister@virginia.edu
- (434) 924 7956
- <http://faculty.virginia.edu/quantum/>