Who we are:

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London

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- Institutions: Universities of Illinois, Queensland, Bristol, Maryland Baltimore County, & Toronto; Louisiana State University; Imperial College of London; and IQOQI (Vienna)
- Lead: Paul Kwiat
- Current team: Andrew White, James Franson & Todd Pittman, Jeremy O'Brien, Anton Zeilinger, Jonathan Dowling, Daniel James, Timothy Ralph, and Terry Rudolph

What we do:

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- Photonic quantum computation
- Experimentally: single- & entangled-photon sources, quantum circuitry, quantum delays, single-photon detection.
- Theoretically: quantum tomography, quantum algorithms, quantum error correction, design of new QC schemes, techniques.
- In general: quantum information, control, metrology, & foundations

Qualifications & capabilities:

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- Leading teams in photonic quantum computing
  - Invented and/or developed: critical optical quantum technologies, many LOQC schemes; quantum state & process tomography; key quantum algorithms (Grover's, Shor's, trace-estimation, quantum chemistry, …)
  - Developing: efficient heralded-photon (single and entangled) sources; efficient photon detectors (cryogenic); integrated-optic circuits; photon delays, ultra-low loss optics

Seeking...

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- At both ~800 nm & ~ 1550 nm
  - efficient single-photon sources (e.g., separable downconversion, FWM, quantum dots, NV-centers...)
  - efficient photon detectors, number-resolving, fast
  - low-loss integrated optics (waveguides, fibers, hybrid...)
  - photon delays and/or quantum memories
  - system engineering

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