Linear Optics Interferometry

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Contents

I. INTRODUCTION

Si-Hui can colour code things she adds like this
And Peter can do it like this
Let's add comments and questions like this

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II. MATHEMATICAL BACKGROUND

Mathematical representation for LO networks, and very basic background on quantum optics

III. OPTICAL ENCODING OF QUANTUM INFORMATION

A. Single-photons

1. Polarisation

2. Dual-rail

3. Time-bins

B. Continuous-variables

1. Coherent states

2. Squeezed states

IV. EFFICIENT CIRCUIT DECOMPOSITIONS OF LINEAR OPTICS NETWORKS

Discuss the Reck et al. decomposition

V. EXPERIMENTAL IMPLEMENTATION

A. State preparation

1. Single-photons

2. Bell pairs

3. Coherent states

4. Squeezed states

B. Linear optics networks

1. Bulk-optics

2. Waveguides

3. Time-bins

Discuss fibre-loop architecture