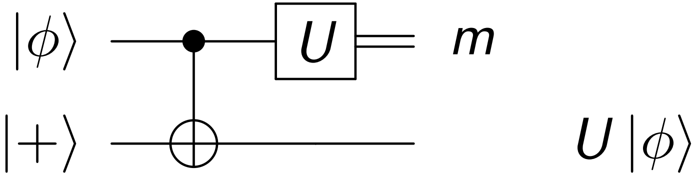
Generalised Flow for Continuous Variables 1QC

Robert Booth

December 4th, 2018

MBQC

- Teleportation



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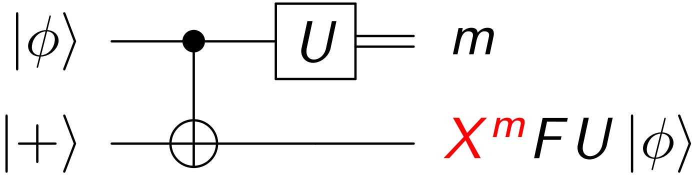

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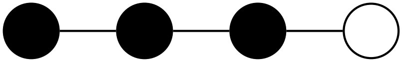

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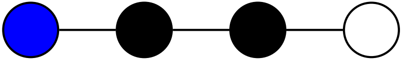

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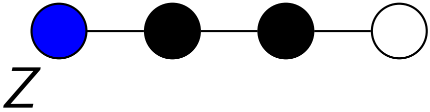

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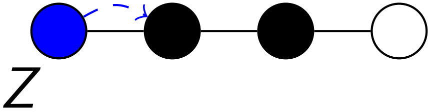

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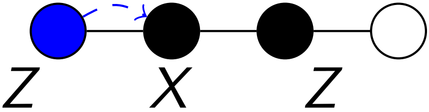

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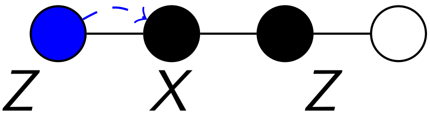

$$K_i = X_i \prod_{j \in G(i)} Z_j$$

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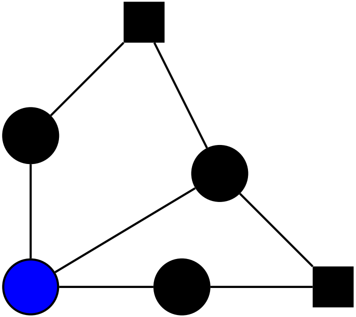

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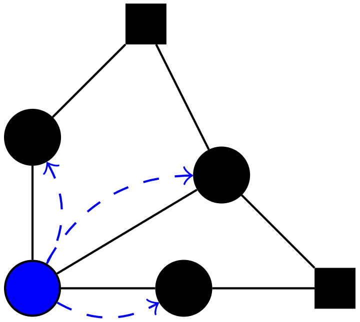

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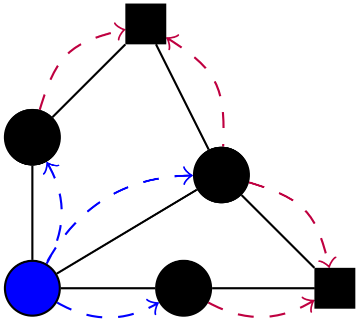

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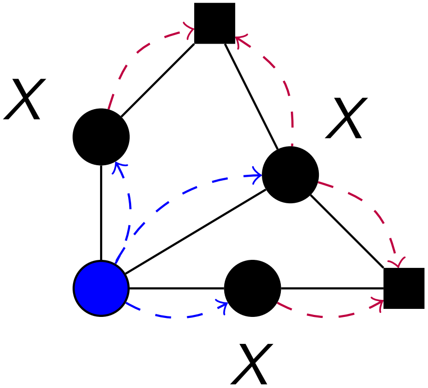

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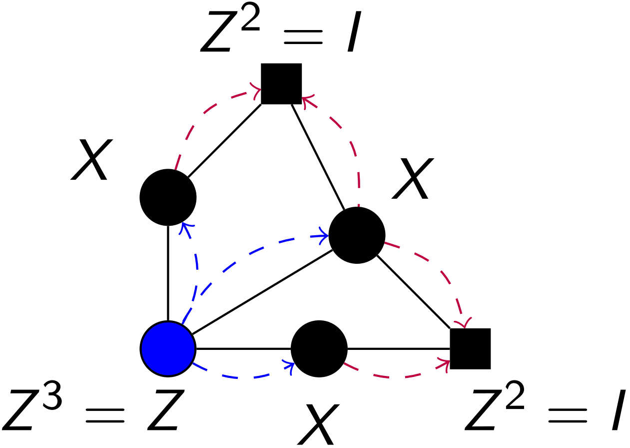

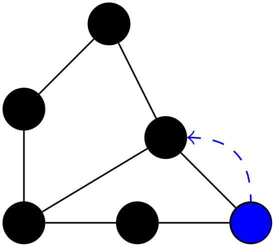

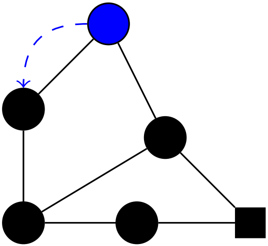

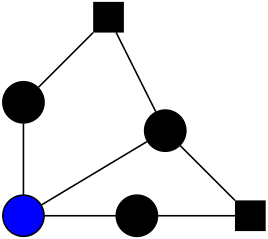

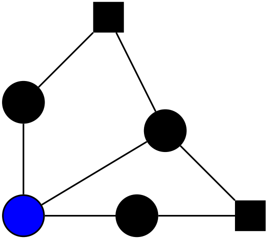

- Linear equations:

$$A_i\vec{c} = \begin{pmatrix} 1 \\ 0 \\ \vdots \\ 0 \end{pmatrix} \quad \text{with} \quad \vec{c} \in \mathbb{Z}_2^n$$

CV Graph States

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- Commutation rules are essentially the same!

CV Flow

- DV:

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- CV:

$$A_i\vec{c} = \begin{pmatrix} 1 \\ 0 \\ \vdots \\ 0 \end{pmatrix} \quad \text{with} \quad \vec{c} \in \mathbb{R}^n$$

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