

Contribution ID: 365

Type: Oral Presentation

One-way Quantum Computing with Photonic Orbital Angular Momentum

Wednesday, 13 July 2011 14:45 (15 minutes)

<Done-Way Quantum computing is based on the preparation of certain entangled states of several particles, which are subsequently individually measured. The measurements serve to process information as well as to read out the final result of the computation. The implementation with OAM carrying photons is based on the usage of qubits (only two OAM values are relevant) but is a first step towards the implementation of a generalized form of One-Way Quantum computing by means of qudits (involving more then two OAM values).</p>

Level (Hons, MSc,
 PhD, other)?

MSc

Consider for a student
 award (Yes / No)?

Yes

Would you like to
 submit a short paper
 for the Conference
 Proceedings (Yes / No)?

Yes

Primary authors: Ms BASSA, Humairah (UKZN); Prof. KONRAD, Thomas (UKZN)

Presenter: Ms BASSA, Humairah (UKZN)

Session Classification: Theoretical

Track Classification: Track G - Theoretical and Computational Physics