



Contribution ID: 231

Type: Oral Presentation

## Non-specialist lecture: Quantum measurement, but not as you know it

Wednesday, 5 July 2017 14:00 (40 minutes)

Standard courses in quantum mechanics focus teaching of quantum measurement on projective measurement of observables. Quantum theory, however, allows for a much broader class of measurements known as Positive Operator Valued Measures. Here we will discuss these generalized measurements, laying specific emphasis on so-called unsharp measurements. In particular, we will show that adding unsharp measurements to the toolbox of control protocols of quantum experimenters can allow useful applications like real-time state estimation and feedback control, noise protection of quantum systems, and measurement of dynamical correlation functions.

**Apply to be considered for a student award (Yes / No)?**

No

**Level for award (Hons, MSc, PhD, N/A)?**

n/a

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

No

**Primary author:** Dr UYS, Hermann (National Laser Centre, CSIR)

**Co-authors:** Mr DU TOIT, Pieter (University of Pretoria / NMISA); Prof. GOSH, Sibasish (Institute of Mathematical Sciences, Chennai, India); Prof. KONRAD, Thomas (UKZN)

**Presenter:** Dr UYS, Hermann (National Laser Centre, CSIR)

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