

# Eugene Wigner Colloquium

*joint event of GRK 1558 and SFB 910*



## Dr. Alessio Serafini

University College London, UK

### “Diffusive conditional dynamics and the control of quantum continuous variables”

In the first part of the talk, a theoretical framework to describe the continuous, weak filtering of a quantum system upon monitoring of a white noise bath at finite temperature will be introduced and analysed in some detail. Then, this general formalism will be applied to the steady state optimisation of interesting figures of merit, such as squeezing or entanglement, where both optimal values and optimal Gaussian measurements will be analytically derived under certain conditions. Finally, an interesting (and somewhat counterintuitive) case where the optimal conditional squeezing turns out to increase with the temperature of the bath will be discussed and clarified.

---

**Thursday, 13.11.14 · 16:15h · EW 202**

Technische Universität Berlin · Institut für Theoretische Physik · Hardenbergstraße 36 · 10623 Berlin

[www.itp.tu-berlin.de/grk1558](http://www.itp.tu-berlin.de/grk1558) · [www.itp.tu-berlin.de/sfb910](http://www.itp.tu-berlin.de/sfb910)

