



**Location** University of Regensburg, Dept. of Physics  
Room PHY 5.0.21

**Time** Thursday, 26<sup>th</sup> June 2008  
3:15 p.m.

**Speaker** **Dr. Mario Ziman**  
Research Centre for Quantum Information,  
Slovak Academy of Sciences, Bratislava

**Title** Unambiguous Quantum Estimation Problems

Abstract

Although the quantum physics is a statistical theory there are problems in which unambiguous conclusions based on individual clicks are possible. After giving a general picture of various unambiguous problems we will demonstrate the basic ideas and results on spin1/2 system (qubit). We shall show how to compare quantum states, how to conclusively identify a quantum state among mutually nonorthogonal states, etc. Similar problems for processes and measurements will be formulated and particular examples will be addressed in details.

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