

1106-46-851

**Erling Størmer\*** ([erlings@math.uio.no](mailto:erlings@math.uio.no)), Department of Mathematics, University of Oslo, 0316 Oslo, Norway, Oslo, Norway. *Separable states and positive maps.*

The subject of positive linear maps between  $C^*$ -algebras started with Dick's famous papers on isometries and the generalized Schwarz inequality in the early 1950s. Personally I had the luck of having Dick as my thesis advisor for my dr. thesis on positive maps. The theory developed rather slowly until it became clear in the 1990s that positive maps are important in the study of entanglement in quantum information theory. An important class of states on tensor products of matrix algebras are the separable ones, which are sums of product states. It is a very difficult problem to find sufficient conditions for states to be separable. In my talk I'll give a necessary condition for states to be separable and then apply this to give a negative answer to a conjecture on separability of the so-called SPA of a positive map. (Received September 08, 2014)