

Contribution Title:	DEFORMATIONS OF OPERATOR ALGEBRAS AND THE CONSTRUCTION OF QUANTUM FIELD THEO- RIES
Authors:	G. Lechner
Presenting author:	Lechner G.
Affiliation:	Vienna University
E-mail:	gandalf.lechner@univie.ac.at
Invited speaker:	Topical session
YRS seminar:	NO

Quantum field theories on Minkowski space can be described in terms of a single von Neumann algebra lying in a suitable relative position to a fixed representation of the Poincare group. Deformations of this algebra which preserve the relative position w.r.t. the Poincare representation can therefore be used to construct new quantum field theories from known ones, and open up a novel, algebraic perspective on the problem of constructing quantum field theories in higher dimensions. In this talk, the basic ideas underlying this program will be presented, and with the help of some explicit examples, the relation to Rieffel deformations will be explained.