DEFORMATIONS OF FERMIONIC QUANTUM FIELD THEORIES AND INTEGRABLE MODELS

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Recent developments regarding the construction of quantum field theoretic models have shown that deformation techniques lead to models with non-trivial interaction. In particular, in two space-time dimensions a large class of integrable models can be obtained by deformation methods developed by G. Lechner. This approach, however, does not yield all integrable models as for example the Sinh-Gordon model. Our analysis shows that it is possible to include the remaining models into the deformation framework, and therefore complements Lechner's results. Moreover, properties of the deformed model are also discussed in higher dimensions.