# Density Matrix and Correlation Functions of the XXZ Chain

Frank Göhmann
*Fachbereich C- Physik, Wuppertal, 42097 Wuppertal, Germany*

I review recent progress on the exact evaluation of static correlation functions of the antiferromagnetic XXZ chain. Static correlation functions can be obtained from the density matrix of a finite chain segment. The density matrix for either the infinite chain at finite temperature and finite longitudinal magnetic field or for the finite chain at zero temperature and zero field can be represented as a multiple integral. We put forward the hypothesis that the multiple integral factorizes and present explicit results for short range correlation functions and a conjectured general formula for the inhomogeneous density matrix of the isotropic chain at zero magnetic field.