

Contribution Title:	ON CORRELATION FUNCTIONS OF QUANTUM INTEGRABLE SYSTEMS
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Invited speaker:	Topical session
YRS seminar:	NO

I will review recent results concerning the computation, from first principles, of correlation functions of quantum integrable systems. Taking the example of the XXZ Heisenberg chain, I will explain how to obtain, in the algebraic Bethe ansatz framework, exact representations for the two-point functions in the finite chain. I will then explain how to analyse those expressions in the thermodynamic limit in order to derive, in the massless regime of the chain, the long-distance asymptotic behaviour of the two-point functions. At leading order, the results confirm the Luttinger liquid and conformal field theory predictions. (Joint work with N. Kitanine, K. K. Kozłowski, J. M. Maillet and N. A. Slavnov)