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Seminaires du LPTM , Universite de Cergy Pontoise

Jeudi 21 Juin 2018, 14 :00
LPTM, 4.13 St Martin II
Domaines : math-ph

Titre : *Quantum Darboux-Bäcklund transformations*

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Résumé : *We discuss the notion of the quantum auxiliary linear problem and the associated problem of quantum Darboux-Bäcklund transformation. In this frame we derive the analogue of the classical formula that provides the hierarchy of the time components of Lax pairs at the quantum level for both closed and open integrable lattice models. Particular emphasis is given to the time part of the quantum transformation as possible connections and applications to the problem of quantum quenches as well as the time evolution of local quantum impurities are evident. A discussion on the use of Bethe states as well as coherent states for the study of the time evolution is also presented. Connections with the quantum analogue of the Zakharov-Shabat method are also discussed.*