Schedule of talks, representation theory special session.

All talks in the "Sala Sur", IMAFI.

Thursday Nov. 2

Erdal Emsiz 15.40-16.30

Completeness of the Bethe Ansatz for an open q-boson system with integrable boundary interactions

Jan Felipe van Diejen 16.30-17.20

Ansatz de Bethe algebraica y funciones simétricas

Friday Nov. 3

Francesco Brenti 15.40-16.30

To be announced

Paolo Sentinelli 16.30-17.20

Representations of right-angled Coxeter and Artin groups

Saturday Nov. 4

Steen Ryom-Hansen 11.10-12.00

Jucys-Murphy elements for the diagrammatical category of Soergel bimodules

Sadek Al Harbat 12.00-12.50

On the injectivity of affine Hecke algebras towers and related towers

LXXXVI Encuentro Anual. Talca 2017
Sociedad de Matemática de Chile

Ansatz de Bethe algebraica y funciones simétricas

Jan Felipe van Diejen *

Abstract

Usamos soluciones de la ecuacin de Yang-Baxter cuntica, para estudiar formulas de Pieri y formulas de ramificación para los polinomios de Hall-Littlewood asociados a los grupos clsicos. (Trabajo conjunto con Erdal Emsiz).

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LXXXVI Encuentro Anual. Talca 2017
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Completeness of the Bethe Ansatz for an open q-boson system with integrable boundary interactions

Erdal Emsiz *

Abstract

We will talk about a discrete integral-reflection representation of the five-parameter double affine Hecke algebra of type $C^\vee C$ at the critical level $q = 1$. Using this representation we endow the open finite q-boson system with integrable boundary interactions at the lattice ends. We will explain how the Bethe Ansatz entails a complete basis of eigenfunctions for the commuting quantum integrals in terms of Macdonald's three-parameter hyperoctahedral Hall-Littlewood polynomials. (This is joint work with J. F. van Diejen and I. N. Zurrián)

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LXXXVI Encuentro Anual. Talca 2017
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On the injectivity of affine Hecke algebras towers and related towers

Sadek Al Harbat *

Abstract

We define the tower of affine Hecke algebras related to each infinite familly of affine Coxeter groups. noticing the non-papbolicity settings we explain the braid origins of these tower and the affine T-L allgebras towers resulting, then we show some consequences of the injectivity of the defined towers.

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LXXXVI Encuentro Anual. Talca 2017
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Jucys-Murphy elements for the diagrammatical category of Soergel bimodules

Steen Ryom-Hansen *

Abstract

Soergel introduced a category of bimodules in the nineties during his proof of the Kazhdan-Lusztig conjectures. Over the last years, a diagrammatical version $\mathcal{D}$ of this category has been developed which is better behaved in positive characteristic than the original category. Elias and Williamson proved that $\mathcal{D}$ is cellular.

In this talk we construct of family of Jucys-Murphy elements for $\mathcal{D}$. We show that they satisfy a separation criterion over the field of fractions of the ground ring which leads to a formula for the determinant of the bilinear form on the cell modules. This leads to Jantzen type filtrations and associated sum formulas.

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LXXXVI Encuentro Anual. Talca 2017
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Representations of right-angled Coxeter and Artin groups

Paolo Sentinelli *

Abstract

We will show a way to construct an integral representation of a right-angled Coxeter group; such a representation extends to two representations of the Hecke algebra of the group. A class of representations of an Artin group will be given injecting this group in the Hecke algebra of the corresponding Coxeter group.

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