Einladung zur öffentlichen Defensio

Chiara NOVARINI

Thema der Dissertation

DAHA and Dyck path algebras

Abstract:
This thesis is composed of two parts. The first one is based on our work on DAHA representations at roots of unity and doubly periodic tableaux [BCMN23]. We give a combinatorial description of X-semisimple graded representations of DAHA, showing that these can also be constructed using certain spaces of intertwiners of quantum group representations. As an application, we prove a conjecture of Morton and Samuelson [MS21] on the tangle algebra presentation of the DAHA. In the second half of this work, which is based on [BMN], we begin by defining in a skein theoretic fashion the $\mathbb{A}_q$ algebra of a given surface. We then focus on the $\mathbb{A}_q$ of the disc. We give a basis for this algebra by proving that it is isomorphic to the space of endomorphisms of a certain quantum group representation. Finally, we construct representations for the $\mathbb{A}_q$ of the annulus and $\mathbb{A}_{q,t}$ of the torus from spaces of intertwiners.

Prüfungssenat

Univ.-Prof. Mag. Dr. Andreas Cap
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Assoz. Prof. Dr. Anton Mellit, Privatdoz.
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Prof. Dr. Peter Samuelson
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(University of California, Davis)

Zeit und Ort

Mittwoch, 04. September 2024, 17:00 Uhr

Online:

> https://univienna.zoom.us/j/63550329457?pwd=kfthBKZR2W5EYNSnFHSbwdYjQjuaon.1
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> Meeting ID: 635 5032 9457
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