

# Mathematics Colloquium at IUB

DIMITRY GUREVICH

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will speak on

*An Introduction to Quantum Groups  
and the Yang-Baxter Equation:  
a New Approach With Applications  
to Noncommutative Geometry*

**Date:** Tuesday, April 18, 2006

**Time:** 17:15

**Place:** Lecture Hall Research II, IUB

**Abstract:**

In this talk an introduction to quantum groups and the Yang-Baxter equation is presented. Classical quantum groups are usually treated as deformations of enveloping algebras of Lie algebras. The so-called Yang-Baxter operators and Yang-Baxter equation are associated to these structures. We shall present a new point of view to the subject starting from the Yang-Baxter operators. This allows us to construct a great family of structures and objects similar to quantum groups. I will compare both the approaches.

Some applications to noncommutative geometry will be discussed. In particular, I will discuss a new version of the notions of quantum Lie algebras/superalgebras and quantum homogeneous spaces.

**Colloquium Tea** at ca. 16:45 in the Tea Room of Research II, close to the lecture hall. Everybody is welcome!

M. STOLL