workshop on

Approximation Properties of von Neumann Algebras

Saturday & Monday March 5,7 2016

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Date	10-11	11-11:30	11:30-12:30
Saturday March 5	Lecture I	break	Lecture I (continued)
Monday March 7	Lecture II	11-11:30	Lecture III

Lecture I: Approximation properties of groups and von Neumann algebras

In 1978 Haagerup showed that the group von Neumann algebra of the free group is a non-nuclear C*-algebra that has Grothendieck's metric approximation property. A crucial part of his proof was the construction of a net of positive definite C_0 functions on the free group that converge to the identity pointwise. This property is nowadays known as the "Haagerup property" and has important applications in operator theory and geometric group theory (implying for example the Baum-Connes conjecture). In this talk I will discuss this property (as well as other properties as weak amenability) and its meaning for operator algebras.

Lecture II: Graph products of operator algebras

Graph products were introduced by Green in her thesis from 1990. They are generalizations of free products by adding commutation relations. We construct the proper analogue of the graph product for operator algebras and discuss stability properties.

Lecture III: Examples and further applications: absence of Cartan subalgebras for Hecke von Neumann algebras

I will discuss examples of von Neumann algebras having certain approximation properties (which could be free Araki-Woods factors, q-Gaussian algebras and/or Hecke von Neumann algebras, to be determined).

زمان: شنبه و دوشنبه ۱۵ و ۱۷ اسفند ماه ۹۴ ساعت: ۱۰:۰۰ الی ۱۲:۳۰

مکان: میدان نیاوران، پژوهشگاه دانشهای بنیادی، سالن ۱