

Drinfeld double: averaging and amenability

Jacek Krajczok
Vrije Universiteit Brussel
jacek.krajczok@vub.be

Abstract

Drinfeld double is a construction which out of a discrete quantum group Γ produces a locally compact quantum group $D(\Gamma)$ by gluing together Γ and its compact dual $\widehat{\Gamma}$. Both quantum groups Γ and $\widehat{\Gamma}$ are located inside $D(\Gamma)$ as closed quantum subgroups. In particular, one can average functions on $D(\Gamma)$ into $\widehat{\Gamma}$ -bi-invariant functions. During the talk I will present results of an ongoing joint work with Matt Daws and Christian Voigt which is concerned with this operation. I will outline how one can use this procedure to relate approximation properties of $D(\Gamma)$ to central approximation properties of Γ .