The Mill 2020 vs Corona – Round 2

Matthias Schötz (Université libre de Bruxelles)

Ordered *-Algebras are the better C^*-Algebras

6 April 2020
21.15h

Abstract

An ordered *-algebra is a *-algebra with a partial order on its Hermitian elements. While every C^*-algebra is an ordered *-algebra, the converse is not true: Ordered *-algebras can also be used to describe unbounded operators.

In this talk I am going to explain how an order gives rise to a C^*-norm on bounded elements. This shows that such an order is a more powerful tool than a C^*-norm, because the order makes sense also on unbounded elements. Or rather, I am going to guide the audience to this result, because this will be a very hands-on talk. So keep pencil and paper ready! There are essentially no prerequisits required, but it might help to know what C^*-algebras are in order to appreciate this idea.

As a follow-up, we could discuss representation theorems or some of the intricacies that occur when we are dealing with unbounded operators in contrast to bounded ones.

We meet 15min before the talk starts on discord, make sure to have zoom installed. Write to mschotz (YouKnowWhatSymbolComesHere) ulb.ac.be if you don't have access yet or have any questions.