14 February 2020

♡♡♡ Valentine Workshop 2020 ♡♡♡

Marvin Dippell (JMU)

A Categorical Framework for $*$-Algebras - Part I: Internal $*$-Monoids

At 9.30 in SE 31

Abstract

Algebraic structures with a binary associative operation are omnipresent in mathematics. In the first half of the talk I want to present a well-known categorical framework for these structures using monoids internal to a given monoidal category. The second part will then incorporate involutions on (monoidal) categories, allowing us to define internal $*$-monoids generalizing algebraic structures equipped with an order reversing involution, such as $*$-algebras.

Chiara Esposito (University of Salerno)

Equivariant formality, a wrong statement

At 11.00 in SE 31

Abstract

In a recent note we proved an equivariant version of the formality of multidifferential operators for a proper Lie group action. It turns out that the proof has a problem as the L-infinity quasi-isomorphism that we constructed does not preserves the Hamiltonian actions. This puts in discussion the original conjecture by Tsygan. In this talk I will try to clarify the problem and to discuss new strategies to approach the study of the reduction-quantization diagram.

Nicolò Drago (JMU)

Steinmann scaling degree and the extension of distributions

At 14.00 in SE 31

Abstract

Given a distribution $T \in \mathcal{D}'(\mathbb{R}^d)$, the scaling degree $\mathrm{sd}(T)$ measures the degree of singularity of T at the origin. In this talk, we will review the concept of scaling degree for distributions on $\mathbb{R}^d$. We will then discuss the following problem: given a distribution $T \in \mathcal{D}'(\mathbb{R}^d \setminus \{0\})$, find (if any) all extensions $\hat{T} \in \mathcal{D}'(\mathbb{R}^d)$ T such that $\mathrm{sd}(T) = \mathrm{sd}(\hat{T})$.