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 \( T \in D'(\mathbb{R}^d) \), the scaling degree \( sd(T) \) 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 \( T \in D'(\mathbb{R}^d \setminus \{0\}) \), find (if any) all extensions \( \hat{T} \in D'(\mathbb{R}^d) \) such that \( sd(T) = sd(\hat{T}) \).