TOPOLOGY SEMINAR

Euler characteristics of finite EI categories

By

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Abstract: Euler characteristics of categories are a generalization of Euler characteristics of spaces, stemming from the notion of the Euler characteristic of a poset. We know that the Euler characteristic of a finite poset is the sum of the values of the Möbius function, which can be regarded as the inverse of incidence matrix. By the same idea in a finite EI category we will show that if we construct the zeta function as the number morphisms between two objects, then we can call the inverse of it (if it exists) the Möbius function. Hence we can define the Euler characteristic of the category in the same way. We will also discuss that if there does not exist such an inverse, we can overcome this problem with the concepts of a weighting or a coweighting of an EI category. We will give some examples for these concepts and discuss certain categorical properties under which the Euler characteristic is invariant.

Date: June 10, 2019 Monday
Time: 13:40 – 14:40
Place: SA141 Mathematics Seminar Room

* Tea and cookies will be served after the talk. All are most cordially invited.