HACETTEPE UNIVERSITY MATHEMATICS GENERAL SEMINAR

HACETTEPE ÜNİVERSİTESİ MATEMATİK BÖLÜMÜ GENEL SEMİNERİ

The Non-Abelian Exterior Product and Low Dimensional Homology of Leibniz Algebras

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Leibniz algebras were first defined by Bloh (1965) as a non skew-symmetric analogue of Lie algebras, but they became very popular when Loday rediscovered them in Lo (1993), mainly due to the development of a new, Leibniz (co)homology theory for Lie algebras. Since then, many authors have been studying them obtaining very relevant algebraic results. Among them, many results of Lie algebras have been extended to the Leibniz case. The notions of non-abelian tensor and exterior products were introduced in groups by Brown and Loday (1987), as tools in homotopy theory, but they can give us nice information about central extensions and (co)homology. They were extended to the Lie case by Ellis (1991). Later, the notion of non-abelian tensor product was extended to Leibniz algebras by Gnedbaye (1999). The exception was exterior product in Leibniz case, which was not specified, as we believe, by technical difficulties.

In this talk we present construction of the non-abelian exterior product of Leibniz algebras, with applications in low dimensional Leibniz homology and in the study of capability properties of Leibniz algebras, which have been obtained in Donadze et al. (2018), and Khmaladze et al. (2021).

Zoom Bağlantısı (Zoom Link)

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