

1155-43-490

Mahya Ghandehari* (mahya@udel.edu), 15 Orchard Rd, Newark, DE 19716, and **Yemon Choi**. *Derivations on the Fourier algebras of non-Abelian groups.*

Fourier transform and its analogues are the cornerstone of classical harmonic analysis. To generalize the concept of Fourier transform to non-Abelian groups, the modern field of non-commutative harmonic analysis was initiated. The broad philosophy here is to employ group representations and operator theory to capture the non-Abelian nature of a group. A major trend in non-commutative harmonic analysis is to investigate function algebras related to Fourier analysis (and representation theory) of non-Abelian groups. The Fourier algebra, which is associated with the regular representation of the ambient group, is a fundamental example of such function algebras. In this talk, we investigate Banach algebraic behavior, in particular derivation theory, of the Fourier algebra for various classes of locally compact (Lie) groups, and show that these function algebras encode the properties of the underlying groups in various ways. (Received January 20, 2020)