Introduction to Orlicz Figa-Talamanca Herz Algebras and its Properties

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Abstract: Let G be a locally compact group. Herz in 1973 introduced and studied the Figa-Talamanca Herz algebra denoted as $A_p(G)$. We define and study a more general algebra Orlicz Figa-Talamanca Herz algebras denoted as $A_\Phi(G)$ which generalizes the Figa-Talamanca Herz algebra. More precisely, we shall replace the classical L^p-spaces, used in the definition of the $A_p(G)$, by the Orlicz spaces $L^\Phi(G)$, where Φ is a Young function satisfying the Δ_2-condition. We compute the dual of the Banach algebra $A_\Phi(G)$. We show that the Gelfand spectrum of $A_\Phi(G)$ is homeomorphic to G. Singletons are sets of spectral synthesis and closed subgroups are sets of local spectral synthesis for these algebras. We study means on the dual of the Orlicz Figa-Talamanca Herz algebras and show that the set of invariant means is nonempty.

REFERENCES

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