



istanbul matematiksel bilimler merkezi
istanbul center for mathematical sciences

WORKSHOP IN BANACH ALGEBRAS

THE GROUP AND MEASURE ALGEBRA OF A LOCALLY COMPACT GROUP

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Abstract

These Banach algebras are the central objects of study in the vast domain of *harmonic analysis*. A key property of them is that they are far from being C^* -algebras: in fact they are SAI.

Let S be a semigroup or a group. Then we shall recall the basic properties of the *semigroup algebra* $A = \ell^1(S)$ with the convolution product. We shall make preliminary remarks on its second dual, which has the form $A'' = (M(\beta S), \square)$, where the Stone-Cech compactification βS becomes a compact right topological semigroup and $M(\beta S)$ denotes the space of regular Borel measures on βS . We shall show that the topological centre $\mathfrak{Z}(A'')$ is often determined by just two points in βS .

Now suppose that G is a locally compact group, such as the circle \mathbb{T} . Then we shall define the group algebra $L^1(G)$ and measure algebra $M(G)$ of G as Banach algebras.

Date: Thursday, 10 September 2009

Time: 10:30

Place: IMBM Seminar Room, Boğaziçi University

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