WYDZIAŁ MATEMATYCZNO – FIZYCZNY
Instytut Matematyki

Zaprasza na wykład pod tytułem:

FUNCTIONAL EQUATIONS ON DOUBLE COSET HYPERGROUPS.

który wygłosi:

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ABSTRACT:

Let K be a locally compact Hausdorff toplogical space. Hypergroups are algebras with involutions of all complex valued bounded Radon measures on K with some additional properties. We are going to study a particular class of hypergroups, namely double coset hypergroup.

Let G be a locally compact group with identity e and K a compact subgroup with normed Haar measure ω: $\int_K d\omega(K) = 1$. For each x in G we define the double coset of x as the set $KxK = \{kxl: k, l \in K\}$.

We introduce a hypergroup structure on the set L of all double cosets: the topology of L is the factor topology, which is locally compact. The identity o is the coset K = KeK itself and the involution is defined by $(KxK)^{\vee} = Kx^{-1}K$

Finally, the convolution of δ_{KxK} and δ_{KyK} is defined by

$$\delta_{KxK} * \delta_{KyK} = \int_K \delta_{KxkyK}\, d\varpi(k).$$

It is known that this gives a hypergroup structure on L which is non-commutative, in general. If K is a normal subgroup, then L is isomorphic to the hypergroup arising from the factor group G/K. We describe the complex valued solutions defined on a double coset hypergroup of the exponential, additive and quadratic functional equations. Moreover, the m-sine functions on a double coset hypergroup are discussed. The double coset hypergroup we consider is closely related to affine groups and spherical functions on them.

Wykład odbędzie się **23 czerwca 2017 r.** (piątek)
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