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Finite dimensional varieties on hypergroups

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(joint work with LÁSZLÓ SZÉKELYHIDI)

Let X be a hypergroup, K its compact subhypergroup and assume that (X, K) is a Gelfand pair. Connections between finite dimensional varieties and K -polynomials on X are discussed. It is shown that a K -variety on X is finite dimensional if and only if it is spanned by finitely many K -monomials. Next, finite dimensional varieties on affine groups over \mathbb{R}^d , where d is a positive integer are discussed. A complete description of those varieties using partial differential equations is given.

REFERENCES

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- [3] László Székelyhidi, *Spherical spectral synthesis*, Acta Math. Hungar. **153** (2017) 120–142.