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Mathematische Institute der WWU – Kolloquium Wilhelm Killing

# Multivariable hypergeometric functions and harmonic analysis

Professorin Margit Rösler (Universität Paderborn)

Donnerstag, den 21.06.2012, 16:30 Uhr, Hörsaal M 5

Classical hypergeometric functions such as Gegenbauer polynomials and the Gaussian hypergeometric function are known to play an important role in the analysis on spheres and hyperbolic spaces.

There are multivariable generalizations of such functions within a theory of Heckman, Opdam and Cherednik, which in particular include the spherical functions of general Riemannian symmetric spaces. In this talk, we give an overview of the basic ingredients in the theory of such hypergeometric functions and the harmonic analysis associated with them, starting from examples in one variable. We explain the role of differential-reflection operators (called Dunkl operators) in this context, and we address some more recent issues, such as the existence of positive convolution algebras and limit transitions related to infinite dimensional symmetric spaces.

Tee wird ab 16:00 Uhr im Sitzungszimmer SR 0 des Mathematischen Instituts serviert.

Fachbereich 10  
Mathematik und Informatik

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