

Algèbres non commutatives, théorie des représentations et fonctions
spéciales
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Non-commutative algebras, representation theory and special functions
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Matrix spherical functions and matrix orthogonal polynomials

We will discuss some generalities for matrix spherical functions on compact symmetric spaces. After imposing additional conditions on the related multiplicities, the matrix spherical polynomials can be related to matrix orthogonal polynomials. We will discuss an explicit example in order to see how the radial part of the Casimir operator plays a role in determining the properties of the matrix orthogonal polynomials, in particular the matrix weight and the matrix partial differential operator to which these polynomials are eigenfunctions.