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Special values for continuous q -Jacobi polynomials and applications

We compute special values for Askey's continuous q -Jacobi polynomials in terms of q -Racah polynomials. Then by starting with Gasper and Rahman's Poisson kernel for these polynomials, we compute new generating functions for these polynomials, those in their subfamilies such as for Rogers polynomials, and in the q to 1 limit, for Jacobi polynomials. We also study the self-duality of the corresponding q -Racah polynomials.