

学术报告

Algebraic properties of q -difference operators and q -summable functions

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Abstract: One calls q -difference operator any expression of the form $a_0 + a_1 \sigma_q + \dots + a_n \sigma_q^n$, where q is some given constant different from zero and one, $a_0, \dots, a_n$ are known functions and where σ_q denotes the q -shift operator defined by the relation $\sigma_q f(x) = f(qx)$. Such operators, appearing often in combinatorics or number theory, may be viewed as q -analog of ordinary differential operators. In our talk, we will see how to write everyone of such operators as a product of a finite number of first order operators in some appropriate analytic setting. This factorization permits to define a q -summation procedure for solving the corresponding q -difference equation.

欢迎大家参加！