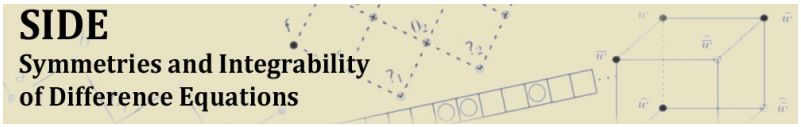
SIDE 14.2



Contribution ID : 14

An affine Weyl group action on the basic hypergeometric series arising from the q-Garnier system

Monday 19 Jun 2023 at 17:00 (00h30')

Content :

The Garnier system is an extension of the sixth Painlev\'e equation from a viewpoint of the isomonodromy deformation of a Fuchsian system.
Its q-difference analogue was proposed by Sakai as the connection preserving deformation of a linear q-difference system.
Recently, we formulated the q-Garnier system in a framework of an extended affine Weyl group of type $A^{(1)}_{2n+1}\times A^{(1)}_1\times A^{(1)}_1$.
On the other hand, the q-Garnier system admits a particular solution in terms of the basic hypergeometric series ${}_{n+1}\phi_n$.
Then it becomes the next problem to investigate an action of the extended affine Weyl group on ${}_{n+1}\phi_n$.
In this talk, we give an answer to this problem.
Namely, we give a left action of a subgroup of the extended affine Weyl group on a vector whose components are described in terms of ${}_{n+1}\phi_n$.
Hence q-contiguity relations and a linear q-difference equation for ${}_{n+1}\phi_n$ can be derived from the extended affine Weyl group systematically.

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