SIDE 14.2

SIDE
**Symmetries and Integrability
of Difference Equations**

Contribution ID : 48

Deformations and integrability of cluster maps

Monday 19 Jun 2023 at 15:00 (00h30')

Content :

We present parametric deformations of sequences of cluster mutations in the framework of cluster algebras, which destroy the Laurent property but preserve a presymplectic structure induced by the corresponding exchange matrix. We investigate the Liouville integrability of deformed parametric cluster maps associated with the A3 and A4 quivers by imposing suitable constraints on the parameters. We also study examples of more general types of deformed mutations associated with affine Dynkin quivers which correspond to periodic reductions of the discrete sine-Gordon equation.

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