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Discrete symmetries of systems of isomonodromic deformations of second-order Fuchsian differential equations. (English. Russian original) [Zbl 1084.32010](#)

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The author studies discrete transformations of moduli spaces of logarithmic $sl(2)$ -connections with singularities at distinct points $\{x_1, \dots, x_n\}$ on the Riemann sphere P^1 and with given eigenvalues of the residues of the connection. Using the modification technique for vector bundles with connections this allows to compute the discrete affine group of Schlesinger transformations for isomonodromic deformations of a Fuchsian system of second order differential equations. The obtained result is applied to three examples of Fuchsian differential equations, the hypergeometric equation, the Heun equation and the sixth Painlevé equation, and therefore is the generalization of classical situation.

Reviewer: [Boris V. Loginov \(Ul'yanovsk\)](#)

MSC:

[32G34](#) Moduli and deformations for ordinary differential equations (e.g., [Cited in 1 Document](#) Knizhnik-Zamolodchikov equation)

[34M55](#) Painlevé and other special ordinary differential equations in the complex domain; classification, hierarchies

Keywords:

[Schlesinger transformations](#); [Fuchsian systems](#); [Frobenius-Hecke sheaves technique](#); [the hypergeometric equation](#); [the Heun equation](#); [the sixth Painlevé equation](#)

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