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Bethe-Ansatz Solution of the Hofstdter Problem[1]

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I review the solution of the Hofsdater problem by means of the Bethe Ansatz. The solution has been obtained quite some time ago together with Anton Zabrodin and further developed together with Alexander Abanov and Joop Talstra. Solution is possible due to realization of the group of magnetic translations by means of the cyclic representation of the quantum group $U_q(SL_2)$. It equates the Hofstadter problem to the Heisenberg magnetic chain on just few sites but with a large spin.

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