The fermionic quantum plane

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Abstract

Here is a definition of the fermionic quantum plane and the associated fermionic quantum group.

1 The quantum plane

The quantum plane is defined as:

\[ xy = qyx \]

The transformations of the quantum plane define the quantum group \( U_q(sl_2) \) [K].

2 The fermionic quantum plane

The fermionic quantum group is defined as:

\[ xy + yx = \frac{q - 1}{q + 1} (x^2 + y^2) \]

3 The fermionic quantum group

The fermionic quantum group \( \hat{U}_q(sl_2) \) is defined as the quantum group of transformations of the fermionic quantum plane.

References