

The Seiberg-Witten equations generalized

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Abstract

We show a set of equations which generalizes the Seiberg-Witten equations

1 The Seiberg-Witten equations

The Seiberg-Witten equations are the following ones [F] [M]:

$$\mathcal{D}_A(\psi) = 0$$

$$F_+(A) = w(\psi)$$

2 The generalization of the SW equations

We consider two spinors ψ, ϕ and we define [F]:

$$\omega(\psi, \phi)(X, Y) = \langle \psi, XY.\phi \rangle + \langle \phi, XY\psi \rangle + 2 \langle X, Y \rangle \operatorname{Re}(\langle \psi, \phi \rangle)$$

$$\mathcal{D}_A(\psi) = \mathcal{D}_A(\phi) = 0$$

and

$$F_+(A) = w(\psi, \phi)$$

3 The invariants of Seiberg-Witten generalized

We have to prove compactity of the moduli spaces and to define the invariants of Seiberg-Witten over them.

References

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