The homotopy type of the configuration space in Seiberg-Witten theory

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In the Theory of the Seiberg-Witten Equations, the configuration space is $\mathcal{C}_\alpha = \mathcal{A}_\alpha \times \Gamma(S^+_\alpha)$, where $\mathcal{A}_\alpha$ is a space of u_1-connections and

$\Gamma(S^+_\alpha)$ is the space of sections of the complex spinor bundle over X^4. Considering that the SW-equations admits a variational treatment, and that the functional is invariant by the action of the Gauge Group $\mathcal{G}_\alpha = Map(X, U_1)$, our aim is to describe the weak homotopy type of the space $\mathcal{A}_\alpha \times_{\mathcal{G}_\alpha} \Gamma(S^+_\alpha)$.

Theorem 1 *Let X^4 be a closed 4 dimensional manifold. Then for all $\alpha \in Spin^C(X)$,*

$$\mathcal{A}_\alpha \times_{\mathcal{G}_\alpha} \Gamma(S^+_\alpha) \overset{w\text{-}htpy}{\sim} Map^0(X, \mathbb{C}P^\infty)$$

($\overset{w\text{-}htpy}{\sim}$ = *same weak homotopy type*).

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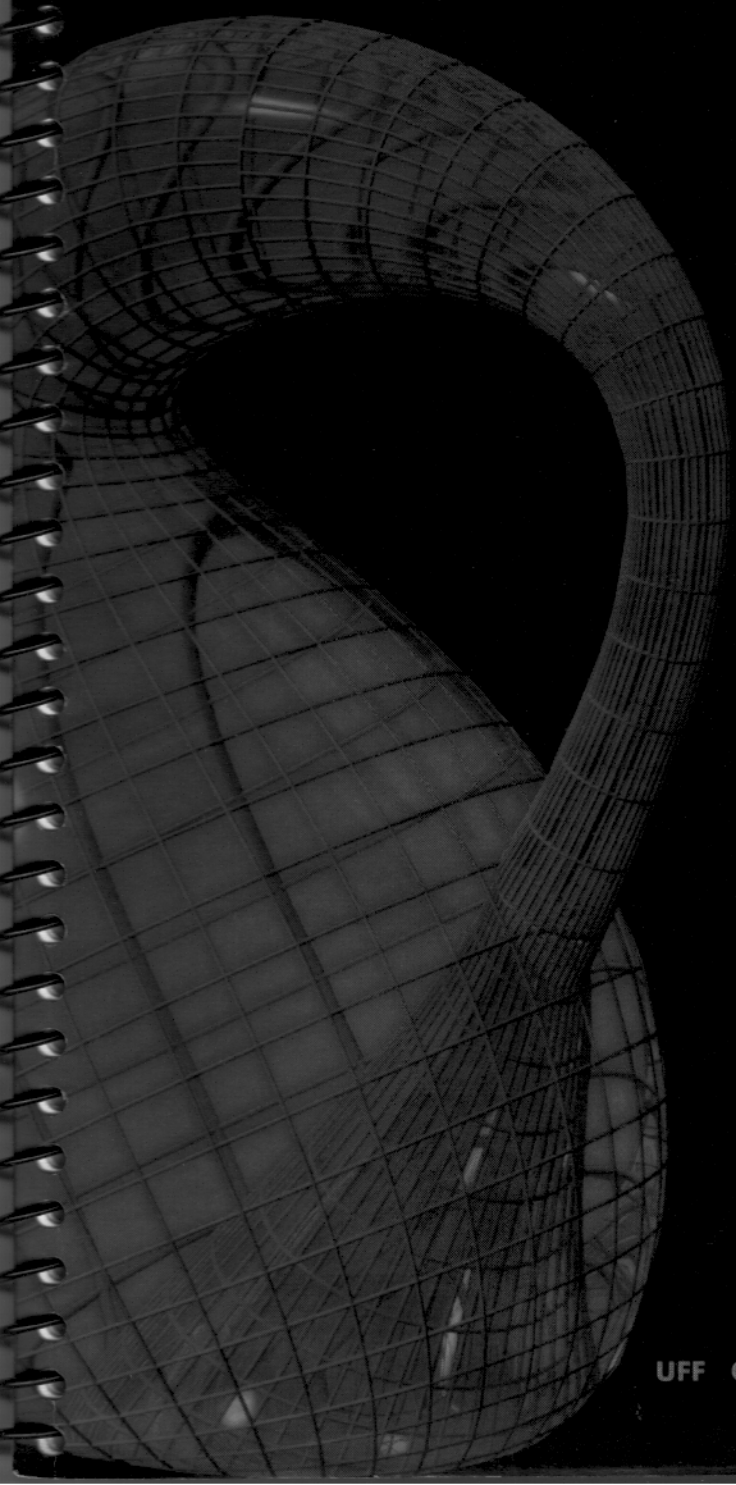

ABSTRACTS

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