Departamento de Matemática

Centro de Matemática e Aplicações

Seminário

Harmonic maps into G2/SO(4) and their twistor lifts

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Resumo

Given an inner Riemannian symmetric space, it is known that the flag manifolds canonically fibered over this space sit in a natural way inside its twistor space. It is also known that a harmonic map from a surface to an inner Riemannian symmetric space of classical type has a twistor lift into such a flag manifold if and only if it is nilconformal, meaning that its derivative is nilpotent. In this talk I will show that this result can be generalised to harmonic maps into the exceptional inner symmetric space $G_2/SO(4)$. I will describe the structure of the canonically fibered flag manifolds over this space and the construction of the twistor lifts of nilconformal harmonic maps. I will also show how almost complex maps into S^6 can be used to construct harmonic maps into $G_2/SO(4)$.

The talk will be based on joint work with John C. Wood.

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