

# On flows of $SU(2)$ -structures

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An  $SU(2)$ -structure on a 4-manifold  $M$  is given a triple of 2-forms satisfying certain algebraic conditions: this is equivalent to saying that  $M$  is almost hyper-Hermitian manifold. In this talk I want to report on an ongoing joint work with Henrique Sá Earp on the classification of flows of  $SU(2)$ -structures. In particular, we shall exhibit short time existence and uniqueness for a class of such flows. This work presents the simplest non-trivial case in a more ambitious programme to classify flows of general H-structures. Time permitting, I will also explain how these ideas can be extended to other H-structures (in particular, this was recently done in the G2 case by Dwivedi-Gianniotis-Karigiannis).