



# Seminario de Geometría y Topología

## The space of almost complex 2-spheres in the 6-sphere

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**Abstract.** An almost complex map from the 2-sphere to the 6-sphere is a "holomorphic" map (i.e. whose differential commutes with the (almost-)complex structures) with respect to the usual complex structure of the 2-sphere and the almost complex structure of the six sphere inherited from the octonions. Such maps are, in particular, harmonic, and their area is known to be  $4\pi d$ , where  $d$  is a positive integer. I will study the moduli space of almost complex maps from the 2-sphere to the 6-sphere of a given area, calculate the dimension of this space, and construct explicit examples for every value of  $d$ . In the process we will find some interesting characterizations of the almost complex condition.

Lugar: Universidad Complutense de Madrid  
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Departamento de Geometría y Topología, Sala 225  
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