CENTRO DE MATEMÁTICA
UNIVERSIDADE DO PORTO

GEOMETRY AND TOPOLOGY SEMINAR

Wallach spaces and Dirac operators

Ana Ferreira

Universidade do Minho / CMAT

Abstract. Generalized Wallach spaces are homogeneous spaces of type III, sometimes also called tri-symmetric spaces in the literature. The 'original' Wallach spaces are those of positive sectional curvature and there exist only three of them in dimensions 6, 12 and 24. The three cases are related to the complex, quarternion and octonion division algebras, respectively. The 6-dimensional Wallach space is a flag manifold and has been intensively studied in the literature – it has the remarkable property of carrying both a Kahler and a nearly Kahler metric. In this talk, we will discuss these spaces and their properties. Time permitting, we will discuss their Dirac operators and show how the fact that these are spaces of split holonomy may lead to good estimates for the first eigenvalue. This is joint work with Ilka Agricola and Stefan Vasilev (Marburg).

FRIDAY, JANUARY 18	15H30	ROOM 0.06

Please note the unsual room

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With the support of UID/MAT/00144/2019