

Oberseminar Geometrie und Topologie

Wintersemester
2019/2020

Prof. Lorenz Schwachhöfer

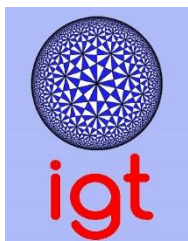
(Universität Dortmund)

Lagrangian submanifolds in strict nearly Kähler 6-manifolds

14. Januar 2020 – 16.15 Uhr

Seminarraum IGT, Raum 7.530, Pfaffenwaldring 57

Abstract: Lagrangian submanifolds in strict nearly Kähler 6-manifolds are related to special Lagrangian submanifolds in Calabi-Yau 6-manifolds and coassociative cones in G_2 -manifolds. We describe the space of deformations of Lagrangian submanifolds and show that it is locally a finite dimensional real analytic variety, whence infinitesimal Lagrangian deformations are smoothly obstructed if and only if they are formally obstructed. As an application, we relate our results to the description of Lagrangian submanifolds in the sphere S^6 with the standard nearly Kähler structure described by J. Lotay. This is based on joint work with Hông Vân Lê.



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