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Isospectral nearly Kähler manifolds

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In my talk I will give you a group theoretical Ansatz to construct isospectral pairs of nearly Kähler manifolds (for the Hodge Laplace and Dirac operator) in dimension higher than six as quotients of the Ledger-Obata space. The Ansatz is based on group representations of the symmetric group and some cohomological facts of this group. In stark contrast to higher dimensions, the given Ansatz does not produce examples in dimension six, dimension in which the mere construction of nearly Kähler manifolds remains being a big problem in the field.

If time allows I will present also current work with Gregor Weingart that concerns the spectrum of the Dirac operator for nearly Kähler manifolds in dimension six and some open problems.

Refereces.

<http://link.springer.com/article/10.1007/s10455-015-9470-4>

<https://arxiv.org/pdf/1607.01897.pdf> *

*) This is an outdated version.