



## Minisymposium 17 - Globale Analysis

### Rozansky–Witten Invariants and Quaternionic Kähler Manifolds

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A construction due to Rozansky and Witten associates a Dolbeault cohomology class on a hyperkähler manifold to every trivalent graph. For a graph with the right number of vertices this Dolbeault class will be of top degree so that it can be integrated over a compact manifold to produce a numerical invariant. The resulting Rozansky–Witten invariants of compact hyperkähler manifolds are non-trivial and include all characteristic numbers. In the talk I will generalize the basic construction in various ways to produce polynomial invariants of compact hyperkähler manifolds and invariants of compact quaternionic Kähler manifolds, which shed new light on the classification problem of these manifolds.