Essential spectrum of the complex Laplacian on product manifolds

FRANZ BERGER

Faculty of Mathematics, University of Vienna, Austria

I will compute the essential spectrum of the L^2 complex Laplacian on the product of two Hermitian manifolds. Applications to (non-) compactness of the associated $\overline{\partial}$-Neumann operator are given, and extensions to vector-valued differential forms are also available. The results are valid more generally for the tensor product of two Hilbert complexes.

References

[1] Berger, F. Essential spectrum of tensor product Hilbert complexes, and the $\overline{\partial}$-Neumann problem on product manifolds. *Journal of Functional Analysis*, to appear, 2016. `http://dx.doi.org/10.1016/j.jfa.2016.06.004`