

On the global properties of operators on compact Lie groups

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In this talk I will present some results on the global hypoellipticity and the global solvability for a class of differential operators on compact Lie groups. In view of Greenfield's and Wallach's conjecture, about the non-existence of globally hypoelliptic vector fields on compact manifolds different from tori, we study zero-order perturbations of vector fields as well as operators of Vekua-type.