

1022-53-101

David Eelbode* (deef@cage.UGent.be), Mathematical Institute of Charles University, Sokolovska 83, 186 75 Praha 8, Czech Rep, and **Vladimir Soucek** (soucek@karlin.mff.cuni.cz), Mathematical Institute of Charles University, Sokolovska 83, 186 75 Praha 8, Czech Rep. *Powers of the Dirac operator on the sphere*. Preliminary report.

In their paper [LR] basic function theoretical results for higher order spherical iterated Dirac operators are presented, such as fundamental solutions and integral formulae. In our talk, we will show that the operators in this paper are the conformally invariant powers of the Dirac operator on the sphere - which is not a priori clear from (ad hoc) definition in the paper.

To do so, we will speak about the ambient space construction [FG] of conformally invariant operators together with the application to the case of the sphere, see [BH], on the one hand, and the possibility to define these operators using tools from representation theory, see [BOO], on the other hand.

[BH] Branson, T., Hong, D., Translation to bundle operators, arXiv:math/0606552.

[BOO] Branson, T., Olafsson, G., Orsted, B., Spectrum generating operators, and intertwining operators for representations induced from a maximal parabolic subgroup, J. Funct. Anal. 135, 1996, pp. 163-205.

[FG] Fefferman, C., Graham, C.R., Conformal Invariants, Eli Cartan et les Mathematiques d'aujourd'hui Asterisque (Societe Mathematique de France, Paris), 1996, pp. 163-205.

[LR] Liu, H., Ryan, J., Clifford analysis techniques for Spherical PDE, J. Fourier Anal. Appl. 8 (6), 2002, pp. 535-564. (Received September 11, 2006)