A K-THEORETIC PROOF OF BOUTET DE MONVEL'S INDEX THEOREM FOR BOUNDARY VALUE PROBLEMS

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The first goal of this talk is to explain how K-theory for C*-algebras can be used to express index theorems for elliptic operators. Then I plan to report on a new proof of Boutet de Monvel's index theorem for boundary value problems [1] that uses K-theoretic techniques. The talk is based on joint work with Nest, Schick and Schrohe [2, 3].

REFERENCES

[1] L. BOUTET DE MONVEL, *Boundary problems for pseudo-differential operators*, Acta Math. **126** (1971), 11-51.

[2] S. T. MELO, R. NEST & E. SCHROHE, *C*-structure and K-theory of Boutet de Monvel's algebra*, J. Reine Angew. Math **561** (2003), 145-175.

[3] S. T. MELO, T. SCHICK & E. SCHROHE, *A K-Theoretic Proof of Boutet de Monvel's Index Theorem for Boundary Value Problems*, http://br.arXiv.org/abs/math.KT/0403059, to appear in J. Reine Angew. Math.

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