Non-commutative geometry, index theory and mathematical physics. Abstracts from the workshop held July 8–14, 2018. (English) Zbl 1425.00097

Summary: Noncommutative geometry today is a new but mature branch of mathematics shedding light on many other areas from number theory to operator algebras. In the 2018 meeting two of these connections were high-lighted. For once, the applications to mathematical physics, in particular quantum field theory. Indeed, it was quantum theory which told us first that the world on small scales inherently is non-commutative. The second connection was to index theory with its applications in differential geometry. Here, non-commutative geometry provides the fine tools to obtain higher information.

MSC:
00B05 Collections of abstracts of lectures
00B25 Proceedings of conferences of miscellaneous specific interest
58B34 Noncommutative geometry (à la Connes)
81T75 Noncommutative geometry methods in quantum field theory
19K56 Index theory
58J20 Index theory and related fixed-point theorems on manifolds
58-06 Proceedings, conferences, collections, etc. pertaining to global analysis

Full Text: DOI

References:

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