Noncommutative geometry (NCG) is a branch of mathematics concerned with a geometric approach to algebraic structures, and geometric entities of certain noncommutative algebras, and with the construction of kinds, and give an interaction between the algebraic and geometric description of those via this duality. The Journal of Noncommutative Geometry covers the noncommutative world in all its aspects. It is devoted to publication of research articles which represent major advances in the area of noncommutative geometry and its applications to other fields of mathematics and theoretical physics. Topics covered include in particular: Hochschild and cyclic cohomology, K-theory and index theory, measure theory and topology of noncommutative spaces, operator algebras, spectral geometry of noncommutative spaces.

Noncommutative geometry applies ideas from geometry to mathematical structures determined by noncommuting variables. Within mathematics, it is a highly interdisciplinary subject drawing ideas and methods from many areas of mathematics and physics. Natural questions involving noncommuting variables arise in abundance in many parts of mathematics and quantum mathematical physics. On the basis of ideas and methods from algebraic topology and Riemannian geometry, as well as from the theory of operator algebras and from homological algebra, an extensive machinery has been developed which permits the formulation and investigation of the geometric properties of noncommutative structures. This includes K-theory, cyclic homology and the theory of spectral triples. Areas of intense research in recent years are related to topics such as index theory, quantum groups and Hopf algebras, the Novikov- and Baum-Connes conjectures as well as to the study of specific questions in other fields such as number theory, modular forms, topological dynamical systems, renormalization theory, theoretical high-energy physics and string theory. Many results elucidate important properties of fascinating specific classes of examples that arise in many applications.

The talks covered substantial new results and insights in several of the different areas in Noncommutative Geometry. The workshop was attended by 53 participants including 6 young researchers supported by the European Union. No keywords available for this article.

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