# Algebraic K-theory of Categories of Diagrams

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**Περίληψη**: *The Waldhausen K-theory of a category with cofibrations and weak equivalences is an infinite loop space that encodes important homotopical information about the category. It defines a functor that extends the algebraic K-theory of rings to categories of non-abelian origin. The main purpose of this talk will be to discuss Waldhausen's algebraic K-theory of spaces and present an approach based on the K-theory of Waldhausen categories of diagrams of based simplicial sets indexed by posets. Generalisations of this approach to suitable categories other than the category of based simplicial sets will also be discussed.*