

The project is devoted to the study of the lattice of closed operator ideals in the Banach algebra of bounded operators on a Banach space, its cardinality and structure.

The research in the area of the project, nowadays extensively studied in a close connection in particular to the study of complemented subspaces in Banach spaces and types of strictly singular operators, leads to better understanding of the structure of Banach spaces.

The project concentrates on new general criteria guaranteeing large cardinality of the lattice of closed operator ideals in terms of properties of the basis of the considered Banach space.

The project concerns also construction of Banach spaces with prescribed cardinality or structure of the lattice of closed operator ideals within the framework of the Banach spaces with "few" operators.