

The thesis consists of four research papers. The first three deal with the Choquet theory of function spaces. In Chapter 1, a theory on products and projective limits of function spaces is developed. It is shown that the product of simplicial spaces is a simplicial space. The stability of the space of maximal measures under continuous affine mappings is studied in Chapter 2. The third chapter employs results from the previous chapters to construct an example of a function space where the abstract Dirichlet problem is not solvable for any class of Baire- n functions with $n \in \mathbb{N}$. It is shown that such an example cannot be constructed via the space of harmonic functions. In the final chapter, the recently introduced class of sequentially Right Banach spaces is being investigated. Connections to other isomorphic properties of Banach spaces are established and several characterizations are given.