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**Dissertation title:**

Composition and Multiplication Operators between Distinct Orlicz Spaces

**Abstract:**

We analyze composition and multiplication operators between distinct Orlicz spaces with tools available within Orlicz space theory (the internal method) and in terms of inclusions between more general Musielak-Orlicz spaces (the external method). Continuity, uniform absolute continuity, compactness, surjectivity, closed range, finite rank, and Fredholmness of the operators are examined. It was possible to establish equivalent conditions for these properties, as well as various sufficient or necessary conditions. They involve properties of the convex functions generating Orlicz spaces, of the underlying measure spaces, and of the transformation between measure spaces inducing the composition operator or the real-valued function on a measure space inducing the multiplication operator. General measure spaces, non-atomic, and purely atomic measure spaces are considered, and the theorems are proved accordingly.

The dissertation consists of five chapters. The first presents basic notions and conventions used later. The second tackles continuity of the operators via the internal method. The third chapter applies the external method to continuity and surjectivity. The fourth provides theorems on uniform absolute continuity and compactness. The fifth deals with closed range, finite rank, and Fredholmness of the operators, employing the internal and the external method.

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