

Summary

The thesis studies the question how universal behavior is inherited by the Hadamard product. The type of universality that is considered here is universality by overconvergence; a definition will be given in chapter five.

The situation can be described as follows: Let f be a universal function, and let g be a given function. Is the Hadamard product of f and g universal again? This question will be studied in chapter six.

Starting with the Hadamard product for power series, a definition for a more general context must be provided. For plane open sets both containing the origin this has already been done. But in order to answer the above question, it becomes necessary to have a Hadamard product for functions that are not holomorphic at the origin. The elaboration of such a Hadamard product and its properties are the second central part of this thesis; chapter three will be concerned with them. The idea of the definition of such a Hadamard product will follow the case already known: The Hadamard product will be defined by a parameter integral. Crucial for this definition is the choice of appropriate integration curves; these will be introduced in chapter two.

By means of the Hadamard product's properties it is possible to prove the Hadamard multiplication theorem and the Borel-Okada theorem. A generalization of these theorems will be presented in chapter four.