

**Ion Chițescu**, *The Formula of Faà di Bruno: Old and New*

**Abstract:** The famous formula of F. Faà di Bruno, concerning higher order derivatives of compounded functions, is introduced. Using this formula, a new formula for higher order derivatives of inverse functions is introduced. This last formula is used in order to obtain another new formula for higher order derivatives of functions depending on other functions. This type of formula can be used, e.g. for studying parametric representations.

**Keywords:** generalized composition, generalized inverse, higher order derivatives.

**MSC 2010 Classification:** 26A04, 26A24.