

**ZMATH 2014b.00704**

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**Differentiable functions. L3, Masters, CAPES, Agregation. (Fonctions différentiables. L3, Masters, CAPES, Agrégation.)**

Bien Maîtriser les Mathématiques. Toulouse: Cépaduès-Éditions (ISBN 978-2-36493-075-9/pbk). iv, 146 p. (2013).

This work is an introductory course on differential calculus in vector spaces. The following subjects are presented: 1. Introduction: Normed spaces, linear (multilinear) continuous applications, canonic isomorphisms, series in Banach algebras; 2. Differentiable applications: linearity, composition of differentiable applications, Leibniz formula, partial derivatives, derivatives of higher order. 3. Mean value theorems: Rolle's theorem, the fundamental theorem of integral calculus. 4. Sequences and series of differentiable applications, Schwarz' theorem. There is a set of exercises at the end of each chapter. *Cristinel Mortici (Târgoviște)*

*Classification:* I45 I65 I55

*Keywords:* vector spaces; normed spaces; linear applications; Banach spaces; series; differentials; mean theorems