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Titolo	Mathematical Analysis : Functions of Several Real Variables and Applications / / by Nicola Fusco, Paolo Marcellini, Carlo Sbordone
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Collana	La Matematica per il 3+2, , 2038-5757 ; ; 137
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Nota di contenuto	1 Sequences and Series of Functions -- 2 Metric Spaces and Banach Spaces -- 3 Functions of Several Variables -- 4 Ordinary Differential Equations -- 5 Linear Differential Equations -- 6 Curves and Integrals Along Curves -- 7 Differential One-Forms -- 8 Multiple Integrals -- 9 The Lebesgue Integral -- 10 Surfaces and Surface Integrals -- 11 Implicit Functions -- 12 Manifold in R^n and k -Forms.
Sommario/riassunto	This work is a textbook on Mathematical Analysis written by expert lecturers in the field. This textbook, other than the classical differentiation and integration tools for functions of several real variables, metric spaces, ordinary differential equations, implicit function and so on, also provides opportunities to go deeper into certain topics: among them, the Ascoli-Arzelà theorem, the regularity of convex functions in R^n , L^p spaces and absolutely continuous functions, all topics that are paramount in modern Mathematical Analysis. Other instances include the Weierstrass theorem on polynomial approximation of continuous functions or Peano's existence theorem (typically only existence, without uniqueness) for nonlinear ODEs and systems under general assumptions. The content is discussed in an elementary way and, at a successive stage, some topics are examined from several, more penetrating, angles. The agile organization of the subject matter helps instructors to

effortlessly determine which parts to present during lectures and where to stop. The authors believe that any textbook can contribute to the success of a lecture course only to a point, and the choices made by lecturers are decisive in this respect. The book is addressed to graduate or undergraduate honors students in Mathematics, Physics, Astronomy, Computer Science, Statistics and Probability, attending Mathematical Analysis courses at the Faculties of Science, Engineering, Economics and Architecture.
