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Title:	Multivariable Analysis
Authors:	Shirali, Satish (/jspui/browse?type=author&value=Shirali%2C+Satish) Vasudeva, H.L. (/jspui/browse?type=author&value=Vasudeva%2C+H.L.)
Keywords:	Advanced Calculus Multivariable Calculus Real Analysis
Issue Date:	2011
Publisher:	Springer London Ltd
Abstract:	This book provides a rigorous treatment of multivariable differential and integral calculus. Implicit function theorem and the inverse function theorem based on total derivatives is explained along with the results and the connection to solving systems of equations. There is an extensive treatment of extrema, including constrained extrema and Lagrange multipliers, covering both first order necessary conditions and second order sufficient conditions. The material on Riemann integration in n dimensions, being delicate by its very nature, is discussed in detail. Differential forms and the general Stokes' Theorem are expounded in the last chapter. With a focus on clarity rather than brevity, this text gives clear motivation, definitions and examples with transparent proofs. Much of the material included is published for the first time in textbook form, for example Schwarz' Theorem in Chapter 2 and double sequences and sufficient conditions for constrained extrema in Chapter 4. A wide selection of problems, ranging from simple to more challenging, are included with carefully formed solutions. Ideal as a classroom text or a self study resource for students, this book will appeal to higher level undergraduates in Mathematics.
URI:	http://mathdl.maa.org/mathDL/19/?pa=reviews&sa=viewBook&bookId=71924 (http://mathdl.maa.org/mathDL/19/?pa=reviews&sa=viewBook&bookId=71924)
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