F. and R. Nevanlinna

Absolute Analysis

Translated from the German by Phillipp Emig

With 5 Figures



Table of Contents

Intr	oduction	1
T.	Linear Algebra	4
	§ 1. The Linear Space with Real Multiplier Domain	4
	§ 2. Finite Dimensional Linear Spaces	10
	3. Linear Mappings	15
	4. Bilinear and Quadratic Functions	26
	5. Multilinear Functions	41
	6. Metrization of Affine Spaces	56
H.	Differential Calculus	74
		-
	1. Derivatives and Differentials	74 90
	2. Taylor's Formula	95
	3. Fatual Differentiation	99
	3 4. Implicit Functions	97
III.	Integral Calculus	118
	1. The Affine Integral	
	2. Theorem of Stokes	
	3. Applications of Stokes's Theorem	140
IV.	Differential Equations	148
	1. Normal Systems	148
	2. The General Differential Equation of First Order	
	3. The Linear Differential Equation of Order One	163
V.	Theory of Curves and Surfaces	181
	1. Regular Curves and Surfaces	
	2. Curve Theory	
	3. Surface Theory	
	4. Vectors and Tensors	
	5 Integration of the Derivative Formulas	
	6. Theorema Egregium	
	7. Parallel Translation	
	8. The Gauss-Bonnet Theorem	2 40
VI.	Riemannian Geometry	247
	1. Affine Differential Geometry	 248
	2. Riemannian Geometry	257
Bib!	ography	
	•	
rnae	K	204