

Contents

Introduction	1
1 Preludes in Analysis	6
2 The Origins of Cantorian Set Theory: Trigonometric Series, Real Numbers, and Derived Sets	30
3 Denumerability and Dimension	47
4 Cantor's Early Theory of Point Sets	77
5 The Mathematics of Cantor's <i>Grundlagen</i>	95
6 Cantor's Philosophy of the Infinite	120
7 From the <i>Grundlagen</i> to the <i>Beiträge</i> , 1883–1895	149
8 The <i>Beiträge</i> , Part I: The Study of Simply-Ordered Sets	169
9 The <i>Beiträge</i> , Part II: The Study of Well-Ordered Sets	194
10 The Foundations and Philosophy of Cantorian Set Theory	219
11 The Paradoxes and Problems of Post-Cantorian Set Theory	240
12 Epilogue: The Significance of Cantor's Personality	271
Appendixes: Previously Unpublished Correspondence	303
Notes	315
Bibliography	361
Index	385