

List of Theorems, Lemmas and Definitions

Theorem	Page	Theorem	Page	Theorem	Page	Theorem	Page
1	19	20	98	39	168	59	259
2	19	21	102	40	169	60	267
3	21	22	103	41	179	61	281
4	23	23	106	42	193	62	284
5	24	24	107	43	194	63	287
6	26	25	111	44	204	64	288
7	32	26	112	45	205	65	294
8	61	27	113	46	205	66	295
9	62	28	113	47	205	67	314
10	62	29	116	48	217	68	314
11	72	30	117	49	228	69	319
12	77	31	124	50	228	70	335
13	83	31a	129	51	231	71	336
14	84	32	133	52	232	72	338
15	86	33	134	53	233	73	343
15a	87	34	135	54	234	74	344
16	88	35	136	55	242		
17	92	36	159	56	244		
18	93	37	160	57	250		
19	98	38	160	58	252		

Lemma	Page	Lemma	Page	Lemma	Page	Lemma	Page
1	20	22	59	43	117	64	171
2	20	23	63	44	118	65	172
3	21	24	70	45	120	66	174
4	24	25	70	46	126	67	174
5	25	26	70	47	126	68	177
6	25	27	71	48	134	69	178
7	25	28	74	49	139	70	180
8	27	29	74	50	140	71	195
9	37	30	77	51	151	72	196
10	41	31	78	52	152	73	202
11	51	32	79	53	152	74	204
12	53	33	82	54	153	75	219
13	53	34	90	55	153	76	219
14	53	35	91	56	156	77	219
15	54	36	96	57	157	78	220
16	55	37	97	58	162	79	220
17	55	38	101	59	165	80	221
18	56	39	105	60	168	81	221
19	58	40	108	61	168	82	222
20	59	41	110	62	170	83	223
21	59	42	110	63	170	84	224

Lemma	Page	Lemma	Page	Lemma	Page	Lemma	Page
85	225	94	239	103	280	112	332
86	226	95	240	104	281	113	332
87	227	96	241	105	287	114	333
88	230	97	246	106	293	115	341
89	231	98	247	107	308	116	342
90	236	99	248	108	309	117	342
91	236	100	253	109	311	118	342
92	237	101	273	110	330		
93	238	102	280	111	331		

Defi- nition	Page	Defi- nition	Page	Defi- nition	Page	Defi- nition	Page
1	17	7	20	12	157	18	220
2	18	7 _a	27	13	165	19	222
3	18	8	20	14	171	20	234
4	18	9	26	15	219	21	235
5	19	10	142	16	220	22	321
6	20	11	147	17	220	23	344

Bibliography

The following list is not complete. It contains only books and monographs which either touch the subjects of this treatise or their applications.

- Bohr, B., and E. T. Copson: *The Mathematical Theory of Huygens' Principle*, Oxford 1950.
- Bateman, H.: *Electrical and Optical Wave Motion*. New York 1955.
- Becker, R., and F. Sauter: *Theorie der Elektrizität*. Stuttgart 1959.
- Beckmann, B.: *Die Ausbreitung der elektromagnetischen Wellen*. Leipzig 1948.
- Bergmann, L., and H. Lassen: *Ausstrahlung, Ausbreitung und Aufnahme elektromagnetischer Wellen (Lehrbuch der drahtlosen Nachrichtentechnik)*. Berlin 1940.
- Borgnis, F., and C. Papas: *Randwertprobleme der Mikrowellenphysik*. Berlin 1955.
- Born, M., and E. Wolf: *Principles of Optics*. Oxford 1964.
- Bouwkamp, C. J.: *Diffraction Theory, Reports on Progress in Physics*, Vol. 17, 35 (1954).
- Bremmer, H.: *Propagation of Electromagnetic Waves, Handbuch der Physik*, Vol. 16, 423–638, Berlin 1958.
- de Broglie, L.: *Problèmes des Propagations Guidées des Ondes Electromagnétiques*. Paris 1951.
- Courant, R., and D. Hilbert: *Methods of Mathematical Physics*. New York 1966.
- Frank, P., and R. v. Mises: *Die Differential- und Integralgleichungen der Mechanik und Physik*. Braunschweig 1961.
- Günter, N. M.: *Die Potentialtheorie und ihre Anwendungen auf Grundaufgaben der mathematischen Physik*. Leipzig 1957.
- Hobson, E. W.: *The Theory of Spherical and Ellipsoidal Harmonics*. Cambridge 1931.
- Kahan, T.: *Les cavités électromagnétiques et leurs applications en radiophysique. Mémorial des Sciences Physiques*, Vol. 60, Paris 1956.
- Kline, M., and I. W. Kay: *Electromagnetic Theory and Geometrical Optics*. New York 1965.
- Kupradse, W. D.: *Randwertaufgaben der Schwingungstheorie und Integralgleichungen*. Berlin 1956.
- Landau, L. D., and E. M. Lifshitz: *Course of Theoretical Physics*, Vols. 2 and 8, Oxford 1962.
- Langer, R. E., ed.: *Electromagnetic Waves, Proc. of a Symposium Conducted by the Mathematics Research Center, U.S. Army, at the Univ. of Wisconsin, Madison* 1962.
- Langmuir, R. V.: *Electromagnetic Fields and Waves*. New York 1961.
- Lense, J.: *Kugelfunktionen*. Leipzig 1954.
- *Reihenentwicklungen in der mathematischen Physik*. Berlin 1953.
- Marcuvitz, N.: *Waveguide Handbook*. New York 1951.
- Page, L., and N. Adams: *Principles of Electricity*. New York 1945.

- Petrowski, I.: Lectures on Partial Differential Equations. New York 1961.
- Poincaré, H.: *Electricité et Optique*. Paris 1954.
- Poincelot, P.: *Précis d'Electromagnétisme Théorique*, Paris 1963.
- Rayleigh, Lord (Smith, J. W.): *The Theory of Sound*. New York 1945.
- Schaefer, C.: *Einführung in die Theoretische Physik*, Vol. 3/I, Berlin 1950.
- Schelkunoff, S. A.: *Electromagnetic Waves*. New York 1948.
- Slater, J., and N. Frank: *Electromagnetism*. New York 1947.
- Sommerfeld, A.: *Partial Differential Equations in Physics*. New York 1957.
- *Vorlesungen über Theoretische Physik*, Vols. 3 and 4, Leipzig 1961.
- Stratton, J. A.: *Electromagnetic Theory*. New York 1941.
- Wagner, K. W.: *Elektromagnetische Wellen*. Basel 1953.
- Zuhrt, H.: *Elektromagnetische Strahlungsfelder*. Berlin 1953.

Author and Subject Index

The pages in *italics* give the place where the subjects is treated in detail

- Addition theorem of spherical harmonics 53
Adjoint equations 329
— transformation 235
Alexandroff, P. 171
Alternatives, theorem of Fredholm's 242
Analysis of surface currents 142
Apparent charges 286
— currents 285, 295, 297
Apparently homogeneous space 285
Arc length 155
Asymptotic behavior, prescribed 115, 338
— conditions for entire solutions 99
— expansion 12
— laws 10
— — for Bessel and Hankel functions 69, 71, 77, 79
- Banach space** 218, 234
Basis 333
Bessel differential equation 68
— — —, fundamental system of 68, 75
Bessel functions 68, 70, 327
— —, asymptotic behavior 69, 79
— —, asymptotic expansion 71, 77
— —, zeroes 327
Boundary condition 273, 284, 331
— values 158, 195, 196, 201
— — problems 326
— — — at infinity 338
— — —, exterior problem 328, 336, 338
— — —, interior problem 328, 337, 338
Bounded transformation 219
- C-point of a radiation pattern 341
C-point of a radiation pattern, order 344
Chain 18
Charges 262, 295
—, apparent 286
Charges, electric 1
—, fictitious magnetic 16
—, first kind 5
—, second kind 6
—, line 7
—, magnetic 1
—, surface 5, 159
—, total 7
Chu, L. J. 133
Circuit number of a complex field relative to a curve 165
— — of a real field relative to a curve 344
Circularly polarized 340
Closed surface 18, 163
— —, fields on a 163
— regular region, eigenoscillations 327, 328
— — — with prescribed boundary values 326
Closure of the spherical harmonics 62
Compact sequence 219, 252
Complete reflection 328
Completely continuous transformation 220, 252, 259
Completeness of spherical harmonics 62
Conductivity, electric 2
—, infinite 261, 320
—, magnetic 2
Continuity equations 159
Coordinates on a surface 256
Covariant differentiation 151
Curl 136, 327
—, extended definition 20
—, usual definition 19
Currents, apparent 285, 295, 297
—, line 7
—, surface 5, 130, 142, 159, 210, 213, 261, 297, 329
—, volume 130, 137, 261, 293
Curvature, Gaussian 149
—, mean 149
Curve, regular 17, 35

- Dependence, linear 222
 Dielectric constant 2
 Differentiation, covariant 151
 Diffraction problems 251
 Dimension of a linear space 222, 239
 Dipoles 261
 Discontinuity relations 29, 32, 188,
 213, 214, 217, 298, 329, 325
 Distributive transformation 219
 Divergence 19, 24
 —, surface 154, 157, 319, 331
- Edges** 18
 Eigenfrequencies 327
 Eigenoscillations of regular regions 327
 — of the interior 337
 Eigenvalues of a tensor 257
 Eigenvectors of a tensor 257
 Electric charges 1
 — conductivity 2
 — currents 1, 142
 — energy 3
 — field 1
 — power 3
 Electrostatics 16
 Elements of a space 218
 Elliptically polarized 340
 Energy, electric 3
 —, flow of 4, 13, 14
 —, loss of 3
 —, magnetic 3
 Energy transport to infinity 10, 13, 14
 Entire solutions, asymptotic conditions 99
 Entire solutions of the reduced wave equation 95, 98
 Equicontinuous 253
 Erdélyi, A. 54
 Exhaustion, Kellogg's principle of 23
 Existence of solutions of the integral equation 295
 Existence of solutions for problem I 288
 — — — for problem II 297—320
 — — — for problem III 320—326
 Exterior problem 328
 Exterior problem, existence of solutions 336
 — —, uniqueness of solutions 336
- Fictitious magnetic charges 16
 — — current 16
 Field, electric 1
- Field, magnetic 1
 —, incident 264, 286, 297
 —, reflected 297, 317
 —, refracted 317
 Field on closed surfaces 163
 Flux through a curve 6
 Fredholm's alternatives 242
 — equations, solution of 243
 Frequency 1
 Functional determinant 34, 143, 144
 Fundamental system of Bessel's differential equation 68, 75
 Funk 54
- Gauss' theorem, extended version** 21
 — —, usual version 19
 Gaussian curvature 149
 Genus of a surface 170
 Gradient, extended form 27, 179, 182
 Green's theorem, extended version 26
- Hankel expansion** 74
 — functions 68
 Harmonic function, representation by spherical harmonics 63
 — functions 9
 — polynomials 49
 Hecke, E. 54
 Helmholtz wave equation 68, 79
 — — —, expansion of solutions at infinity 84
 — — —, expansion of solutions in finite regions 83
 — — —, iterated 105
 — — —, solutions 49, 82
 — — —, vector solutions 104
 Hermitian form 241
 — matrix 241
 Hertz, H. 1
 Hilbert space 234
 Hobson, E. W. 55
 Hölder, O. 41
 Hölder continuity 41
 Homogeneous integral equations 329
 — medium (space), electromagnetic waves 129
 — space 17, 264
 — —, apparently 285
 — —, source free 9
 Hopf, H. 171
 Huygens's principle 129

- Identity Operator** 227
Image space 230
Impressed forces 1
Incident field 264, 286, 297
Incoming waves 81
Index of a point 344
 — of a vector field 171
Infinite conductivity 261, 320
Inhomogeneous medium (space) 2, 260
Integral equations homogeneous 329
 — — of problem I 287
 — — of problem II 301
 — —, existence of solutions 295
 — —, singularities 305
 — —, solutions 316
 — —, system 303, 314
 — —, uniqueness of solutions 295
 — representation of electromagnetic waves 130
Interior, eigenoscillations of the 337
 —, existence of solutions 335
 —, uniqueness of solutions 331
 — problem 327
Invariant differentiation 151
Invariants of a surface 149, 181, 256
Inverse mapping 246
Inversion of linear transformations 227
Isolated L -point 343
Isolated zero 171
Iterated wave equation 11, 105
- Jacobian, see functional determinant**
Jump relations, see discontinuity relations
- Kellog, O. D.** 17, 19, 23, 41
Kelvin transformation 10
- L -point of a radiation pattern** 342
Laplace equation 49
 — —, system of special solutions 49
 — operator 16, 124
 — —, generalization 26
 — —, in polar coordinates 69
Lax, P. D. 243
Legendre polynomials 52, 54, 55
 — —, asymptotic behavior 58
Line charges 7
 — currents 7
 — element of a curve 35
Linear combination 223
 — dependence 222
- Linear relation** 217
 — space 218
 — —, dimension 220
 — subspace 222
 — transformation 217, 219
 — —, inversion 227
Linearly polarized 340
Local behavior of solutions of the wave equation 116
- Magnetic charges** 1
 — —, fictitious 16
 — conductivity 2
 — currents 1, 142
 — —, fictitious 16
 — energy 3
 — field 1
 — power 3
 — surface charges 7
Magnetostatics 16
Magnus, W. 71, 74, 77, 103
Mapping of linear spaces 230
 — of surface fields 256
Matrix, capacity 333
 — Hermitian 241
 — of a mapping 239
 — of an integral operator 252
Maxwell, J. C. 1
Maxwell equations 1
 — —, solutions with prescribed asymptotic behavior 338
Mean curvature 149
 — value equation 63, 85
 — — theorem of potential theory 63
Müller, Cl. 20, 55, 103, 111, 124, 243, 260, 328
- Nagy, B.** 218
Norm 218
Normal region 23
 — vector 18, 19
 — —, representation 34
Normalized wave equation 48, 79
 — — —, solutions 82
- Oberhettinger, F.** 71, 74
Operator, identity 227
Order of a C -point 344
Orthonormal system of spherical harmonics 51
Outgoing waves 81

- Parametrization of a curve 35
 — of a surface 33
 Pattern, radiation 10, 338
 Permeability 2
 Permittivity, see dielectric constant
 Poincaré, H. 171
 Poisson, S. D. 17
 Poisson's equation 17
 — —, solutions 17, 41
 Polar coordinates 8, 49
 Polarized, elliptically 340
 —, circularly 340
 —, linearly 340
 Polarization 339, 340, 341
 —, axes 340
 Polynomials, Legendre 52, 54, 55
 Positive definite Hermitian form 241
 — — — matrix 241
 Potential theory 9, 10, 17, 19, 41
 — —, mean value theorem 63
 Power, electric 3
 —, magnetic 3
 Poynting vector 2, 4, 13
 Principal polarization axes 340
 Problem I 262, 285
 —, existence of solution 288
 —, system of integral equations 287
 —, uniqueness of solution 266, 282
 Problem II 262
 —, existence of solution 297—320
 —, system of integral equations 301
 —, uniqueness of solution 267, 282
 Problem III 263, 320
 —, existence of solution 320—326
 —, system of integral equations 321
 —, uniqueness of solution 267, 284

 Radiation conditions 136, 140, 215,
 261, 282, 315, 338
 — —, Sommerfeld's 10, 81
 — —, weakened 266
 Radiation pattern 10, 338
 — —, C-point 341
 — —, L-point 342
 — —, polarization 341
 — — of a field 339
 Reduced wave equation 48, 49, 79
 — — — with k positive, real and
 constant 112
 — — — variable k 116
 Reflected field 317
 Reflection, complete 328

 Refracted field 317
 Region regular 19
 — normal 23
 Regular curve 17, 35
 — point relative to a regular surface 18
 — — — — a regular curve 18, 19
 — region 19
 — —, convergence of a sequence 20
 — surface 18
 — — element 17
 Rellich, F. 86
 Riesz, F. 218
 Rodrigues formula 55

 Saunders, W. K. 266
 Scalar product 234, 244, 252
 Schwarz, inequality 244
 Sequence, compact 219, 252
 Singularities, of systems of integral
 equations 305
 —, two dimensional 7
 Solution of Fredholm's equations 243
 — — — —, existence 243
 — — — —, uniqueness 234
 Solutions, linear space of 227
 Sommerfeld's radiation conditions 10,
 81, 290, 339
 Source free homogeneous medium 9
 Sources, periodically varying 10
 Space, apparently homogeneous 285
 —, dimension 222, 239
 —, elements 218
 —, finite dimensional 237
 —, homogeneous 17, 264
 —, inhomogeneous 2, 260
 —, linear 218
 —, —, dimension 222
 — of solutions 227
 Spherical harmonics 9, 49, 50, 80
 — —, closure 62
 — —, completeness 62
 — —, orthonormal system 51
 Stable, sequence of spaces 239
 Stationary process 16
 Stirling formula 76, 89
 Stokes' theorem 6, 158
 — —, extended form 24
 — —, usual form 19
 Stratton, J. A. 133
 Subspace, linear 220
 Surface charges 5, 159
 — —, magnetic 1

- Surface charges, magnetic of the second kind 7
- — of the first kind 5
 - — of the second kind 5
 - — (second kind) of a surface current 6
 - —, total 7
 - currents 5, 130, 159, 210, 213, 297
 - —, analysis of 142
 - —, to generate oscillations 261, 323
 - , closed 18, 163
 - coordinates 256
 - divergence 154, 157, 319, 331
 - element 18, 155
 - —, regular 17
 - field 142, 212
 - fields, mapping of 256
 - —, transformation of 256
 - , genus of 170
 - invariants 149, 181, 256
 - , parametrization of a surface 33
 - , regular 18
- Symmetric tensor 257
- Tangent vector to a curve** 19, 35
- Tangential components, jumps** 213
- normal system 173, 181, 302
- Tensors** 147, 257
- , eigenvalues 257
- Total charges** 7
- Transformation, adjoint** 235
- , bounded 219
 - , completely continuous 220, 252, 259
 - , distributive 219
 - , inversion of 227
 - , Kelvin 10
 - , linear 217, 219
 - matrix 239, 241
 - of linear spaces 218
 - of surface fields 256
 - of tensors 147
 - of vectors 147
- Triangle inequality** 218
- Uniqueness of solutions** 9
- — — for problem I 266, 282
 - — — for problem II 267, 282
 - — — for problem III 267, 284
 - — — of the boundary value problem 326, 337
 - — — of the integral equation 294
 - theorems 267, 331
- Vector solutions of the reduced wave equation** 104
- Vertices** 18
- Volume currents** 130, 137, 261, 293
- Watson, G. N.** 71, 74, 77, 327
- Wave equation** 48
- —, Helmholtz 48, 68, 79
 - —, iterated 11, 105
 - —, normalized 48, 79
 - —, reduced 48, 49, 79
 - —, scalar 9, 79
- Waves, incoming** 81
- , outgoing 81
- Weyl, H.** 20, 328
- Wintner, A.** 124
- Zero, isolated** 171
- Zeros of Bessel functions** 321

Die Grundlehren der mathematischen Wissenschaften in Einzeldarstellungen mit besonderer Berücksichtigung der Anwendungsgebiete

2. Knopp: Theorie und Anwendung der unendlichen Reihen. DM 48,—
3. Hurwitz: Vorlesungen über allgemeine Funktionentheorie und elliptische Funktionen. DM 49,—
4. Madelung: Die mathematischen Hilfsmittel des Physikers. DM 49,70
10. Schouten: Ricci-Calculus. DM 58,60
14. Klein: Elementarmathematik vom höheren Standpunkt aus. 1. Band: Arithmetik, Algebra, Analysis. DM 24,—
15. Klein: Elementarmathematik vom höheren Standpunkt aus. 2. Band: Geometrie. DM 24,—
16. Klein: Elementarmathematik vom höheren Standpunkt aus. 3. Band: Präzisions- und Approximationsmathematik. DM 19,80
20. Pólya/Szegő: Aufgaben und Lehrsätze aus der Analysis II: Funktionentheorie, Nullstellen, Polynome, Determinanten, Zahlentheorie. DM 38,—
22. Klein: Vorlesungen über höhere Geometrie. DM 28,—
26. Klein: Vorlesungen über nicht-euklidische Geometrie. DM 24,—
27. Hilbert/Ackermann: Grundzüge der theoretischen Logik. DM 38,—
30. Lichtenstein: Grundlagen der Hydromechanik. DM 38,—
31. Kellogg: Foundations of Potential Theory. DM 32,—
32. Reidemeister: Vorlesungen über Grundlagen der Geometrie. DM 18,—
38. Neumann: Mathematische Grundlagen der Quantenmechanik. DM 28,—
40. Hilbert/Bernays: Grundlagen der Mathematik I. DM 68,—
43. Neugebauer: Vorlesungen über Geschichte der antiken mathematischen Wissenschaften. 1. Band: Vorgriechische Mathematik. DM 48,—
50. Hilbert/Bernays: Grundlagen der Mathematik II. DM 68,—
52. Magnus/Oberhettinger/Soni: Formulas and Theorems for the Special Functions of Mathematical Physics. DM 66,—
57. Hamel: Theoretische Mechanik. DM 84,—
58. Blaschke/Reichardt: Einführung in die Differentialgeometrie. DM 24,—
59. Hasse: Vorlesungen über Zahlentheorie. DM 69,—
60. Collatz: The Numerical Treatment of Differential Equations. DM 78,—
61. Maak: Fastperiodische Funktionen. DM 38,—
62. Sauer: Anfangswertprobleme bei partiellen Differentialgleichungen. DM 41,—
64. Nevanlinna: Uniformisierung. DM 49,50
66. Bieberbach: Theorie der gewöhnlichen Differentialgleichungen. DM 58,50
68. Aumann: Reelle Funktionen. DM 68,—
69. Schmidt: Mathematische Gesetze der Logik I. DM 79,—
71. Meixner/Schäffe: Mathiesche Funktionen und Sphäroidfunktionen mit Anwendungen auf physikalische und technische Probleme. DM 52,60
73. Hermes: Einführung in die Verbandstheorie. DM 46,—
74. Boerner: Darstellungen von Gruppen. DM 58,—
75. Rado/Reichelderfer: Continuous Transformations in Analysis, with an Introduction to Algebraic Topology. DM 59,60
76. Tricomi: Vorlesungen über Orthogonalreihen. 2. Aufl. in Vorbereitung
77. Behnke/Sommer: Theorie der analytischen Funktionen einer komplexen Veränderlichen. DM 79,—

78. Lorenzen: Einführung in die operative Logik und Mathematik. DM 54,—
80. Pickert: Projektive Ebenen. DM 48,60
81. Schneider: Einführung in die transzendenten Zahlen. DM 24,80
82. Specht: Gruppentheorie. DM 69,60
84. Conforto: Abelsche Funktionen und algebraische Geometrie. DM 41,80
86. Richter: Wahrscheinlichkeitstheorie. DM 68,—
87. van der Waerden: Mathematische Statistik. DM 49,60
88. Müller: Grundprobleme der mathematischen Theorie elektromagnetischer Schwingungen. DM 52,80
89. Pfluger: Theorie der Riemannschen Flächen. DM 39,20
90. Oberhettinger: Tabellen zur Fourier Transformation. DM 39,50
91. Prachar: Primzahlverteilung. DM 58,—
93. Hadwiger: Vorlesungen über Inhalt, Oberfläche und Isoperimetrie. DM 49,80
94. Funk: Variationsrechnung und ihre Anwendung in Physik und Technik. 2. Aufl. in Vorbereitung
95. Maeda: Kontinuierliche Geometrien. DM 39,—
97. Greub: Lineare Algebra. DM 39,20
98. Saxer: Versicherungsmathematik. 2. Teil. DM 48,60
99. Cassels: An Introduction to the Geometry of Numbers. DM 69,—
100. Koppenfels/Stallmann: Praxis der konformen Abbildung. DM 69,—
101. Rund: The Differential Geometry of Finsler Spaces. DM 59,60
103. Schütte: Beweistheorie. DM 48,—
104. Chung: Markov Chains with Stationary Transition Probabilities. DM 56,—
105. Rinow: Die innere Geometrie der metrischen Räume. DM 83,—
106. Scholz/Hasenjaeger: Grundzüge der mathematischen Logik. DM 98,—
107. Köthe: Topologische Lineare Räume I. DM 78,—
108. Dynkin: Die Grundlagen der Theorie der Markoffschen Prozesse. DM 33,80
110. Dinghas: Vorlesungen über Funktionentheorie. DM 69,—
111. Lions: Equations différentielles opérationnelles et problèmes aux limites. DM 64,—
112. Morgenstern/Szabó: Vorlesungen über theoretische Mechanik. DM 69,—
113. Meschkowski: Hilbertsche Räume mit Kernfunktion. DM 58,—
114. MacLane: Homology. DM 62,—
115. Hewitt/Ross: Abstract Harmonic Analysis. Vol. 1: Structure of Topological Groups, Integration Theory, Group Representations. DM 76,—
116. Hörmander: Linear Partial Differential Operators. DM 42,—
117. O'Meara: Introduction to Quadratic Forms. DM 48,—
118. Schäfke: Einführung in die Theorie der speziellen Funktionen der mathematischen Physik. DM 49,40
119. Harris: The Theory of Branching Processes. DM 36,—
120. Collatz: Funktionalanalysis und numerische Mathematik. DM 58,—
121. Dynkin: Markov Processes. DM 96,—
- 122.
123. Yosida: Functional Analysis. DM 66,—
124. Morgenstern: Einführung in die Wahrscheinlichkeitsrechnung und mathematische Statistik. DM 38,—
125. Itô/McKean: Diffusion Processes and Their Sample Paths. DM 58,—
126. Letho/Virtanen: Quasikonforme Abbildungen. DM 38,—
127. Hermes: Enumerability, Decidability, Computability. DM 39,—
128. Braun/Koecher: Jordan-Algebren. DM 48,—

129. Nikodým: The Mathematical Apparatus for Quantum-Theories. DM 144,—
130. Morrey: Multiple Integrals in the Calculus of Variations. DM 78,—
131. Hirzebruch: Topological Methods in Algebraic Geometry. DM 38,—
132. Kato: Perturbation Theory for Linear Operators. DM 79,20
133. Haupt/Künneth: Geometrische Ordnungen. DM 68,—
134. Huppert: Endliche Gruppen I. DM 156,—
135. Handbook for Automatic Computation. Vol. 1/Part a: Rutishauser: Description of ALGOL 60. DM 58,—
136. Greub: Multilinear Algebra. DM 32,—
137. Handbook for Automatic Computation. Vol. 1/Part b: Grau/Hill/Langmaack: Translation of ALGOL 60. DM 64,—
138. Hahn: Stability of Motion. DM 72,—
139. Mathematische Hilfsmittel des Ingenieurs. Herausgeber: Sauer/Szabó. 1. Teil. DM 88,—
140. Mathematische Hilfsmittel des Ingenieurs. Herausgeber: Sauer/Szabó. 2. Teil. DM 136,—
141. Mathematische Hilfsmittel des Ingenieurs. Herausgeber: Sauer/Szabó. 3. Teil. DM 98,—
142. Mathematische Hilfsmittel des Ingenieurs. Herausgeber: Sauer/Szabó. 4. Teil. In Vorbereitung
143. Schur/Grunsky: Vorlesungen über Invariantentheorie. DM 32,—
144. Weil: Basic Number Theory. DM 48,—
145. Butzer/Berens: Semi-Groups of Operators and Approximation DM 56,—
146. Treves: Locally Convex Spaces and Linear Partial Differential Equations. DM 36,—
147. Lamotke: Semisimpliziale algebraische Topologie. DM 48,—
148. Chandrasekharan: Introduction to Analytic Number Theory. DM 28,—
149. Sario/Oikawa: Capacity Functions. DM 96,—
150. Iosifescu/Theodorescu: Random Processes and Learning. DM 68,—
151. Mandl: Analytical Treatment of One-dimensional Markov Processes. DM 36,—
152. Hewitt/Ross: Abstract Harmonic Analysis. Vol. II. In preparation
153. Federer: Geometric Measure Theory. DM 118,—
154. Singer: Bases in Banach Spaces I. In preparation
155. Müller: Foundations of the Mathematical Theory of Electromagnetic Waves. DM 58,—
156. van der Waerden: Mathematical Statistics. DM 68,—
157. Prohorov/Rozanov: Probability Theory. DM 68,—
159. Köthe: Topological Vector Spaces I. DM 78,—
160. Agrest/Maksimov: Theory of Incomplete Cylindrical Functions. In preparation
161. Bhatia/Szegö: Stability Theory of Dynamical Systems. In preparation
162. Nevanlinna: Analytical Functions. DM 76,—
163. Stoer/Witzgall: Convexity and Optimization in Finite Dimensions I. DM 54,—
164. Sario/Nakai: Classification Theory of Riemann Surfaces. DM 98,—
165. Mitrinović: Analytic Inequalities. In preparation
166. Grothendieck/Dieudonné: Eléments de Géométrie Algébrique. En préparation
167. Chandrasekharan: Arithmetical Functions. In preparation
168. Palamodov: Linear Differential Operators with Constant Coefficients. In preparation