Totally Geodesic Submanifolds of Grassmann Manifolds  p. 137
Curves with a Scalar Double Ratio  p. 143
Fourth Harmonic as a Geodesic Symmetry  p. 147
Manifold of Isotropic Planes  p. 148
Clifford Parallels  p. 150
Connection Between Clifford Parallels and Isoclinic Planes  p. 154
Matrix Double Ratio on the Lagrange-Grassmann Manifold  p. 155
Morse-Maslov-Arnol'd Index in the Leray-Kashivara Form  p. 158
Fourth Harmonic as an Isometry of the Lagrange-Grassmann Manifold  p. 162
Application of the Matrix Double Ratio to the Study of the Riccati Equation  p. 162
Complex Riccati Equations  p. 166
Cartan-Siegel Domains  p. 166
Klein-Poincare Upper Half-Plane and Generalized Siegel Upper Half-Plane  p. 174
Generalized Siegel Upper Half-Plane  p. 177
Siegel Half-Plane as a Symmetrical Space  p. 178
Action of Sp(n, $\mathbb{R}$) on the Boundary of the Siegel Half-Plane  p. 184
Cayley Transform  p. 185
Complexified Riccati Equation as a Flow on the Generalized Siegel Upper Half-Plane  p. 187
Flow on Cartan-Siegel Homogeneity Domains  p. 189
Riccati-Type Equation for a Linear System Whose Matrix Belongs to a Given Lie Algebra  p. 190
Flow on the Siegel Homogeneity Domain of Type I  p. 192
Flow on the Siegel Homogeneity Domain of Type II  p. 194
Flow on the Siegel Homogeneity Domain of Type IV  p. 196
Matrix Analog of the Schwarz Differential Operator  p. 198
Classical Schwarz Differential Operator  p. 200
Schwarz Operator and a Linear Second-Order Differential Equation  p. 202
Schwarz Operator and the Riccati Equation  p. 203
Matrix Analog of the Schwarz Operator  p. 205
Higher-Dimensional Calculus of Variations  p. 208
Minimal Surfaces  p. 208
Necessary Optimality Conditions for a Multiple Integral  p. 212
Euler Equation  p. 213
Second Variation  p. 215
Variational Equation  p. 216
Vector Bundles  p. 217
Distributions and the Frobenius Theorem  p. 219
Connection in a Linear Bundle  p. 227
Levi-Civita Connection  p. 230
Torsion and Curvature of a Connection of a Vector Bundle  p. 233
Nonnegativity Conditions of the Second Variation  p. 236
<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field Theory in the Weyl Form</td>
<td>240</td>
</tr>
<tr>
<td>Caratheodory Transformation</td>
<td>244</td>
</tr>
<tr>
<td>Condition for Realizability of the Caratheodory Transformation</td>
<td>247</td>
</tr>
<tr>
<td>Field Theory in the Caratheodory Form</td>
<td>248</td>
</tr>
<tr>
<td>On the Quadratic System of Partial Differential Equations Related to the Minimization Problem for a Multiple Integral</td>
<td>254</td>
</tr>
<tr>
<td>Riccati Equation in the Case of the Degenerate Legendre Condition</td>
<td>254</td>
</tr>
<tr>
<td>Reducing the Dirichlet Integral to the Integral of Its Principal Part</td>
<td>257</td>
</tr>
<tr>
<td>Relation of the Riccati Partial Differential Equation to the Euler Equation</td>
<td>261</td>
</tr>
<tr>
<td>Compactification of the Space on Which the Riccati Partial Differential Equation is Defined</td>
<td>263</td>
</tr>
<tr>
<td>Connection Defined by a Solution to the Riccati Partial Differential Equation</td>
<td>264</td>
</tr>
<tr>
<td>Potentiality Condition for Tensor Fields</td>
<td>270</td>
</tr>
<tr>
<td>Epilogue</td>
<td>272</td>
</tr>
<tr>
<td>Appendix to the English Edition</td>
<td>273</td>
</tr>
<tr>
<td>References</td>
<td>276</td>
</tr>
<tr>
<td>Index</td>
<td>282</td>
</tr>
</tbody>
</table>