

CONTENTS

§1.	Preliminary remarks on topological groups	1
§2.	Automorphism groups of bilinear forms	8
§3.	Geometry in the representation space	22
§4.	Symplectic geometry	31
§5.	Weakly symmetric Riemannian spaces	51
§6.	The Riemannian space of all positive matrices	63
§7.	A generalization of $J_g(X)$	84
§8.	The Riemannian space $\mathcal{L}_g \times \mathbb{R}/2\pi\mathbb{Z}$	103
§9.	The reduction theory of positive quadratic forms	122
§10.	Größen-characters of quadratic forms	140
§11.	The modular group of degree n	155
§12.	The fundamental domain of the modular group	165
§13.	Modular forms of degree n	181
§14.	Report on Eisenstein series of the modular group	197
§15.	Dirichlet series corresponding to modular forms	202
§16.	Zeta functions attached to quadratic forms	220
§17.	Selberg's zeta functions	253
§18.	Non-analytic Eisenstein series	300
§19.	The differential operator M_α	309
§20.	Final aspects	319
	References	326