## Table of contents

## Chapter I. Classical background.

§1. On the multidimensional arithmetic in the sense of	
E. Hecke.	p. 1
§2. Group theoretic intermission.	p. 10
§3. Weil's group and non-abelian L-functions.	p. 19
§4. On character sums extended over integral ideals.	p. 32
§5. On character sums extended over prime ideals.	p. 41
§6. Consequences of the Riemann Hypothesis.	p. 50
§7. Equidistribution problems.	p. 60
Appendix 1. Frobenius classes in Weil's groups.	p. 69
Appendix 2. Ideal classes and norm-forms.	p. 72
Chapter II. Scalar product of L-functions.	
§1. Definition and elementary properties of scalar products.	p. 78
§2. Digression: virtual characters of compact groups.	p. 87
§3. Analytic continuation of Euler products.	p. 94
§4. The natural boundary of $L(s,H)$ .	p. 99
§5. Explicit calculations related to scalar products.	p. 107
§6. Proof of the theorem 4.2.	p. 125
Chapter III. Ideals with equal norms and integral points	
on norm-form varieties.	
§1. On character sums extended over ideals having equal norms.	p. 141
§2. Equidistribution of ideals with equal norms.	p. 151
§3. Equidistribution of integral points in the algebraic	
sets defined by a system of norm-forms.	p. 160
Chapter IV. Remarks and comments.	p. 168
Literature cited.	p. 171
Index	p. 177