

## CONTENTS

Preface to the Second Edition .....	v
Preface to the First Edition .....	vii
PART ONE	
<b>1. INTRODUCTION</b> .....	<b>1</b>
1.1 Power of the $F$ -test .....	1
1.2 Range of the Charts .....	2
<b>2. EXAMPLES</b> .....	<b>5</b>
2.1 General Remarks .....	5
2.2 One-way Layout .....	7
2.3 Two-way Layout .....	12
2.4 Randomized Blocks .....	16
2.5 Latin Squares .....	19
2.6 Simple Linear and Quadratic Regression .....	22
2.7 Multivariate $t$ -tests .....	25
2.8 Fixed $\alpha$ on a Sphere .....	28
2.9 A Bayesian Approach .....	30
<b>3. BACKGROUND</b> .....	<b>33</b>
3.1 Tests of Hypotheses .....	33
3.2 The General Linear Hypothesis .....	35
3.3 Least Squares Estimate and the $F$ -test .....	36
3.4 The Canonical Form .....	37
3.5 Expressions for $\varphi$ .....	38
<b>4. LITERATURE SURVEY</b> .....	<b>41</b>
4.1 Tables of the Operating Characteristic .....	41
4.2 Tables of $\varphi$ .....	42
4.3 Curves of Constant $f_1$ or $f_2$ .....	43
4.4 Computer Programs .....	43

4.5 Special Purpose Charts and Tables .....	43
4.6 Stein's Two-sample Procedure .....	45
4.7 Error Rate .....	46
<b>5. DETAILS OF COMPUTATION .....</b>	<b>47</b>
5.1 Auxiliary Functions .....	47
5.2 Generation of Critical Values .....	50
5.3 Power Computation .....	51
5.4 Some More Recent Algorithms .....	53
5.5 Construction of the Charts .....	54
<b>6. INTERPOLATION IN TABLE 1 .....</b>	<b>57</b>
<b>REFERENCES .....</b>	<b>59</b>
Examples .....	59
Theoretical References .....	60
Previous Tables, Charts, and Programs .....	60
Computational Methods .....	62

## PART TWO

Table 1 – Critical Values of the $F$ -distribution .....	66
Table 2 – Critical Values of the $\chi^2$ -distribution .....	82
Table 3 – Critical Values of the $t$ -distribution .....	84

## PART THREE

Charts .....	87
Index .....	193