## Contents

(Bracketed numbers are from the Bibliography.)

## Preface xiii

The Classification of Wiener's Papers 2

P. Masani: Introduction and Acknowledgment 3

Bibliography of Norbert Wiener 9

Supplementary Bibliography 27

## ID

## Generalized Harmonic Analysis and Tauberian Theory

[23f]	Note on a new type of summability	31
	V. Beneš: Comments on [23f]	35
[24f]	The quadratic variation of a function and its Fourier coefficients	36
	V. Beneš: Comments on [24f]	59
[25c]	On the representation of functions by trigonometrical integrals	60
	V. Beneš: Comments on [25c]	102
[25d]	Verallgemeinerte trigonometrische Entwicklungen	103
	V. Beneš: Comments on [25d]	111
[26a]	The harmonic analysis of irregular motion	112
[26b]	The harmonic analysis of irregular motion (Second Paper)	135
[28a]	The spectrum of an arbitrary function	167
	S. Koizumi: Comments on [26a, b], [28d]	181

[30a]	Generalized harmonic analysis	183
	S. Koizumi: Commentary on the memoire [30a] on generalized harmonic analysis	325
	P. Masani: Commentary on the memoire [30a] on generalized harmonic analysis	333
[27a]	The spectrum of an array and its application to the study of the translation properties of a simple class of arithmetical functions, Part I (Part II: On the translation of a simple class	
	of arithmetical functions, by K. Mahler)	380
	P. Masani: Comments on [27a]	393
[26c]	The operational calculus	397
	L. Schwartz: Comments on [26c]	425
[29c]	Fourier analysis and asymptotic series	428
	P. Masani: Comments on [29c]	442
[25b]	The solution of a difference equation by trigonometrical inte-	
	grals	443
	G. Strang: Comments on [25b]	454
[27b]	A new definition of almost periodic functions	455
	F. Holland: Comments on [27b]	458
	C. Berenstein: Comments on [27b]	460
[29a]	Harmonic analysis and group theory	461
	F. Holland: Comments on [29a]	468
	C. Berenstein: Comments on [29a]	471
	KS. Lau: Comments on [29a]	472
[27c]	On a theorem of Bochner and Hardy	474
	H. R. Pitt: Comments on [27c]	480
[27d]	Une méthode nouvelle pour la démonstration des théorèmes de M. Tauber	481
	H. R. Pitt: Comments on [27d]	484
[28b]	A new method in Tauberian theorems	485
[~~~]	H. R. Pitt: Comments on [28b]	509
	L J	

[29b]	A type of Tauberian theorem applying to Fourier series	510
	H. R. Pitt: Comments on [29b]	518
[32a]	Tauberian theorems	519
[32b]	A note on Tauberian theorems	619
	H. R. Pitt: Commentary on the memoire [32a, b] on Tauberian theory	620
[33b]	A one-sided Tauberian theorem	624
	H. R. Pitt: Comments on [33b]	627
	J. Korevaar: Commentary on the Tauberian-theoretic papers [27c, d], [28b], [29b], [32a, b], [33b]	628
[32f]	Analytic properties of the characters of infinite Abelian groups, Abstract (with R. E. A. C. Paley)	636
[33c]	Characters of Abelian groups (with R. E. A. C. Paley)	637
	E. Hewitt: Comments on [32f], [33c]	642
[33d]	The total variation of $g(x + h) - g(x)$ (with R. C. Young)	643
[38b]	On absolutely convergent Fourier-Stieltjes transforms (with H. R. Pitt)	657
	W. Rudin: Comments on [33d], [38b]	674
	E. Hewitt: Comments on [38b]	675
[38c]	Fourier-Stieltjes transforms and singular infinite convolutions (with A. Wintner)	677
[39c]	On singular distributions (with A. Wintner)	687
	W. Rudin: Comments on [38c], [39c]	701
	E. Hewitt: Comments on [38c]	703
[39d]	Convergence properties of analytic functions of Fourier-Stieltjes transforms (with R. H. Cameron)	705
	W. Rudin: Comments on [39d]	718
	R. H. Cameron and I. Richards: Comments on [39d]	719
[37a]	Taylor's series of entire functions of smooth growth (with W. T. Martin)	721

[38d]	Taylor's series of functions of smooth growth in the unit circle (with W. T. Martin)	732
	W. Fuchs: Comments on [37a], [38d]	741
[39e]	A generalization of Ikehara's theorem (with H. R. Pitt)	742
[50a]	Some prime-number consequences of the Ikehara theorem (with L. Geller)	754
[56a]	On a local $L^2$ -variant of Ikehara's theorem (with A. Wintner)	758
[57b]	Notes on Pólya's and Turán's hypotheses concerning Liouville's factor (with A. Wintner)	765
[57c]	On the non-vanishing of Euler products (with A. Wintner)	774
	P. T. Bateman and H. G. Diamond: Commentary on the number-theoretic papers [39e], [50a], [56a], [57b, c]	782
[38e]	The historical background of harmonic analysis	794
	P. Masani: Comments on [38e]	807
	IE Classical Harmonic and Complex Analysis	
	Orthogonal developments, quasi-analyticity, gap theorems,	
	and Fourier transforms in the complex domain	
[22d]	The equivalence of expansions in terms of orthogonal functions (with J. L. Walsh)	813
	J. L. Walsh: Comments on [22d]	833
[25e]	Note on quasi-analytic functions	834
	J. W. Neuberger: Comments on [25e]	841
[27e]	On the closure of certain assemblages of trigonometrical functions	842
[34b]	A class of gap theorems	845

[35a]	Fabry's gap theorem	851
[36b]	Sur les séries de Fourier lacunaires. Théorèmes directs (with S. Mandelbrojt)	858
[36c]	Séries de Fourier lacunaires. Théorèmes inverses (with S. Mandelbrojt)	861
[36d]	Gap theorems	863
[36e]	A Tauberian gap theorem of Hardy and Littlewood	876
[36a]	A theorem of Carleman	884
	P. J. Koosis: Commentary on the gap-theoretic papers [27e], [34b], [35a] and [36a-e]	892
[47a]	Sur les fonctions indéfiniment dérivables sur une demi-droite (with S. Mandelbrojt)	909
	S. Mandelbrojt: Comments on [36b, c], [47a]	912
[29d]	Hermitian polynomials and Fourier analysis	914
	T. Hida: Comments on [29d]	918
[33e]	Notes on the theory and application of Fourier transforms (with R. E. A. C. Paley)	919
	J. W. Neuberger: Comments on [33e, Part I]	950
	R. P. Gosselin: Comments on [33e, Part II]	951
[38f]	Remarks on the classical inversion formula for the Laplace integral (with D. V. Widder)	952
	D. V. Widder: Comments on [38f]	955
[42a]	On the oscillation of the derivatives of a periodic function (with G. Pólya)	956
	R. Askey: Comments on [42a]	964
Index	of Papers and Commentaries	967