

Index

This index contains concepts and results which appear in the main text of this book. A name appears here only if it is commonly associated with a concept or a result. The Exercises are indexed only when a new concept (or definition) is introduced there.

- Alaoglu Theorem II.A.9
- algebra uniform I.B.10., III.I.1-4.
- almost everywhere convergence III.A.29, III.H.22ff
- approximation numbers III.G.1, III.G.7
- asymptotic distribution of a sequence III.C.7.
- Auerbach Lemma II.E.11, III.D.29
- ball Algebra III.D.30
- Banach Algebra I.B.10.
- Banach-Mazur distance II.E.6.ff
- Banach-Mazur theorem II.B.4.
- Banach-Saks theorem III.A.27.
- Banach-Steinhaus Theorem I.A.7
- basis (Schauder) II.B.5., II.E.4., III.B.24., III.D.19.,25,26, III.E.17.
- basis boundedly complete II.C.Ex.8
- basis constant II.B.6.
- basis shrinking II.C.Ex.8
- basis unconditional II.D.8ff, II.D.13, III.F.10
- basic sequence II.B.13ff
- Bergman projection III.A.Ex.10
- Bergman space I.B.28., III.A.8.ff, III.H.27.ff
- big subspace of ℓ_∞^N III.D.Ex.12
- Biorthogonal Functionals II.B.7.
- Blaschke product I.B.23., III.E.4,5
- Bloch function III.B.Ex.13,14
- block basic sequence II.B.16.ff
- block basis II.D.11
- Bochner integrable functions III.B.28.
- boolean algebra of projections III.A.Ex.8
- bounded approximation property II.E.2., II.E.12., III.D.16., III.H.15.
- bounded extension property III.D.11.
- Bourgain's analytic projection III.I.10
- canonical factorisation I.B.23., III.E.4.
- capacity III.E.6.
- Carleman theorem III.A.25.
- character I.B.14.
- closed graph theorem I.A.6.
- complemented subspace II.B.5., III.F.10
- complemented subspace of ℓ_p III.A.6
- convex set I.A.1.

- convolution I.B.13.
- convolution operator II.A.Ex.9, II.C.Ex.4, III.F.12,30,32, Ex.9, III.G.18
- cotype III.A.17.ff, III.F.36,37
- cotype constant III.A.17
- cotype of L_1/H_1 III.I.14
- Demko lemma III.D.23
- decomposition method II.B.23., III.E.11.
- derivative radial III.B.Ex.11, III.D.Ex.11
- dilation theorem III.H.19.
- direct sums of Banach spaces II.B.19.ff
- Dirichlet kernel I.B.15.
- Dirichlet space III.E.6.
- disc algebra I.B.26., II.E.5., III.D.25.
- dual space I.A.1.
- Dunford-Pettis property III.D.33., III.I.3.
- Dunford-Pettis Theorem III.C.12.
- Eberlein-Šmulian theorem II.C.3.
- eigenvalue of an operator I.A.18., III.G.6,8,10,14,15,17,19,21
- eigenvector I.A.18.
- embedding canonical II.A.10., II.C.2.
- embedding isomorphic II.B.1., II.D.10,12, II.E.13.
- energy III.E.6.
- extension constant III.B.1.
- extreme point I.A.21.
- Faber-Schauder system II.B.12.
- factorisation canonical I.B.23., III.E.4.
- Fejer kernel I.B.16.
- finite representability II.E.15., III.C.16.
- finite representability of ℓ_1 III.C.16,18
- Fourier series II.D.9, III.C.8, III.E.9, III.F.13, III.G.14,22, III.H.8, III.F.17
- Franklin system III.D.21.ff, III.E.17., III.G.14.
- function inner I.B.23.
- function of weak type I.B.17.
- function outer I.B.23.
- Goldstine theorem II.A.13.
- Grothendieck's inequality III.F.14.
- Grothendieck's theorem III.F.7,29. III.G.12.
- Grothendieck-Maurey theorem III.F.35
- group, locally compact I.B.13.
- Haar measure I.B.13.
- Haar system II.B.9.ff, II.D.13., III.G.13.
- Hahn-Banach theorem I.A.8.ff
- Hankel matrix III.E.Ex.5
- Harmonic conjugate function I.B.22., III.E.16., III.H.8.
- Hausdorff-Young inequality III.G.22.
- Havin lemma III.C.20.
- Hilbert-Schmidt operators III.G.12,13
- Hille-Tamarkin operator III.G.22
- Hölder's inequality I.B.3.
- ideal III.D.1.
- ideal of operators III.F.1. III.G.3
- infinite divisibility of A III.E.12

- infinite divisibility of H_∞ III.E.13., III.E.18.
- infinite divisibility of L_1/H_1 III.E.13
- injective space III.B.1.
- inner function I.B.23.
- inner function on \mathbf{B}_d III.B.21
- interpolating sequence III.E.4.
- interpolation by polynomials III.B.23
- interpolation of Fourier coefficients III.E.9.
- invariant projection III.B.13.
- isomorphism II.B.1.
- Kahane's inequality III.A.18.
- Khinchine's inequality I.B.8.
- Krein-Milman theorem I.A.22.
- lacunary sequence III.E.9.
- linear extension operator III.D.10. III.E.3,5.
- linear extension theorem III.D.16.
- linear operator, positive III.H.Ex.6,7
- linear topological space I.A.1.
- locally convex linear topological space I.A.1.
- local reflexivity principle II.E.14., III.G.5.
- Lozinski-Kharshiladze theorem III.B.22., III.E.15.
- Marcinkiewicz interpolation theorem I.B.7.
- matrix banded III.D.23.
- Mazur theorem II.A.4.
- measure space separable I.B.1.
- Menchoff theorem III.C.6.
- Menchoff-Rademacher theorem III.H.22.
- M-ideal III.D.2.ff, III.D.8., III.E.2.
- Milutin theorem III.D.19.
- multiplicity of eigenvalue I.A.18.
- multipliers III.H.27.ff, III.I.17.
- Nikishin theorem III.H.6.
- norm, equivalent II.B.Ex.2
- open mapping theorem I.A.5.
- operator adjoint I.A.12.
- operator compact I.A.15., III.A.12., III.B.20., III.G.5,6.
- operator dual I.A.12.
- operator factors strongly through L_2 III.H.11,16., III.I.16.
- operator factors strongly through L_p III.H.9.ff, III.H.15
- operator factors strongly through $L_{p,\infty}$ III.H.4.ff
- operator Hilbert-Schmidt III.G.12,13
- operator Hille-Tamarkin III.G.22.
- operator invertible I.A.17.
- operator integral II.C.Ex.5, III.A.8,9,Ex.10,13,14, III.F.Ex.3,5, III.G.13,22,Ex.8,9
- operator of weak type (p-p) I.B.7.
- operator of weak type (1-1) III.I.11.
- operator p-absolutely summing III.F.2.ff, III.G.12,16,19., III.H.14,15,23,24.,
- operator p-integral III.F.21., III.I.12.
- operator p-nuclear III.F.19., III.G.17,18.
- operator polynomially bounded III.F.15-18.
- operator power compact I.A.16., III.G.6,15.
- operator power bounded III.F.15-18 operator sublinear III.H.1.ff

- operator weakly compact II.C.4.ff, III.D.34., III.F.9.
- operators related III.G.15.
- operators Bernstein III.D.Ex.9
- Orlicz property II.D.7., III.A.24.
- Orlicz theorem II.D.6.
- Orlicz, Paley, Sidon theorem III.F.30
- Ørno theorem III.H.17
- orthogonal series (general) III.A.25, III.G.13, III.H.18,22,26, III.F.18
- outer function I.B.12.
- Paley's inequality and operator I.B.24., III.F.6.
- Pelczyński's property III.D.33.
- Pietsch factorisation theorem III.F.8., III.F.22., III.H.17.
- Poisson kernel I.B.18.
- principle of local reflexivity II.E.14, III.G.5
- projection I.A.20.
- projection constant III.B.3.ff, III.B.15.ff, III.B.22.
- projection constant of ℓ_2 III.B.10.
- projection constant of n-dimensional space III.B.10.
- projections in A III.E.10,11
- projections onto n-codimensional subspaces III.B.11.
- projections onto n-dimensional subspaces of L_p III.B.10.
- projective tensor product III.B.25.ff
- quasi-norm I.A.2.
- Rademacher functions I.B.8.
- reflexive space II.A.14., II.C.5., III.C.1,18., III.H.13.
- reflexive subspaces of $L_1(\mu)$ III.C.18., III.H.13.
- reflexive subspaces of L_1/H_1 III.I.20,21,25
- related operators III.G.15.
- relative projection constant III.B.3.
- relatively weakly compact set II.C.1.ff, III.C.9.ff, III.D.31,34.
- rich subspace of $C(K)$ III.D.29.ff
- Riesz products II.A.Ex.7
- Riesz projection I.B.20., III.I.23,24.
- Riesz theorem I.B.11.
- Riesz F.M. theorem I.B.26., III.E.1.
- Riesz-Thorin theorem I.B.6.
- Rudin-Carleson theorem III.E.2.
- Schatten-von Neumann classes III.G.6,11., III.H.26
- Schmidt decomposition III.G.6,12.
- Schur lemma III.A.9.
- Schur theorem III.C.9.
- semi-embedding III.C.2.ff
- sequence weakly Cauchy II.A.1.ff
- sequence weakly convergent II.A.1.ff, II.B.18.
- series unconditionally convergent II.D.1.ff, II.D.6., III.A.21.
- series unconditionally convergent in measure III.H.17,20,25.
- series weakly unconditionally convergent II.D.3., III.D.31,35., III.F.2.
- set Λ_p III.I.27.
- Sidon set III.F.31.
- singular numbers III.6-8,10.
- Sobolev spaces I.B.30., III.A.3., III.D.30., III.F.11.
- space $C(K)$ III.f.8,12., III.G.12., III.H.14., III.I.3.

- space $C[0, 1]$ or $C(\mathbb{T})$ II.B.4., II.D.12., II.E.5., III.B.24., III.D.25., III.E.14.
- space $C^k(\mathbb{T}^s)$ III.D.30.
- space Dirichlet III.E.6.
- space F I.A.2, III.H.3
- space Hardy I.B.19.
- space H_∞ III.C.19., III.D.6., III.E.4,13,18., III.I.25,26.
- space $H_\infty + C$ III.D.6. ff
- space James' I.C.Ex.9
- space Lip_α I.B.29., III.D.27., III.G.14., III.H.26
- space L_∞ I.B.2., III.B.2,5., III.C.19., III.H.1. ff
- space L_p I.B.2., II.D.13., II.E.5., III.B.10., III.D.26., III.H.9. ff
- space ℓ_p^n II.E.8.
- space $L_{p,\infty}$ III.H.4. ff
- space L_1 II.D.10., III.F.7,10., III.G.12., III.H.13.
- space of homogenous polynomials on \mathbb{C}^d III.B.14. ff
- space of trigonometric polynomials II.E.9., III.B.22. ff, III.E.15.
- space π_λ II.E.3., III.D.15.
- space quasi-normed I.A.2.
- space reflexive II.A.14., II.C.5., III.C.1,18., III.H.13.
- space uniformly convex II.E.Ex.1,2
- space $W_p^k(\mathbb{T}^s)$ III.A.3., III.F.11.
- space weakly sequentially complete III.C.14., III.D.35.
- spectrum I.A.18.
- splines III.D.Ex.13
- stable law III.A.13., III.H.12.
- Steinhaus theorem III.C.14.
- Stone-Weierstrass theorem I.B.12
- subspace complemented I.A.20.
- system of convergence in measure for ℓ_2 III.H.Ex.13,16
- tensor product, projective III.B.25. ff, III.I.19,25
- theorem Banach-Mazur II.B.4.
- theorem Banach-Saks III.A.27
- theorem Banach-Steinhaus I.A.7.
- theorem closed graph I.A.6.
- theorem Carleman III.A.25.
- theorem dilation III.H.19.
- theorem Dunford-Pettis III.C.12.
- theorem Eberlein-Šmulian II.C.3.
- theorem Goldstine II.A.13.
- theorem Grothendieck III.F.7., III.F.29., III.G.12.
- theorem Grothendieck-Maurey III.F.35.
- theorem Hahn-Banach I.A.8. ff
- theorem Korovkin III.D.Ex.8
- theorem Krein-Milman I.A.22.
- theorem local reflexivity II.E.14., III.G.5.
- theorem Lozinski-Kharshiladze III.B.22., III.E.15.
- theorem Marcinkiewicz on interpolation I.B.7.
- theorem Mazur II.A.4.
- theorem Milutin III.D.19.
- theorem Menchoff III.C.6.
- theorem Menchoff-Rademacher III.H.22.
- theorem Nikishin III.H.6.

- theorem open mapping I.A.5.
- theorem Orlicz II.D.6.
- theorem Orlicz, Paley, Sidon III.F.30.
- theorem Orlicz-Pettis II.D.Ex.3
- theorem Ørno III.H.17.
- theorem Pietsch factorisation III.F.8,22., III.H.17.
- theorem Riesz I.B.11.
- theorem Riesz F.M. I.B.26., III.E.1.
- theorem Riesz-Thorin I.B.6.
- theorem Rudin-Carleson III.E.2.
- theorem Schur III.C.9.
- theorem Steinitz II.D.Ex.7
- theorem Stone-Weierstrass I.B.12.
- theorem weak basis II.B.Ex.16
- Toeplitz matrix III.D.Ex.6
- topology weak II.A.1.ff
- topology weak* II.A.6.ff
- trace duality III.F.26
- trigonometric conjugate function I.B.22.
- type III.A.17.ff, III.C.16.ff, III.H.6,11,12,14., III.I.20.
- type constant III.A.17.
- unconditional basis constant II.D.Ex.8
- uniform algebra I.B.10., III.I.1-4.
- uniform approximation property II.E.Ex.10
- uniform integrability III.C.11.
- Vallee Poussin de la, kernel I.B.17.
- weakly compact subset of L_1 III.D.12.
- weakly compact set
- weak sequential completeness III.C.12., III.D.35.
- Weyl set III.C.7.
- Weyl's inequality III.G.8,11.
- Zygmund class III.D.Ex.15