

Index

- Abel, 1
- action, 159
 - free, 166
- Adams, 165
- Agnew, 179
- Alaoglu, 157, 336, 429
- algebra
 - C^* , 342
 - Banach, 51, 61, 155, 329, 391
 - Banach unital, 329
 - commutative Banach, 329
 - convolution, 330, 342
 - disk, 330, 339, 349, 394
 - involutive, 391
 - of bounded holomorphic functions on D , 330
 - of multipliers, 422
 - sub-, 295
 - uniform, 338, 391
 - Wiener, 51, 325, 330, 340
- alphabet, 164, 166, 173, 228
- amplitudes, 123
- analytic, 309, 320, 323
- Ananda–Rau, 25
- annulus, 355
- approximate identity, 43, 96
- approximation numbers, 386
- approximation property, 392
- arithmetical progression, 302
- Atkinson, 433
- automorphism, 159
- axiom of choice, 150, 151, 167, 172, 177
- Baire, 103–106, 111, 115, 429
- Banach, 38, 115, 128, 143, 148, 336
- Bary, 22
- basis
 - canonical, 407, 443
 - Hilbertian, 361, 447
 - Malmqvist–Walsh, 427
 - orthonormal, 439
 - Riesz, 387
 - Schauder, 388, 430, 449, 451
 - unconditional, 449
- Bellay, 324
- Beppo Levi, 49, 362
- Bernal–González, 118
- Bernoulli, 135
- Bernstein, 34, 135, 308, 473
 - numbers, 390
- Besicovitch, 39
- Beurling, 332, 366
- bi-orthogonal, 387
- bilateral, 25
- binomial distribution, 138
- Blaschke, 359
- Blei–Körner, 137, 142
- Bočkarëv, 293, 324
- Boas, 445
- Bolzano, 182
- Bombieri, 287
- Borel, 287
 - set, 178, 289
- boundary, 333
- bounded, 176
- bounded variation, 194
- Bourgain, 71, 120, 287, 392, 419
- Burkholder, 324

- Cantor, 112
 - middle third set, 104, 178, 465
- Carathéodory, 487
- cardinality, 121, 135, 146, 151, 178, 446, 453
- Carleson, 27, 29, 68, 217, 289, 329, 353, 395, 412
 - norm, 413
 - window, 413, 425
- category, 104, 107
- Cauchy, 7, 75, 133, 220, 341
- Cegrell, 419
- Cellérier, 215
- Cesàro, 6, 8, 361
- character, 42, 294
 - of an algebra, 333
- circle method, 225
- circle of convergence, 31
- cluster set, 10, 20, 100
- Cohen, 293
- combinatorial dimension, 120, 136
- combinatorics, 141, 207
- compact, 125, 156, 176, 336, 437
- compactly supported, 47, 49, 56, 65
- compactness, 47, 53
- complemented, 134, 327, 392, 421, 429, 430, 436, 451
- completely multiplicative, 88
- cone, 441
- congruent, 162
- conjugate, 180
- connected component, 107–109, 333
- constant
 - interpolation, 370
 - uniform separation, 370
- continuity of translation, 41
- continuous lifting, 380
- convergence
 - f -convergence, 58
- convergent, 195, 205, 276, 289
- convex, 72, 142, 156, 429
 - body, 438
 - hull, 179, 456
- convolution, 42, 59, 196, 297
- corona, 392
- cotype 2, 131, 134, 147, 452
- countable, 103, 114, 446
- Curtis, 445
- Daboussi, 73
- Davenport, 293, 326
- de la Vallée–Poussin, 73
- Delange, 93
- diameter, 105
- diffeomorphism, 114
- differentiable
 - left, 109
 - right, 108
- dimension-free, 404
- Dirac, 64
- Dirichlet, 73, 220, 292
- distance
 - Banach–Mazur, 437
 - pseudo-hyperbolic, 369, 424, 482
- Dixmier, 180
- doubly disjoint, 141, 142
- Du Bois–Reymond, 326
- duality, 362, 407
- Duistermaat, 191, 195
- Dvoretzky, 29, 120, 132, 430, 437
- dyadic block, 306, 319
- Eberlein, 429
- element
 - Hermitian, 343, 344, 349, 351
 - normal, 343, 345
 - positive Hermitian, 346
- Enflo, 430, 451
- equation
 - integral, 429
 - partial differential, 396
- equidecomposable, 162
- equidistributed, 21, 282
- equivalence relation, 149
- Erdős, 29, 69, 83, 93, 326
- Euclid, 204
- Euler, 88, 219
- example
 - Berndtsson–Chang–Lin, 428
- expectation, 120
- exponential sums, 24
- extension
 - analytic, 188, 273
 - continuous linear, 431
- extremal, 352
- extremal point, 129
- family
 - bounded, 446
- Farey
 - sequence, 248
 - subdivision, 250
- Fatou, 9

- lemma, 477
- Fefferman, 354, 414
- Fejér, 2, 8
- Feller, 69
- field, 331, 334
- first category, 104
- Fischer, 217, 296
- fixed point, 156, 170
 - common, 156
- Fourier, 220
 - approximate formula, 316
 - coefficient, 146, 292, 360
 - expansion, 320
 - formula, 313
 - inversion formula, 42, 95
 - localised formula, 314
 - transform, 238
- fraction
 - continued, 195, 204, 289
- Fraenkel, 151, 172
- Fredholm, 433
- frequency
 - integer, 313, 322
 - real, 312
- Freud, 212, 314
- Frobenius, 7, 36
- Fubini, 42, 64, 95, 127, 297
- function
 - Γ , 66, 68, 244, 262
 - η , 227
 - ζ , 68, 221
 - Baire class one, 105
 - bounded, 393
 - characteristic, 70, 120
 - determinant, 136
 - elliptic, 198
 - entire, 331, 351
 - entire of exponential type, 350
 - generating, 220, 226
 - harmonic, 357
 - indicator, 152, 327
 - inner, 363
 - Jacobi, 193
 - Liouville, 68
 - Möbius, 462
 - maximal, 438
 - midconvex, 177
 - nowhere analytic, 118
 - outer, 365, 406
 - singular, 363
 - special, 244
 - square, 439
 - step, 152
 - subharmonic, 403
 - summatory, 222
 - trapezoid, 43
 - triangle, 43
 - upper semi-continuous, 105
- functional
 - G -invariant linear, 153
 - bilinear symmetric, 405
 - continuous linear, 153
 - linear, 152
 - linear continuous, 331
 - multiplicative, 64
 - positive linear, 151
- functional equation, 186
 - approximate, 268, 275, 279
 - of η , 228
 - of θ_0 , 188, 199
- Gamelin, 401, 402, 416
- Gauss
 - measure, 288
 - sums, 214
 - transformation, 288
- Gaussian
 - standard sequence, 121
- Gelfand, 41, 61, 65, 329, 331, 332, 352, 393
- generic, 103
- Gerver, 183, 191, 211
- Godefroy, 117
- golden ratio, 277, 289
- Gowers, 430, 434, 451
- Green, 356, 416
- group, 148, 334
 - θ_0 -modular, 191, 194
 - amenable, 154, 178
 - free, 164
 - free of rank 2, 164
 - free subgroup of rank 2, 167
 - modular, 188, 192, 223, 227
 - normal subgroup, 178
 - of sub-exponential growth, 173
 - paradoxical, 163
 - solvable, 158
 - superamenable, 173, 174
- Hölder, 123
- Hölderian, 34, 146, 186, 192, 325, 429
 - at x_0 , 192
- Hörmander, 353, 355, 395, 399, 422

- Haar, 294
- Hadamard, 17, 73, 128, 301
- Hadwiger, 10
- Hankel, 244
 - formula, 262, 264
 - operator, 353, 389
- Hardy, 6, 93, 182, 195, 211, 219, 292, 324
- Hardy and Littlewood, 267
- harmonic analysis, 137
- Hausdorff, 11, 162, 165
- Hayman, 376
- Hermite, 16, 445
- Hilbert, 121, 128, 145, 180
 - inequality, 327
 - Nullstellensatz, 417
- Hlawka, 89
- holomorphic, 75, 201, 296
- Holschneider, 191
- homeomorphism, 114, 349
- Hurwitz, 248
- hyperplane, 335
- ideal, 45, 46, 65, 72, 417
 - closed, 334, 347
 - finite type, 417
 - maximal, 330, 334
 - of operators, 435
 - principal, 422
 - proper, 393
 - two-sided, 334
- identity
 - Bézout, 412
 - Littlewood–Paley, 358, 372, 401, 409
 - Littlewood–Paley vectorial, 406, 410
 - parallelogram, 128
 - Parseval, 29, 49, 61, 277, 285, 296, 327, 362, 475
- Ikehara, 73, 80, 99, 102
- inaccessible cardinal, 172
- independence, 120, 122, 139
- index, 200, 341
- inequality
 - a priori*, 297
 - arithmetic–geometric mean, 241
 - Bernstein, 126, 350
 - Cauchy–Schwarz, 61, 66, 131, 295, 324, 409, 439
 - Hardy, 298
 - interpolation, 288
 - Jensen, 366
 - Khintchine, 122
 - Landau, 287
 - Ingham, 74, 82
 - integration by parts, 285
 - interpolating sequence, 353
 - interpolation, 429
 - inequality, 285
 - Lagrange, 367
 - quasi-isometric, 425
 - Schwarz–Pick, 367
- inverse, 114
 - left, 432
 - right, 432, 459
- invertible, 334
- involution, 342
- isometry, 134, 148, 158, 169, 181, 338, 345, 455
- isomorphism, 128, 436
- Itatsu, 184, 211
- Izumi, 314
- Jacobi, 267
- Jaffard, 191, 195
- James, 434
- Jean Saint Raymond, 452
- John, 438, 456
- Jones, 380
- König, 449
- Köpcke, 116
- Körner, 33
- Kadeč, 438
- Kahane, 314, 325
- Kakutani, 156
- Kalton, 445
- Karamata, 14
- Katsnelson V. E., 351
- Kennedy, 27, 36
- kernel, 26, 41, 448
 - analytic Dirichlet, 298
 - Dirichlet, 468
 - Fejér, 43, 50, 56, 297, 311, 326
 - of a homomorphism, 202
 - Poisson, 194, 196, 297
 - reproducing, 378
- Khintchine, 120, 127
- Kisliakov, 31, 432
- Klein, 154
- Klimes, 311, 324
- Kneser, 17
- Koksma, 21
- Kolmogorov, 120

- Komorowski, 451
- Konyagin, 292, 303
- Korevaar, 10
- Koszmider, 452
- Koszul, 398
- Kottman, 145
- Krein, 429
- Kronecker, 1, 217
 - symbol, 459
- Kuzmin, 22, 290

- Lévy, 341
- Lagrange, 281, 423
- Lambert, 26, 59, 69
- Landau, 9, 22, 44, 290
- Lang, 183
- Laplace, 354
- Lebesgue, 39, 120, 148, 161, 282, 289
- Lehmer, 224
- Levêque, 326
- Lewis, 456
- Lindelöf, 11
- Lindemann, 445
- Lindenstrauss, 429, 451
- linear fractional map, 194, 206
- linearisation, 17
- Liouville, 331
- Lipschitz, 308
- Littlewood, 6, 14, 60, 183, 195, 211, 224, 290, 292
 - L^1 conjecture, 286, 292, 300
- local, 52
- logarithmic integral, 92
- Lukashenko, 28
- Lusin, 29

- MacMahon, 224
- majorant property, 295, 299
- Markov, 120
- Marshall, 360
- martingale
 - dyadic, 324
 - transformation, 324
- Maurey, 430
- Mazur, 331
- Mazurkiewicz, 178
- McGehee, 292, 303, 324
- meagre, 104
- mean, 41, 151
- measurable
 - cardinal, 151
 - subset, 151
- measure, 103, 107
 - G -invariant, 151
- Borel, 442
- Carleson, 353, 371, 403, 414, 415, 425
- counting, 440
- finitely additive, 151
- Gauss, 476
- geometric Carleson, 413
- Haar, 357, 416
- idempotent, 298, 300
- Lebesgue, 476
- positive Borel, 413
- probability, 442
- singular, 364
- vanishing Carleson, 417
- Meise, 433
- meromorphic, 91, 100
- Mertens, 8
- metrizable, 391
- Meyer, 191
- Milman, 429
- Molk, 198
- monomials, 17
- Mordell, 268
- Morse, 179
- multiplicative, 88
- multiplier, 144

- Naftalevitch, 377, 378, 426
- Nagy, 180
- Naimark, 345
- Nazarov, 296, 312, 314, 324, 328
- negligible, 103, 114
- neighbourhood, 176
- Neumann, 52, 61, 331, 341
- Neville, 371
- Newman, 41, 61, 73, 78, 80, 92, 341, 445
- Nikolskii, 395, 420
- norm, 443
 - Hilbert–Schmidt, 412
 - nuclear, 456
 - quotient, 67
- number
 - algebraic, 437
 - Liouville, 105, 116, 438, 444
 - transcendental, 112, 165, 178, 437
- number theory
 - additive, 220
 - multiplicative, 220

- Olevskii, 293
- operator
 - adjoint, 144, 343
 - compact, 430, 451, 453
 - composition, 416
 - differential, 354
 - strictly singular, 436, 453
 - super-strictly singular, 453
 - theory, 420
 - unitary, 180
 - Volterra, 366
- oriented, 355
 - boundary, 356
- orthogonal, 300, 407
- orthogonality, 312
- oscillation, 105, 110
- Osofsky, 165
- Paley, 358
- paradox
 - Hausdorff–Banach–Tarski, 172
 - sphere, 163
- partition
 - of an integer, 219
 - of unity, 52, 53
- Pelczynski, 433
- Perron, 222
- Pichorides, 293
- Pietsch, 438
- Pigno, 292, 303, 324
- Pisier, 452
- Pitt, 57, 60
- Plancherel, 39, 66
- Poisson, 188
 - extension, 360
 - formula, 267
 - summation formula, 184, 188, 198, 211, 238
- Pollard, 69
- polynomial, 14, 340
 - Rudin–Shapiro, 449
 - trigonometric, 50, 54, 147, 213, 287, 308, 347
- polynomially convex hull, 348
- Pompeiu, 112, 115, 116
- power series
 - uniformly convergent, 143
- pre-compact, 450
- primitive, 110
- principle
 - Heisenberg uncertainty, 302, 304
 - maximum, 350, 399
 - Phragmén–Lindelöf, 350
- probability, 120
- problem of phases, 123
- product
 - Blaschke, 418, 420, 422
 - inner, 405, 437, 444
- projection
 - continuous, 301, 420
 - finite rank, 448
 - orthogonal, 447, 458
 - Paley, 455
- property
 - 2-ball, 454
- quadratic, 277, 281
- quotient, 155, 363
 - bounded partial, 281
 - complete, 205
 - partial, 195, 217, 276
- Rademacher, 121, 126, 128, 146, 224, 259
- Raikov, 329
- Ramanujan, 101, 219
- random variable, 120
 - p -stable, 134
 - Gaussian, 120, 133, 134
- random variables
 - identically distributed, 121
- random walk, 69
- Rao, 418
- Read, 430
- rearrangement
 - decreasing, 302
- reduced word, 164, 173
- reflexive, 129
- renewal, 69
- representation, 159, 180
 - unitary, 180
- reproducing kernel, 383
- reproducing kernel thesis, 378
- residual, 104, 110, 165
- residue, 268
- Riemann, 11, 73, 89, 183
 - function, 182, 292
 - integral, 341
 - sphere, 214
- Riemann–Lebesgue lemma, 42, 72, 79, 97
- Riesz
 - F., 145, 296
 - F. and M., 311
 - formula, 357, 358, 400, 403, 407

- M., 445
- system, 328
- ring
 - quotient, 334
- Rodriguez–Piazza, 71, 143
- Rosenthal, 430
- Rudin, 25, 293, 445
- Runge, 480
- Ryan, 191
- Salem, 123, 143, 147, 293, 328
 - lemma, 319
- Sarason, 366
- Schatten
 - class, 407
- Schlumprecht, 451
- Schoissengeier, 89
- Schur, 145
- Schwartz, 66, 188, 212
- sector, 350
- Selberg, 93, 225
- selectors, 120, 135
- semi-metric, 71
- semigroup, 157
- separable, 420, 424
- sequence
 - basic unconditional, 449
 - Blaschke, 359
 - interpolating, 353, 412, 414
 - recursive, 100
 - separated, 369
 - unconditional basic, 430
 - uniformly minimal, 385
 - uniformly separated, 369, 423
- series
 - Dirichlet, 9, 16, 23, 80, 101
 - Fourier, 9, 41, 429
 - lacunary, 3, 184
 - Neumann, 331
 - numerical, 1
 - power, 7, 27, 286, 291
- Shapiro, 27
- shift
 - forward, 364
 - operator, 353
- Shilov, 329
- Sidon set, 128, 301
- Siegel, 232, 233
- Sierpinski, 178
- skew-symmetric, 397
- skew-symmetry, 411
- slowly oscillating, 17, 57, 60, 67
- Smith, 292, 303, 324
- Smulyan, 429
- Snobar, 438
- Sobczyk, 445
- Solovay, 172
- space
 - Banach, 51, 429
 - Bergman, 417
 - complete metric, 429
 - decomposable, 430, 450
 - dual, 299, 362, 400, 414, 435, 438
 - Gowers–Maurey, 451
 - Hardy, 360
 - hereditarily indecomposable, 450
 - Hilbert, 405, 407
 - homogeneous, 450, 451
 - indecomposable, 450
 - model, 366, 387
 - Polish, 178
 - primary Banach, 435
 - reflexive, 454
 - separably injective, 454
 - topological vector, 156, 176
 - universal separable Banach, 434
- spectral radius, 331, 351
 - formula, 344
- spectrum, 64, 71, 294, 312, 330, 391, 421
 - of an algebra, 334
 - unidirectional, 310
- square of order s , 136
- square root, 346
- Stegeman, 303
- Stein, 354, 414
- Steinhaus, 177
- Stokes, 355, 356
- Stone, 345
- subgroup, 155
 - normal, 155
- subharmonicity, 372
- subset
 - equidecomposable, 167–169
 - paradoxical, 163, 168
- subspace
 - dense, 45
 - invariant, 364
- summability methods, 57, 58
- summable, 88
- super-additive, 142
- support, 47, 66, 97, 132, 315
- Szűsz, 27, 36

- Szarek, 449
Szegő, 405
- tail distribution, 283
Tannery, 198
Tao, 288
Tarski, 149, 162, 163, 175
Taschner, 89
Tauber, 1, 8–10, 14
Tauberian, 41, 220
Tchamitchian, 191
Tchebycheff, 92, 120, 136
theorem
 Abelian, 6
 Bézout, 347
 Banach isomorphism, 422
 Banach–Cantor–Bernstein, 170
 Banach–Steinhaus, 332
 Beurling, 353
 Borel, 367
 Cantor–Bernstein, 169
 Cantor–Bernstein for Banach spaces, 433
 Carleson embedding, 413
 closed graph, 144, 424
 corona, 329, 349, 353, 402, 404, 417
 dimension-free corona, 404
 duality of Fefferman–Stein, 415
 Dvoretzky, 437
 existence, 124
 factorisation, 361, 401
 Gelfand–Naimark, 345
 generalised Calkin, 435
 Hahn–Banach, 159, 331, 362
 Hahn–Banach geometric, 441
 high indices, 25
 Hruscev–Peller, 390
 John, 457
 Kadeč–Snobar, 431, 443, 457
 Kisliakov, 432
 Lindenstrauss–Tzafriri, 437, 451
 Müntz–Szász, 378
 Megretskii, Peller, Treil, 386
 Montel, 384
 Nehari, 386
 normal families, 395, 484
 open mapping, 132
 P. Beurling, 379, 459
 Paley, 448
 Paley–Wiener, 366
 Pietsch factorisation, 440
 prime number, 26, 37, 73, 88, 222
 Rademacher, 259
 residue, 221, 233, 423
 Riesz representation, 442
 Runge, 347
 Schwarz–Pick, 384
 Stone–Weierstrass, 345
 Tauberian, 7, 17, 57
 Wiener approximation, 40
 Wiener Tauberian, 40
theory
 Cauchy–Laurent, 332
 Riesz, 446
Tietze, 429
Titchmarsh, 367
Toeplitz, 353
Tolokonnikov, 404, 420
Tomczak–Jaegermann, 449
Tonelli, 130
topology
 base of, 336
 weak, 336
 weak-*, 155, 336
trace, 444
transform
 Fourier, 39, 41, 44, 73, 95, 131, 188, 328
 Gelfand, 337, 393
 Laplace, 74, 80, 96
transformation
 Abel, 4, 21, 59, 217, 290, 476
 bad, 202
 Fourier, 42
 Gauss, 288
 good, 202
 measure-preserving, 288
 of type i , 202
translation, 327
translation-invariant, 39
Treil, 419
Tsirelson, 451
type, 200
Tzafriri, 430
- Uchiyama, 144
Ulam, 151
unilateral, 25
universal, 133
upper bound
 essential, 454
Urysohn, 339
van der Corput, 20, 290

variance, 120	Wielandt, 14
Veech, 446	Wiener, 14, 26, 39, 73, 222, 341
Vinogradov, 31, 93	lemma, 329, 341
Vitali, 149	Wolff, 353, 395, 399, 416, 418, 419
Vogt, 433	
von Mangoldt, 26, 37, 221	Zalcwasser, 279, 283, 302
von Neumann, 154	Zermelo, 151, 172
	Zorn, 334
Waring problem, 225	Zygmund, 2
wavelet, 194, 314	class, 213
Weierstrass, 15, 182, 355	little class, 4, 213
Weyl, 282	