

Index

- C^* -algebra, 1
- H -separation property, 257
- L^1 -algebra, 14
- $[SIN]_H$ -group, 246
- $*$ -algebra, 1
- cb -multiplier norm, 180
- n -step nilpotent group, 8
- n -step solvable, 8
- p -adic integers, 11
- p -adic number field, 10

- abstract operator space, 283
- affine group, 9
- affine map, 141
- algebra
 - $*$ -, 1
 - C^* -, 1
 - $L^1(G)$, 14
 - Banach, 1
 - Banach-*, 1
 - Figà-Talamanca-Herz, 88
 - Fourier, 52
 - Fourier-Stieltjes, 44
 - group C^* -, 32
 - measure, 15
 - multiplier, 5
 - normed, 1
 - normed *, 1
 - of almost periodic functions, 11
 - reduced group C^* -, 32
 - regular, 3
 - Tauberian, 3
 - unital, 1
- almost connected group, 7
- almost periodic function, 11
- amenable Banach algebra, 281
- amenable group, 33
- amplification, 282
- antidiagonal, 129
- approximate diagonal, 280
- approximate identity, 2
 - bounded, 2
 - multiplier bounded, 191
 - sequential, 159
- ascending central series, 8

- Banach $*$ -algebra, 1
- Banach algebra, 1
 - amenable, 281
 - completely contractive, 284
 - operator amenable, 284
 - semisimple, 5
- bimodule
 - operator, 284
 - pseudo-unital, 281
- Bochner's theorem, 27
- Bohr compactification, 11
- bounded approximate diagonal, 285
- bounded approximate identity, 2

- character, 24
- closed coset ring, 277
 - of \mathbb{R} , 280
 - of \mathbb{T} , 280
 - of \mathbb{Z} , 280
- coefficient function, 29
- Cohen-Hewitt factorization theorem, 2
- commutator series, 8
- compact-free group, 250
- compactly generated group, 6
- completely bounded map, 282
- completely bounded multiplier, 179
- completely contractive Banach algebra, 284
- completely contractive map, 282
- completely positive map, 282
- concrete operator space, 282
- conjugate representation, 20
- convolution
 - of measures, 14
 - convolution of functions, 13
- coset ring, 277
- coset space, 6
- cyclic representation, 19

- Day's fixed point theorem, 34
- derivation, 280
- descending central series, 8
- diagonal

- bounded approximate, 285
 - virtual, 285
- diagonal operator, 280
- direct sum of representations, 268
- disjoint representations, 81
- Ditkin set, 205
- Douady's observation, 242
- dual
 - reduced, 32
- dual group, 24
 - of \mathbb{R} , 25
 - of \mathbb{T} , 25
 - of \mathbb{Z} , 25
 - of Ω_p , 25
 - of direct product, 25
- dual space topology, 32
- Euclidian motion group, 9
- extending subgroup, 238
- extension property, 238
- Fell group, 85
- Fell topology, 30
- Figà-Talamanca-Herz algebra, 88
- flip map, 129
- Folner's condition, 34
- formula
 - inversion, 27
 - Weil, 15
- Fourier algebra, 52
- Fourier transform, 26
- Fourier-Stieltjes algebra, 44
- Fourier-Stieltjes transform, 26, 45
- full host algebra, 90
- function
 - almost periodic, 11
 - coefficient, 29
 - modular, 13
 - negative definite, 23, 196
 - positive definite, 22
 - uniformly continuous, 11
- functional
 - positive, 28
- functions
 - convolution of, 13
- Gelfand homomorphism, 3
- Gelfand representation, 3
- Gelfand space, 3
- Gelfand transform, 3
- Gelfand-Mazur theorem, 2
- Gelfand-Naimark theorem, 2
- Gelfand-Raikov theorem, 19
- GNS-construction, 29
- GNS-representation, 29
- group
 - $[SIN]_H$, 246
 - $ax + b$, 9
 - n -step nilpotent, 8
 - n -step solvable, 8
 - affine, 9
 - almost connected, 7
 - amenable, 33
 - compact-free, 250
 - compactly generated, 6
 - dual, 24
 - Euclidian motion, 9
 - Fell, 85
 - Heisenberg, 10
 - integer Heisenberg, 10
 - locally compact, 6
 - locally finite, 35
 - maximally almost periodic, 11
 - nilpotent, 8
 - semidirect product, 9
 - SIN, 246
 - solvable, 8
 - unimodular, 13
- group C^* -algebra, 32
- Haar measure
 - on semi-direct product, 17
- Heisenberg group, 10
- host algebra, 90
- Host's idempotent theorem, 91
- hull-kernel topology, 31
- ideal
 - primitive, 31
- IN-group, 247
- induced representation, 21
- induction in stages, 21
- inner derivation, 280
- integer Heisenberg group, 10
- intertwining operator, 18
- inverse Fourier transform, 27
- inverse Fourier-Stieltjes transform, 27
- inversion formula, 27
- inversion theorem, 27
- involution, 1
- involution on $L^1(G)$, 14
- irreducible representation, 19
- Jacobson topology, 31
- Kakutani-Kodaira theorem, 11
- lattice, 193
- left Haar measure, 12
- left invariant mean, 33
- left invariant measure, 12
- left regular representation, 18
- local Ditkin set, 206
- local spectral set, 206
- local synthesis, 206
- locally compact group, 6
- locally finite group, 35
- Malliavin's theorem, x, 205

- map
 - affine, 141
 - completely bounded, 282
 - completely contractive, 282
 - completely positive, 282
 - flip, 129
 - piecewise affine, 142
- matricial norm, 283
- Mautner phenomenon, 264
- maximally almost periodic group, 11
- mean, 33
 - left invariant, 33
 - right invariant, 33
- measure
 - Radon, 12
- measure algebra, 15
- modular function, 13
- multiplier, 5
 - completely bounded, 179
- multiplier algebra, 5
- multiplier bounded approximate identity, 191
- negative definite function, 23, 196
- neutral subgroup, 260
- nilpotent group, 8
- normed $*$ -algebra, 1
- normed algebra, 1
- operator
 - intertwining, 18
- operator A -bimodule, 284
- operator amenable Banach algebra, 284
- operator space projective tensor product, 283
- Parseval identity, 27
- piecewise affine map, 142
- Plancherel theorem, 26
- Plancherel transform, 27
- Pontryagin duality theorem, 24
- positive definite function, 22
- positive linear functional, 28
- primitive ideal, 31
- primitive ideal space, 31
- product group, 16
- pseudo-unital bimodule, 281
- quasi-equivalent representations, 82
- radical of G , 7
- Radon measure, 12
- reduced dual, 32
- reduced group C^* -algebra, 32
- regular algebra, 3
- Reiter's condition (P_1), 35
- representation
 - conjugate, 20
 - cyclic, 19
 - GNS-, 29
 - irreducible, 19
 - left regular, 18
 - nondegenerate, 28
 - right regular, 18
 - support of, 30
 - uniformly bounded, 186
- representations
 - direct sum, 19, 268
 - quasi-equivalent, 82
 - similar, 186
 - tensor product, 20
 - weakly equivalent, 30
- right invariant mean, 33
- right regular representation, 18
- Ruan's representation theorem, 283
- Schoenberg's theorem, 23
- semidirect product group, 9
- semisimple Banach algebra, 5
- separating subgroup, 257
- separation property, 257
 - for cyclic subgroups, 257
- sequential approximate identity, 159
- series
 - ascending central, 8
 - commutator, 8
 - descending central, 8
- set
 - Ditkin, 205
 - local Ditkin, 206
 - local spectral, 206
 - of synthesis, 206
 - spectral, 206
- set of synthesis, 206
- similar representations, 186
- SIN-group, 246
- small H -invariant neighbourhoods, 246
- solvable group, 8
- space
 - abstract operator, 283
 - concrete operator, 282
- spectral set, 206
- spectrum, 3
- strong convergence to invariance, 34
- subgroup
 - extending, 238
 - neutral, 260
 - separating, 257
 - torsion, 250
- support of a representation, 30
- support of an operator, 62
- Tauberian algebra, 3
- tensor product
 - operator space projective, 283
- tensor product of representations, 20
- theorem
 - Bochner, 27

- Cohen-Hewitt factorization, 2
- Day's fixed point, 34
- Gelfand-Mazur, 2
- Gelfand-Naimark, 2
- Gelfand-Raikov, 19
- Host's idempotent, 91
- induction in stages, 21
- inversion, 27
- Kakutani-Kodaira, 11
- Malliavin, x, 205
- Plancherel, 26
- Pontryagin duality, 24
- Ruan's representation, 283
- Schoenberg, 23
- Wendel, 18
- topology
 - dual space, 32
 - Fell, 30
 - hull-kernel, 31
 - Jacobson, 31
- torsion subgroup, 250
- transform
 - Fourier, 26
 - Fourier-Stieltjes, 26
 - Gelfand, 3
 - inverse Fourier, 27
 - inverse Fourier-Stieltjes, 27
 - Plancherel, 27
- uniformly bounded representation, 186
- uniformly continuous function, 11
- unimodular group, 13
- unital algebra, 1
- virtual diagonal, 285
- weak containment, 30
- weakly equivalent representations, 30
- Weil's formula, 15
- Wendel's theorem, 18
- word length, 195