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Index of Symbols

C_T, 249
(a, b) determinant, 565
$(f, g)_i$ transvection , 565
$(i_k\, i_{k-1} \ldots i_1 | j_1\, j_2 \ldots j_k)$, 500
$A_{\lambda+\varrho}$, 29
$CH(x_1, \ldots, x_n)$, 442
$CH_n(x)$, 442
$C[V]^G$, 555
$C^\infty(M)$ algebra of C^∞ functions, 60
$C_m(\rho)$ Capelli polynomial, 56
C_λ supercanonical tableau, 497
C_{2n}, 128
$C_{i_1, i_2, \ldots, i_n}$ Schübert cell, 512
$c_\lambda(\mu)$ characters of symmetric group, 257
$D(w)$ record tableau, 477
D_A derivation, 63
E_6, E_7, E_8, 327
$e_i(x)$, 19
$F[X]$, 11
$Gr_n(V)$ Grassmann variety, 509
G^i term of lower central series, 99
$G^{(i)}$ term of derived series, 99
$G_s(L)$ simply connected group, 374
G_x, 5
gl_m Lie algebra of matrices, 53
$H_A(t)$ Hilbert series, 560
H_α root hyperplane, 316
$ht(\lambda)$, 2
$j_U(T)$, $v_U(T)$; $j^V(T)$, $v^V(T)$, 488
$k[V]$ coordinate ring, 167
$M \ltimes L$ semidirect product, 301
$M^\perp$ orthogonal subspace, 114
$M_n(F)$ the ring of matrices, 148
M_λ, 253
N_T normalizer of a torus T, 218
$O(n, \mathbb{C})$ complex orthogonal group, 90
$O(n, \mathbb{R})$ real orthogonal group, 90
$O(p, q; BbbR)$, 124
$O(V)$ orthogonal group, 117
$PGL(n, \mathbb{C})$, 34
$P[V]$, 16
$P^n(k)$ projective space, 168
$R(f, g)$, 27
$R^\vee$ spectrum, 147
$R_m(n)$, 440
r_R Reynold's operator, 554
$S(2)$, 564
$S(U)$ symmetric algebra, 109
$Sp(2n, \mathbb{C})$ symplectic group , 90
$Sp(n, \mathbb{H})$ compact symplectic group, 92
$Sp(V)$ symplectic group, 117
$SU(n, \mathbb{C})$ special unitary group, 90
S^1 circle group, 90
S_k, 20
$S^m(U)$ symmetric power, 109
S_n, 1
$S_\lambda(x)$, 29
S_{2n}, 446
$S_\lambda(V)$, 256
$sh(T)$ shape of the tableau, 481
$so(2n, \mathbb{C})$ Lie algebra of the orthogonal group, 93
$T(w)$ inserted tableau, 477
$T \overset{*}{\cong} T'$, 489
T_n torus, 183
$T_\lambda(V)$ representations of $O(V)$, 418

$V(x)$, 23
$V//G$ categorical quotient, 555
V^{-1} dual character, 139
V_λ, 527
$W(n)$ Weyl algebra, 38
W^λ, 527
$w_1 \overset{K}{\cong} w_2$ Knuth equivalence, 480
X/G, 4
X^G, 7
X^s symplectic transpose, 91
$[i_1, i_2, \ldots, i_n]$ Plücker coordinate, 501
$[x, y]$ commutator, 99
$\mathrm{ad}(x)$ adjoint, 61
$\mathrm{Bil}(U \times V, F)$ bilinear functions, 103
$\bigwedge U$ exterior algebra, 109
$Cl_Q(U)$, 126
Δ_{ij} polarization, 53
$\mathrm{End}(V)$, 17
$\mathrm{End}_G(V)$, 17
ϵ_σ, 28
$\Gamma(V, Q)$ Clifford group, 133
$GL(n, F)$, 12
$GL(V)$, 12
$\mathrm{hom}_G(U, V)$, 13
$\hat{G}$ character group, 138
R_T, 249
$\mathrm{Ind}_H^G N$ induced representation, 223
Λ_{ec}, Λ_{er}, 32
λ/μ skew diagram, 481
$\lambda \vdash n$, 2
$\langle \varphi, v \rangle 16$
$\mathcal{T}_G$ representative functions, 202
Φ^+ positive roots, 317
$\Psi_\mu(X) = \prod_i \mathrm{tr}(X^{h_i})$, 268
ψ_k, 20
$SO(n, \mathbb{C})$ special complex orthogonal group, 90
$SO(n, \mathbb{R})$ special real orthogonal group, 90
$\mathrm{Spin}(V)$ spin group, 135
$so(2n, F)$ Lie algebra, 118
$sp(2n, F)$ Lie algebra, 118
$sp(2n, \mathbb{C})$ Lie algebra of the symplectic group, 94
ϱ, 29
$\mathcal{L}(M)$ Lie algebra of vector fields, 60
$\mathcal{S}_\lambda$ formal Schur function, 494
$\mathbb{H}$ quaternions, 92
$U(n, \mathbb{C})$ unitary group, 90

negative roots, 317

Subject Index

1-parameter subgroup, 62
G-module, 12
λ-rings, 277

action
    of a group, 2
    rational, 171
additive group, 170
adjoint
    action, 73
    group, 86
    representation, 86
    symmetry, 438
adjunction, 116
Ado's theorem, 80, 308
affine variety, 167
algebra, 59
    exterior, 109
    with trace, 438
algebraic function, 167
alphabet, 108, 475
Amitsur–Levitski identity, 446
antilinear map, 121
antisymmetric tensors, 112
antisymmetrizer, 249
Aronhold, 246
    method, viii, 40
Ascoli–Arzelà, 204
associative form, 24
associativity of form, 89

Banach
    algebra, 206
    space, 206
basis of simple roots, 319
Bessel's inequality, 206
bi-tableau, 520
Bialynicki-Birula, 357
bilinear map, 102
binary
    forms, 563
    variables, 45
Binet's formula, 111
block matrices, 152
Borel
    fixed point theorem, 192
    subalgebras, 341
    subgroup, 190, 354
bounded operator, 206
boxes of a diagram, 248
bra-ket notation, 101
branching rule, 532
    for the symmetric group, 285
Bruhat
    cells, 361
    decomposition, 356
    order, 362, 505
Bézoutiant, 24

Capelli, 142
    element, 49
    identity, 45
Cartan
    criterion, 95, 97
    decomposition, 225
    integer, 313
    involution, 378

matrix, 322
subalgebra, 310
Cartan–Dieudonné theorem, 123
Casimir element, 295
categorical quotient, 555
Cauchy, 161
formulas, 31, 258, 270, 385, 403, 530
Cayley, 92
transform, 91
Ω process, 55
Cayley–Hamilton identity, 442
center, 148
central idempotent, 150
centralizer, 6, 147
character, 162, 183, 195
group, 183
ring, 196
characteristic Pfaffian, 447
Chevalley, 175
generators, 332
class function, 196
Clebsch–Gordan
coefficients, 496
formula, 45, 565
Clifford
algebras, 125
even Clifford algebra, 131
group, 133
Theorem, 221
coalgebra, 232
coassociative, 232
coboundary, 304
cocommutative, 232
cocycle, 303, 304
coding map, 447
Cohen–Macaulay, 561
cohomological method, 302
cohomology, 304
column
of a diagram, 248
partition, 249
shape, 248
tableaux, 475
commutator, 99
comorphism, 168
compact
form of a Lie algebra, 378
operators, 208
torus, 87
completely continuous operators, 208
complex algebraic, 91
complexification of a group, 234
conjugacy classes, 5
conjugate space, 121
constructible set, 177
content
of a double tableau, 522
of a tableau, 478
contragredient, 15
convergence in mean, 206
convex ordering, 320
convolution, 14
coordinate ring, 167
corner
inner, 483
outer, 483
coroots, 316
covariants, 564
covector, 244
Coxeter
groups, 330
relations, 330
crystallographic groups, 314
cycles, 4
cyclic
equivalence, 438
module, 148

decomposable tensors, 102
defining ideal, 167
derivation, 39
inner, 60
derived
group, 100
series
of a group, 99
of a Lie algebra, 88
descent, 493
determinantal varieties, 246, 405, 536
differential operators, 37
dihedral groups, 331
Dirac, 101
discriminant, 23
distribution
involutive, 77
on a manifold, 77
dominance order, 343
dominant, 177

Double Centralizer Theorem, 158
double
cosets, 4
standard tableau, 520
dual
equivalence, 488, 491
partition, 2
Dubnov–Ivanov–Nagata–Higman Theorem, 452
Dynkin diagrams, 324

Engel's theorem, 95
English notation, 248
envelope of $O(V)$, 396
equicontinuous, 204
equivariant mapping, 3
exponential map, 62

Fermions, 126
Ferrer diagram, 248
FFT
characteristic free, 536
for $SL(n, \mathbb{C})$, 387
for classical groups, 390
for matrices, 435
with involution, 437
for the linear group, 245
filtration of an algebra, 38
finite
reflection groups, 297
topology, 233
fixed point principle, 6
fixed points, 7
flag, 514
complete, 514
variety, 355
form
antisymmetric, 114
negative definite, 116
positive definite, 116
quadratic, 119
signature, 116
standard hyperbolic, 115
symmetric, 114
symplectic, 114, 115
formal ring
of symmetric functions, 22
formal Schur function, 494
free
algebra(s), 108, 438
Lie algebras, 143
nil algebra, 452
French notation, 248
Frobenius, 152, 257, 267
character, 262
reciprocity, 223
theorem, 78
function(s)
alternating function, 28
with finite support, 11
fundamental
chamber, 316
group, 371
representations, 422

general linear group, 12
generic
matrices, 441
point, 535
geometric invariant theory, 553
good filtration, 529
Gordan, 553
Gorenstein, 561
graded
algebra, 17
character, 263
Grassmann, 109
algebra, 109
variety, 366, 509
group algebra, 13
group schemes, 179

Haiman, 489
Haar measure, 197
height, 2
Hermitian form, 121
highest weight vector, 294
Hilbert, 157, 553
basis theorem, 560
Nullstellensatz, 168
series, 560
space, 121
5^{th} problem, 70
14^{th} problem, 554
Hochster, 562
homogeneous, 17
space, 4, 84

hook, 267
    formula, 267
Hopf, 237
    algebra(s), 105, 231
    ideal, 235
hyperbolic adjoint, 118

idealizer, 149
idempotent, 149
    orthogonal, 153
    primitive, 163
immersion, 77
induced
    characters, 223
    representation, 15
infinitesimal generator, 62, 65
inseparable map, 177
inserted tableau, 478
inserting a letter
    in a standard column, 476
integral kernel, 207
intertwiners, 3, 13
invariant
    absolute, 534
    points, 7
    vector field, 72
inversion, 320
involution, 116
isobaric, 567
isotropic
    flags, 366
    Grassmann variety, 366
    subspace, 115
isotypic component, 156
Iwasawa decomposition, 381

Jacobi identity, 59
Jacobson density theorem, 161
jeu de taquin, 481
Jordan decomposition, 95
Jordan–Chevalley decomposition, 174
juxtaposition, 108

kernel of a form, 115
Killing form, 89
Klein quadric, 503
Knuth equivalence, 479
Kostant, 367
Kostka number, 541
Kostka numbers, 261
Kronecker, 80

Lagrange's interpolation, 97
Lakshmibai, 516
lattice permutation, 497
Levi decomposition, 305
Lie algebra, 53, 59
    abelian, 87
    nilpotent, 88
    semisimple, 89
    simple, 89
    solvable, 88
Lie
    bracket, 59
    derivative, 68
    groups, 70
    product, 59
Lie's theorem, 95, 96
Lie–Kolchin theorem, 192
linear
    action, 11
    algebraic group, 170
    differential operator, 61
    group, 70, 169
linearly reductive group, 180
Littelmann, 516
little group, 5
Littlewood–Richardson
    rule, 289, 498
locally closed set, 177
locally trivial fibration, 84
logarithmic coordinates, 75
long exact sequence
    of homotopy groups, 84
longest element of W, 322
lower central series
    of a group, 99
    of a Lie algebra , 88

Maschke's Theorem, 150
matrix coefficients, 160
maximal torus, 190
Milnor, 237
miniature tableau, 490
minimal left ideal, 148
minuscule, 365, 516
module over a Lie algebra , 86
monoide plactique, 480

monomial, 9
Moore, 237
Mukai, 554
multigraded ring, 43
multiple tensor product, 106
multiplicative character, 138
Mumaghan's rule , 283

Nagata, 553
Newton functions, 21
nilpotent, 95
    radical, 89
nondegenerate pairing, 114
norm, 206
normal shape, 481
normality, 178
normalizer, 6
normed space, 206

one-parameter group, 5
operator norm, 206
operator(s)
    decomposable, 145
    indecomposable, 145
    irreducible, 145
    positive, 211
    semisimple, 145
    simple, 145
orbit(s), 4
    map, 82
    type, 6
orthogonal
    group, 117
    reflection, 122
    transformations
        improper, 117
        proper, 117
orthogonality, 114
    of characters, 199

parabolic subgroup, 354
Parseval formula, 206
partition, 1
periodic orbit, 5
periodicity 8, 131
permutation(s), 1
    matrices, 10
    representation, 9, 11
Peter–Weyl theorem, 161, 213
Pfaffian, 118
Pieri's formula, 289
Plethystic formulas, 403
Plücker coordinate, 501
Poincaré–Birkhoff Witt–theorem, 140
polarization, viii, 40
polynomial
    functor, 273
    identities, 441, 445
power sums, 20
primary covariant, 53
primitive, 423
    elements, 237
principal involution, 133
projective
    linear group, 34
    quotients, xvi, 556
    varieties, 168
pure spinor, 428

quadratic Hodge algebra, 506
quantics, 17
quaternions, 92

rank of a semisimple Lie algebra, 314
rational
    points, 534
    representation, 172
Razmyslov, 451
reading word, 481
record tableau, 478
rectangle, 247
reduced
    affine algebras, 168
    expression, 319
reductive group, 188
reflection groups, 314
regular
    algebraic function, 167
    dominant weights, 470
    elements, 336
    map, 168
    representation, 12, 148
    sheet, 36
    vectors, 316
representation
    decomposable, 13
    indecomposable, 13
    irreducible, 13

of Lie algebra, 86
representative function, 201
restitution, 43
resultant, 26
reverse
lattice permutation, 497
Reynold's
identities, 157
operator, 157, 553
ring
of invariants, 10
semisimple, 150
simple, 151
Roberts, 562
Robinson–Schensted
correspondence, 478
root
hyperplanes, 316
lattice, 323
short, 324
space, 310
system, 314
vectors, 310
roots, 297
decomposable, 317
negative, 317
positive , 317
simple, 318
row
of a diagram, 248
partition, 249
shape, 248
tableaux, 475
word, 481

Schur, 161
function, 29
functor, 273
lemma, 151
Schur–Weyl duality, 243
Schwarz inequality, 206
Schübert cell, 512
Schützenberger, 480
Second Fundamental Theorem, 407
for intertwiners, 410
self-adjoint operator, 207
semi-invariant, 567
semidirect product, 301
semisimple, 95
group, 188, 297
Lie algebras, 293
semistandard
tableau, 289, 476
word, 479
separable map, 177
Serre
relations, 332
theorem, 333
Seshadri, 516, 517
SFT, 246
characteristic free, 541
shape
of a tableau, 248
of a word, 478
shuffle, 503
sign group, 316
simple reflection, 319
skew
Cauchy formula, 281
diagram, 286, 481
Schur functions, 495
tableau, 481
Skolem–Noether, 154
slide
backward, 483
forward, 483
slinky, 283
smooth point, 177
solvable radical, 89
source of a covariant, 566
Specht module, 265
special unitary group, 90
spectrum, 147
spherical
harmonics, 224
weights, 409
spin
formalism, 128
group, 125, 135
representations, 125
representations half, 342, 426
spinors, 425
split form, 117
splittable Lie algebra, 300
splitting, 302
stabilizer, 5
standard
column, 475

module, 149
monomials, 499
permutation action, 10
polynomial, 446
skew tableau, 286
tableau, 284
Stiefel manifold, 510
Stone–Weierstrass theorem, 203
straightening law, 499
striped tableau, 284
subrepresentation, 13
super-tensor product, 126
superalgebra, 126
supercanonical tableau, 497
supercommutator, 127
superderivation, 127
symbolic method, 572
symmetric
algebra, 109
functions
elementary, 19
formal ring of, 22
group, 1
polynomials, 9
tensors, 112
symmetrizer, 249
symmetry action on tensors, 111
symplectic
adjoint, 118
group, 90, 117
transpose, 91

T-ideal, 441
table of Cartan matrices, 328
tableau, 248
anticanonical, 526
bicanonical, 527
tangent space, 177
tensor
algebra, 107
power, 107
product, 102
product of operators, 103
Tits, 336
toral subalgebra, 309
Tori, 183
totally isotropic subspace, 115
trace, 105
form, 24
identities, 442
traceless tensors, 395

transitive action, 4
transvection, 565
triality, 434
type A_n, 93
type B_n, 94
type C_n, 94
type D_n, 93

uniform
convergence, 206
norm, 206
uniformly bounded, 204
unipotent group, 186
unitarizable, 146
unitary group, 90
universal
covering space, 71
enveloping algebra, 53, 139
unstable points, 557
upper triangular matrices, 88

vacated tableau, 487
Vandermonde determinant, 23
variety
quasi-affine variety, 169
quasi-projective variety, 169
irreducible, 167
Veronese embedding, 351
virtual character, 196

walls of a chamber, 319
Wedderburn's theorem, 162
weight, 183
dominant, 323
fundamental, 323
lattice, 323
space, 183
vector(s), 183
extremal , 364
Weizenbock, 554
Weyl, 90
algebra, viii, 37
chambers, 316
group, 218, 315
character formula, 472
dimension formula, 472
integration formula, 457

Whitehead, 304
words, 108, 475
Young
    diagram, 2
    symmetrizer, 250
Zariski
    topology, 167
    main theorem, 179

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