

Index

- 1DTL, *see* Toda lattice, one-dimensional
 2DTL, *see* Toda lattice, two-dimensional
- Ad-orbit, 19
 adjoint orbit, 19
 adjoint representation, 9
 affine Lie algebra, 65
 algebraic Grassmannian, 109
 algebraic loop group, 109
- Birkhoff decomposition, 72, 112
 Borel subgroup, 15
 Borel-Weil theory, 97
 Bruhat decomposition, 91, 113, 129, 149
- Cartan immersion, 115
 Cartan subalgebra, 10
 co-adjoint action, 32
 completely integrable, 39, 185
 complexification, 8
 conformal map, 171
 conserved quantity, 38
 constant mean curvature surface, 56
- decomposition, 12, 68
 dressing, 48, 59, 84, 130
- elephant, ix
 exponential map, 4
 extended framing, 135
 extended solution, 98
- factorization, 12, 68
 finite type, 162
 finite uniton number, *see* uniton number
 flag manifold, 15
 framing, 135
- Gauss decomposition, 44
 generalized flag manifold, 15, 93
 generalized Toda lattice, 37
 Grassmannian model, 69
- Hamiltonian, 19
 Hamilton's equations, 18
 harmonic map, vii, 56, 63, 98
 harmonic sequence, 138
 height function, 21, 110
 homogeneous space, 15
- integrable system, ix
 integrals of motion, 38
 invariant function, 39
 invariant vector field, 46, 158
 isotropy representation, 16
 Iwasawa decomposition, 13, 37, 71
- Jacobi field, 173
- k-symmetric space, 136
 Kac-Moody Lie algebra, 66
 Killing field, 173
- Lax equation, 24, 158
 Lie algebra, 6
 Lie group, 2
 Lie subgroup, 3
 loop algebra, 64
 loop group, 64
- matrix group, 2, 9
 Maurer-Cartan equation, 54
 maximal torus, 11
 Morse theory, 23
- nilpotent, 14
 Noether's theorem, 51
- Poisson bracket, 42
 primitive map, 136, 176
- reality assumption, 74
 reductive, 16
 representation, 9
 R-matrix, 47
 Riemann-Hilbert factorization, 61, 72
 Riemannian metric, 8
- Schubert decomposition, 91
 soliton, x, 185
 spectral curve, x, 184
 superconformal map, 138, 176
 superminimal, 176
 symmetric space, 115
 symplectic form, 19
 symplectic reduction, 39
- tau-function, 87
 Toda hierarchy, 42

Cambridge University Press

978-0-521-58932-1 - Harmonic Maps, Loop Groups, and Integrable Systems

Martin A. Guest

Index

[More information](#)

194

Index

Toda lattice, one-dimensional, ix, 26, 36, 39

Toda lattice, two-dimensional, 55, 62, 77, 94, 139, 172

twistor construction, 145

uniton, 108

uniton number, 109, 133

vector field, 2

Weierstrass formula, 146

zero-curvature equation, 54, 158