Matchings and Factors p. 93
Matchings p. 93
Bipartite Matching p. 95
Edge Cover p. 98
Perfect Matching p. 100
Factors p. 103
Connectivity p. 105
Cut and Connectivity p. 105
2-Connected Graphs p. 109
Menger Theorem p. 111
An Application-Making a Road System One-Way p. 115
Connectivity of Some Interconnection Networks p. 117
Wide Diameters and Fault Diameters p. 118
Superconnectivity and Super-Edge-Connectivity p. 120
Graph Coloring p. 125
Vertex Colorings and Bounds p. 125
Properties of k-Critical Graphs p. 126
Bound for Chromatic Numbers p. 128
Girth and Chromatic Number p. 130
Hajos' Conjecture p. 131
Enumerative Aspects p. 133
Homomorphism Functions p. 136
An Application-Testing on Printed Circuit Boards p. 137
Edge-Colorings p. 138
Hamiltonian Cycles p. 141
Hamiltonian Graphs p. 141
Necessary Conditions p. 141
Sufficient Conditions p. 143
Hamiltonian-Connected p. 147
Mutually Independent Hamiltonian Paths p. 152
Diameter for Generalized Shuffle-Cubes p. 155
Cycles in Directed Graphs p. 158
Planar Graphs p. 161
Planar Embeddings p. 161
Euler's Formula p. 165
Characterization of Planar Graphs p. 166
Coloring of Planar Graphs p. 167
Optimal k-Fault-Tolerant Hamiltonian Graphs p. 171
Introduction p. 171
Node Expansion p. 173
Other Construction Methods p. 180
Fault-Tolerant Hamiltonicity and Fault-Tolerant Hamiltonian Connectivity of the Folded Petersen Cube Networks p. 185
Fault-Tolerant Hamiltonicity and Fault-Tolerant Hamiltonian Connectivity of the Pancake Graphs p. 189
Fault-Tolerant Hamiltonicity and Fault-Tolerant Hamiltonian Connectivity of Augmented Cubes p. 195
Fault-Tolerant Hamiltonicity and Fault-Tolerant Hamiltonian Connectivity of the WK-Recursive Networks p. 206
Fault-Tolerant Hamiltonicity of the Fully Connected Cubic Networks p. 221
Optimal 1-Fault-Tolerant Hamiltonian Graphs p. 227
Introduction p. 227
3-Join p. 228
Cycle Extension p. 229
Cells for Optimal 1-Hamiltonian Regular Graphs p. 241
Generalized Petersen Graphs p. 249
Honeycomb Rectangular Disks p. 259
Properties with Respect to the 3-Join p. 262
Examples of Various Cubic Planar Hamiltonian Graphs p. 267
A \[\cap\] B \[\cap\] C p. 268
A \[\cap\] B \[\cap\] C p. 268
A \[\cap\] B \[\cap\] C p. 268
A \[\cap\] B \[\cap\] C p. 269
A \[\cap\] B \[\cap\] C p. 271
A \[\cap\] B \[\cap\] C p. 272
A \[\cap\] B \[\cap\] C p. 273
A \[\cap\] B \[\cap\] C p. 274
Hamiltonian Properties of Double Loop Networks p. 275
Optimal k-Fault-Tolerant Hamiltonian-Laceable Graphs p. 285
Introduction p. 285
Super Fault-Tolerant Hamiltonian Laceability of Hypercubes p. 287
Super Fault-Tolerant Hamiltonian Laceability of Star Graphs p. 289
Construction Schemes p. 294
Cubic Hamiltonian-Laceable Graphs p. 301
l\^[superscript p]\]-Fault-Tolerant Hamiltonian Graphs p. 303
Spider-Web Networks p. 303
Brother Trees p. 312
Hamiltonian Laceability of Faulty Hypercubes p. 318
Conditional Fault Hamiltonicity and Conditional Fault Hamiltonian Laceability of the Star Graphs p. 327
Spanning Connectivity p. 339
Introduction p. 339
Spanning Connectivity of General Graphs p. 339
Spanning Connectivity and Spanning Laceability of the Hypercube-Like Networks p. 347
Spanning Connectivity of Crossed Cubes p. 361
Spanning Connectivity and Spanning Laceability of the Enhanced Hypercube Networks p. 374
Spanning Connectivity of the Pancake Graphs p. 391
Spanning Laceability of the Star Graphs p. 404
Spanning Fan-Connectivity and Spanning Pipe-Connectivity of Graphs p. 410
Cubic 3*-Connected Graphs and Cubic 3*-Laceable Graphs p. 417
Properties of Cubic 3*-Connected Graphs p. 417
Examples of Cubic Super 3*-Connected Graphs p. 419
Counterexamples of 3*-Connected Graphs p. 426
Properties of Cubic 3*-Laceable Graphs p. 430
Examples of Cubic Hyper 3*-Laceable Graphs p. 431
Counterexamples of 3*-Laceable Graphs p. 447
Spanning Diameter p. 449
Introduction p. 449
Spanning Diameter for the Star Graphs p. 449
Spanning Diameter of Hypercubes p. 465
Spanning Diameter for Some (n, k)-Star Graphs p. 474
Pancyclic and Panconnected Property p. 479
Introduction p. 479
Bipanconnected and Bipancyclic Properties of Hypercubes p. 480
Edge Fault-Tolerant Bipancyclic Properties of Hypercubes p. 485
Panconnected and Pancyclic Properties of Augmented Cubes p. 489
Comparison between Panconnected and Panpositionable Hamiltonian p. 500
Bipanpositionable Bipancyclic Property of Hypercube p. 504
Mutually Independent Hamiltonian Cycles p. 509
Introduction p. 509
Mutually Independent Hamiltonian Cycles on Some Graphs p. 510
Mutually Independent Hamiltonian Cycles of Hypercubes p. 512
Mutually Independent Hamiltonian Cycles of Pancake Graphs p. 518
Mutually Independent Hamiltonian Cycles of Star Graphs p. 524
Fault-Free Mutually Independent Hamiltonian Cycles in a Faulty Hypercube p. 526
Fault-Free Mutually Independent Hamiltonian Cycles in Faulty Star Graphs p. 530
Orthogonality for Sets of Mutually Independent Hamiltonian Cycles p. 543
Mutually Independent Hamiltonian Paths p. 545
Introduction p. 545
Mutually Independent Hamiltonian Laceability for Hypercubes p. 545
Mutually Independent Hamiltonian Laceability for Star Graphs p. 550
Mutually Independent Hamiltonian Connectivity for (n, k)-Star Graphs p. 555
Cubic 2-Independent Hamiltonian-Connected Graphs p. 575
Examples of Cubic 2-Independent Hamiltonian-Connected Graphs That Are Super 3*-Connected p. 576