
Index

- Aleksandrov's maximum principle, 27
- auxiliary functions, 14

- barrier functions
 - for linear equations, 15
- Bernstein methods, 55, 59, 94, 100, 176, 179, 183, 186
- Bernstein theorems
 - minimal surface equations, 144
 - Monge-Ampère equations, 250
- boundary C^2 -estimates
 - for complex Monge-Ampère equations, 261
 - for fully nonlinear equations, 195
 - for Monge-Ampère equations, 224
- boundary gradient estimates
 - for linear equations, 18
 - for mean curvature equations, 89
 - for quasilinear equations, 58
- boundary Hölder estimates
 - for linear equations, 19
- boundary Hölder estimates of normal derivatives
 - for linear equations, 38

- Calderon-Zygmund decomposition, 30
- Codazzi equations, 132
- comparison principles
 - for complex Monge-Ampère equations, 257
 - for fully nonlinear equations, 169
 - for generalized solutions, 301
 - for linear equations, 10, 13
 - for Monge-Ampère equations, 222
 - for quasilinear equations, 52
- complex Monge-Ampère equations, 256
 - boundary C^2 -estimates, 261
 - comparison principles, 257
 - global C^2 -estimates, 273
 - global gradient estimates, 259
- contact sets, 23
- convex domains, 279
 - strictly convex domains, 310
- convex functions, 278
 - locally convex functions, 278
 - strictly convex functions, 278
 - uniformly convex functions, 220
- curvature estimates for minimal surface equations
 - integral estimates, 143
 - pointwise estimates, 145

- defining functions, 223, 258
- distance functions, 84
- divergence, 116
- domains, 3
- doubling condition, 322
- dyadic cubes, 30

- Euclidean norms, 3
- existence for Dirichlet problems
 - for complex Monge-Ampère equations, 275
 - for fully nonlinear equations, 214, 215
 - for generalized solutions, 308, 313
 - for linear equations, 44, 46

- for mean curvature equations, 105, 107
 - for Monge-Ampère equations, 235
 - for quasilinear equations, 73, 75
- exterior sphere condition, 15
- first fundamental forms, 80
- fully nonlinear equations
 - boundary C^2 -estimates, 195
 - comparison principles, 169
 - concavity, 165
 - global C^2 -estimates, 199
 - global $C^{2,\alpha}$ -estimates, 208
 - global gradient estimates, 194
 - interior C^2 -estimates, 179, 186
 - interior $C^{1,\alpha}$ -estimates, 174
 - interior $C^{2,\alpha}$ -estimates, 200, 204
 - interior gradient estimates, 176, 183
 - Liouville theorems, 167, 176, 203
 - uniform ellipticity, 165
- Gauss curvatures, 81
- Gauss equations, 132
- generalized solutions, 296
 - comparison principles, 301
 - Dirichlet problems in convex domains, 308
 - Dirichlet problems in strictly convex domains, 313
 - global L^∞ -estimates, 320
 - global Hölder estimates, 313, 314
 - interior $C^{1,\alpha}$ -estimates, 339
 - interior $C^{2,\alpha}$ -estimates, 353
 - strict convexity, 333
- global C^2 -estimates
 - for complex Monge-Ampère equations, 273
 - for fully nonlinear equations, 199
 - for Monge-Ampère equations, 233
- global $C^{1,\alpha}$ -estimates
 - for quasilinear equations, 68
- global $C^{2,\alpha}$ -estimates
 - for fully nonlinear equations, 208
 - for quasilinear equations, 72
- global L^∞ -estimates
 - for generalized solutions, 320
 - for linear equations, 14
 - for mean curvature equations, 87
 - for quasilinear equations, 58
- global estimates on modulus of continuity
 - for linear equations, 16
 - for mean curvature equations, 93
- global gradient estimates
 - for complex Monge-Ampère equations, 259
 - for fully nonlinear equations, 194
 - for mean curvature equations, 94
 - for Monge-Ampère equations, 223
 - for quasilinear equations, 59
- global Hölder estimates
 - for generalized solutions, 313, 314
- gradients, 3
- Harnack inequalities, 35
- Hausdorff distance, 325
- Hessian matrices, 3
- Hopf lemma, 10
- integration by parts, 117
- interior C^2 -estimates
 - for fully nonlinear equations, 179, 186
 - for Monge-Ampère equations, 237
- interior $C^{1,\alpha}$ -estimates
 - for fully nonlinear equations, 174
 - for generalized solutions, 339
 - for quasilinear equations, 61
- interior $C^{2,\alpha}$ -estimates
 - for fully nonlinear equations, 200, 204
 - for generalized solutions, 353
 - for quasilinear equations, 67
- interior gradient estimates
 - for fully nonlinear equations, 176, 183
 - for mean curvature equations, 100
 - for minimal surface equations, 137
 - for quasilinear equations, 55
- interior Hölder estimates
 - for linear equations, 37
- interior sphere condition, 12
- John lemma, 242, 316
- Laplace-Beltrami operators, 117, 130
- Legendre transforms, 287
- level sets, 245
- Levi-Civita connections, 129
- linear equations
 - Aleksandrov's maximum principle, 27
 - barrier functions, 15
 - boundary gradient estimates, 18
 - boundary Hölder estimates, 19
 - boundary Hölder estimates of normal derivatives, 38
 - boundary Schauder estimates, 45
 - comparison principles, 10

- global L^∞ -estimates, 14
- global estimates on modulus of continuity, 16
- global Schauder estimates, 46
- Harnack inequalities, 35
- interior L^∞ -estimates, 28
- interior Hölder estimates, 37
- interior Schauder estimates, 43
- Liouville theorems, 38
- strong maximum principles, 12
- subsolutions, 8
- supersolutions, 8
- uniform ellipticity, 8
- weak Harnack inequalities, 31
- weak maximum principles, 8
- Liouville theorems
 - fully nonlinear equations, 167, 176, 203
 - linear equations, 38
 - minimal surface equations, 104, 139, 140
 - quasilinear equations, 53, 67
- locally convex functions, 278
- maximum principles
 - strong maximum principles, 12
 - weak maximum principles, 8
- mean curvature equations, 83
 - boundary gradient estimates, 89
 - global L^∞ -estimates, 87
 - global estimates on modulus of continuity, 93
 - global gradient estimates, 94
 - interior gradient estimates, 100
- mean curvatures, 81
- mean-value inequality, 121
- method of continuity, 73, 105, 213, 214, 235
- minimal surface equations, 83
 - Bernstein theorems, 144
 - integral curvature estimates, 143
 - interior gradient estimates, 137
 - Liouville theorems, 104, 139, 140
 - pointwise curvature estimates, 145
- mollifiers, 285
- Monge-Ampère equations, 221
 - Bernstein theorems, 250
 - boundary C^2 -estimates, 224
 - comparison principles, 222
 - generalized solutions, 296
 - global C^2 -estimates, 233
 - global gradient estimates, 223
 - interior C^2 -estimates, 237
- Monge-Ampère measures, 292
- monotonicity identity, 118
- multi-indices, 3
- normal mappings, 279
- normalization, 244, 318
- pluri-subharmonic functions, 254
 - strictly pluri-subharmonic functions, 254
- principal curvatures, 80
- quasilinear equations
 - boundary gradient estimates, 58
 - comparison principles, 52
 - global $C^{1,\alpha}$ -estimates, 68
 - global $C^{2,\alpha}$ -estimates, 72
 - global L^∞ -estimates, 58
 - global gradient estimates, 59
 - interior $C^{1,\alpha}$ -estimates, 61
 - interior $C^{2,\alpha}$ -estimates, 67
 - interior gradient estimates, 55
 - Liouville theorems, 53, 67
 - uniform ellipticity, 52
- Riemann curvature tensors, 130
- Schauder theory
 - boundary Schauder estimates, 45
 - global Schauder estimates, 46
 - interior Schauder estimates, 43
- second fundamental forms, 80, 131
- sections, 298
- Simons identity, 133
- Sobolev inequality, 124
- strictly convex domains, 310
- strictly convex functions, 278
- strictly pluri-subharmonic functions, 254
- strongly pseudo-convex domains, 258
- subsolutions, 8
 - upper bounds, 28
- supersolutions, 8
 - weak Harnack inequalities, 31
- supporting functions, 278
- tangential gradients, 116
- uniformly convex domains, 223
- uniformly convex functions, 220
- uniformly elliptic equations
 - fully nonlinear equations, 165
 - linear equations, 8

- quasilinear equations, 52
- uniqueness for Dirichlet problems
 - for fully nonlinear equations, 170
 - for linear equations, 10
 - for quasilinear equations, 53
- Vitali covering lemma, 123
- weak Harnack inequalities, 31