

Index

- ω - m -accretive, 98
- ω -accretive, 98
- ε -approximate solution, 129
- ε -discretization, 129
- m -accretive, 97
- m -dissipative, 98
- continuous semigroup of contractions, 154

- abstract elliptic variational inequality, 72
- accretive, 97

- bilinear, 16
- Bochner integrable, 21
- Brezis–Ekeland principle, 167

- Carathéodory integrand, 56
- closed, 100
- coercive, 16, 29
- conjugate, 6
- continuous, 16
- convex integrands, 56
- cyclically monotone, 53

- demiclosed, 100
- demicontinuous, 29
- directional derivative, 6
- dissipative, 98, 157
- dissipative system, 157
- distribution, 10
- duality mapping, 1

- elliptic variational inequality, 61
- enthalpy, 222
- entropy, 241
- entropy solution, 241
- equation of conservation laws, 241

- filtration, 183

- Fréchet differentiable, 7
- Fréchet differential, 7
- free boundary, 68, 77, 221
- function
 - absolutely continuous, 22
 - finitely valued, 21

- Gâteaux differentiable, 6
- Gâteaux differential, 6

- hemicontinuous, 29

- indicator function, 8
- infinitesimal generator, 155
- integral solution, 132

- Lax–Milgram lemma, 16
- Lie–Trotter product, 174
- lower semicontinuous (l.s.c.), 5

- maximal accretive, 97
- maximal cyclically monotone, 53
- maximal dissipative, 98
- maximal monotone, 28
- maximal monotone sets, 53
- mild solution, 129, 239
- minimal section, 101
- monotone, 28, 46
- Moreau regularization, 48
- moving boundary, 221

- nonlinear diffusion operator, 68
- nonlinear evolution associated, 131
- normal convex integrand, 56

- obstacle parabolic problem, 217
- obstacle problem, 61

- phase function, 236
- phase-field system, 235
- Poincaré inequality, 15
- porous medium equation, 227
- proper convex function, 5

- quasi- m -accretive, 98
- quasi-accretive, 98, 127

- reflection problem, 166

- self-adjoint operators, 54
- semigroup solution, 239
- semilinear elliptic operators, 59
- Signorini problem, 68
- Skorohod problem, 189
- Sobolev embedding theorem, 13
- Sobolev space, 10, 11
- Stokes operator, 251
- strictly convex, 2
- strong convergence, 1

- strong solution, 194, 252
- strongly measurable, 21
- subdifferential, 7
- subgradient, 7
- subpotential maximal monotone operator, 47
- support, 10
- support function, 8

- trace, 13

- uniformly convex, 2

- variational solution, 17

- weak, 17
- weak convergence, 1
- weak solution, 251
- weak-star, 1
- weakly measurable, 22

- Yosida approximation, 37, 99