

# Index

- $(\mu, \kappa)$ -club directedness, 50
- 2-perfect tree, 128
- $<_{LS}$ , 65
- $<_{\mathcal{D}}$ , 89
- $A \oplus B$ , 21
- $A^{(i)}$ , 12
- $A^{(i)}$ , 12
- $A_\varphi$ , 71
- $A_x$ , 59
- $B$ -generic filter, xi
- $E$ -invariant function, 83
- $H(\kappa)$ , xi
- $S$ -cone, 85
- $S$ -pointed tree, 92
- $S$ -positive set, 92
- $T_s$ , 53
- $U_n(A_1, \dots, A_m)$ , 21
- $U_y$ , 17
- $[T]$ , 53
- $[X]^\alpha$ , x, 45
- $[f]_{\mu_E}$ , 83
- AD, 3
- $AD_{\mathbb{R}}$ , 3
- $AD_X$ , 3
- Axiom of Determinacy, 3
- Baire( $\Gamma$ ), 5
- CC, xii
- $CC_X$ , xii
- Countable Choice, xii
- DC, xii
- $DC_X$ , xii
- $\Delta_\omega(A)$ , 21
- Dependent Choice, xii
- $\Gamma$ -complete set, 16
- $\Gamma$ -norm, 35
- $\Gamma$ -separability, 31
- $\Gamma$ -universal set, 17
- HC, xi
- HC-coding, xi
- HF, xi
- $HOD_X$ , 99
- LR( $A$ ), 11
- Lipschitz Determinacy, 10
- $OD_X$ , 59, 99
- Ord, x
- Red( $\Gamma$ ), 32
- Sep( $\Gamma$ ), 31
- $\Sigma_1^1(A)$ , 22
- TC( $X$ ), xi
- TD, 7
- $\Theta$ , 22
- $WF_E$ , 83
- WR( $A$ ), 11
- $\aleph_1 \not\leq 2^{\aleph_0}$ , 4
- $\mathbb{E}_0$ , 72
- $\mathbb{P}_S$ , 95
- $\bigcup_\delta \Gamma$ , 16
- $\mathcal{D}$ , 89
- $\mathcal{D}_E(x)$ , 5
- $\mathcal{F}^c$ , 22
- $\mathcal{L}^0_{\gamma, \delta}$ , 71
- $\mathcal{L}^0_{\gamma}$ , 71
- $\mathcal{P}_A$ , 76
- $S_\gamma$ , 53
- $S_{<\gamma}$ , 53
- $\mathcal{T}_{\mathbb{P}}$ , 128
- $\mathcal{U}_E(x)$ , 5
- $\dot{A}$ , 16
- $\check{\Gamma}$ , 16
- $\delta(\Gamma)$ , 35
- $\delta_S^\infty$ , 93, 119
- $\delta_A$ , 76
- $\delta_\omega(A)$ , 84
- $\equiv_{\mathcal{D}}$ , 89
- $\equiv_{Ma}$ , 5
- $\equiv_{Tu}$ , xi
- $\eta$ -full tree, 56
- $\exists^{\omega^\omega}$ -closed pointclass, 16
- $\exists^{\omega^\omega} A$ , 16
- $\forall^{\omega^\omega}$ -closed pointclass, 16
- $\forall^{\omega^\omega} A$ , 16
- $\gamma$ -Borel set, 71
- $\gamma$ -Borel\* code, 75
- $\infty$ -Borel code, 71
- $\infty$ -Borel set, 71
- $\infty$ -Borel subset of  $\omega^\delta$ , 74
- $\infty$ -Borel\* code, 75

- $\lambda$ -Determinacy, 68
- $\lambda$ -reasonable ordinal, 47
- $\text{lb}_{\leq}(T)$ , 53
- $\leq_{\text{Li}}$ , 9
- $\leq_{\text{Wa}}$ , 9
- $\leq_{\text{Gö}}$ , xi
- $\leq_{\text{Tu}}$ , xi
- $<\gamma$ -Determinacy, 68
- $<\gamma$ -Borel set, 71
- $\mathcal{X}$ , 15
- $\langle \alpha, \beta \rangle$ , xi
- $\text{meas}(Z)$ , 143
- $\omega$ -parameterized pointclass, 22
- $\text{pos-}\Sigma_1^1(A)$ , 21
- $\prod V/\mu S$ , 85
- $\prod \text{Ord}/\mu S$ , 85
- $\prod f(x)/\mu S$ , 85
- $\text{rank}_T$ , 61
- $\text{rank}_{\leq}$ , xi
- Ma, 5
- $\text{p}[T]$ , 53
- $\sigma * x$ , 4
- $\sigma \circ x$ , 25
- $\Delta_n^1(A)$ , 21
- $\Delta_1^2(A)$ , 37
- $\tilde{\Pi}_n^1(A)$ , 21
- $\tilde{\Pi}_1^2(A)$ , 37
- $\Sigma_1^1(A)$ , 21
- $\tilde{\Sigma}_n^1(A)$ , 21
- $\tilde{\Sigma}_1^2(A)$ , 36
- $\delta_1^2(A)$ , 37
- $f_x^c$ , 22
- $o(\Gamma)$ , 41
- $o(\varphi)$ , 35
- $s \frown x$ , 12
- $x * \sigma$ , 4
- $x \circ \sigma$ , 25
- almost-disjoint coding, xiii
- base of a cone, 5
- basic open interval of a space in  $\mathcal{X}$ , 15
- boldface pointclass, 15
- canonical rank function for a wellfounded tree, 61
- Coding Lemma, 25
- cofinality of a pointclass, 15
- computing a set of reals on a cone, 96
- constructibility degree, 6
- determined set, 3
- diffuse function, 90
- downward cone, 5
- elementarity of an ultraproduct, 84
- fine measure, 144
- generic  $\alpha$ -code, 115
- generic  $\infty$ -code, 115
- generic code, 115
- hereditarily countable set, xi
- hereditarily finite set, xi
- homogeneous tree, 143
- homogeneously Suslin set, 143
- illfounded tree, 53
- induced map, 150
- join of a sequence of generic codes, 117
- leftmost branch, 53
- length of a (strict) prewellordering, 35
- length of a norm, 35
- lightface pointclass, 15
- Lipschitz class, 9
- Lipschitz function, 9
- Lipschitz game, 9
- Lipschitz rank, 11
- Lipschitz reducibility, 9
- locally countable relation, 7
- Lusin-Sierpiński order, 65
- measure, 143
- minimal tree, 54
- minimization of a tree, 54
- nice name, xi
- nonselfdual class, 9
- nonselfdual pointclass, 16
- norm, 35
- normal measure, 149
- ordered equivalence relation, 5
- payoff set, 3
- pointclass, 15
- pointset, 15
- preorder, xi
- prewellordering, 35
- prewellordering property, 36
- projection of a tree, 53
- projection of an ultrafilter, 143
- projective algebra, 41
- projective in  $A$ , 21
- projectively closed pointclass, 21
- quasi- $\text{AD}_X$ , 59
- quasi-determined set, 59
- quasi-strategy, 59
- rank function, xi
- rank of a norm, 35
- real, x
- recursion property, 18
- Recursion Theorem, 20
- recursive function, 15
- recursive subset of HF, xi

- reduction property, 32
- regular norm, 35
  
- s-m-n property, 18
- scale, viii
- selfdual class, 9
- selfdual pointclass, 16
- semi-recursive subset of HF, xi
- separation property, 31
- sequence of sets with the s-m-n property, 18
- strategy, 3
- strict prewellordering, 35
- strict supremum, xi
- strong partition cardinal, 45
- strongly Lipschitz function, 31
- strongly maximal set of ordinals, 97
- Suslin cardinal, 53
- Suslin set, 53
  
- tower of ultrafilters, 143
- Turing cone, 6
- Turing Determinacy, 7
- Turing equivalence, xi
- Turing measure, 6
- Turing reducibility, xi
  
- Uniform Coding Lemma, 27
- uniformizing, 59
- upward cone, 5
  
- Vopěnka algebra, 99
  
- Wadge class, 9
- Wadge rank, 11
- Wadge reducibility, 9
- Wadge's Theorem, 10
- weakly  $\infty$ -Borel set, 58
- weakly  $\kappa$ -Borel set, 58
- weakly  $<\kappa$ -Borel set, 58
- weakly homogeneous tree, 143
- weakly homogeneously Suslin set, 144
- wellfounded preorder, xi
- wellfounded tower of ultrafilters, 143
- wellfounded tree, 53
- winning quasi strategy, 59
- winning strategy, 3
- witness for a  $\Sigma_1^2$  statement, 36