

# Index

- $N_1(X/Z)$ , 5
- $\mathbb{C}^n/\mathbb{Z}_m(a_1, \dots, a_n)$ , 12
- $\text{Diff}_S(B)$ , 15
- $\mathbb{F}_n$ , 40
- $\text{LCS}(X, D)$ , 20
- $\Phi_{\mathbf{m}}$ , 15
- $\Phi_{\mathbf{s}\mathbf{m}}$ , 15
- $\overline{NE}(X/Z)$ , 5
- $\mathcal{N}_n(\Phi)$ , 32
- $\mathbb{P}(a_1, \dots, a_n)$ , 24
- $\mathcal{P}_n$ , 33
- $\mathbb{Q}$ -complement, 28
- $\mathcal{R}_2$ , 31
- $\Sigma_0$ , 40
- Weil( $X$ ), 5
- Weil<sub>alg</sub>( $X$ ), 5
- Weil<sub>lin</sub>( $X$ ), 5
- $\delta(X, B)$ , 102
- $\lfloor \cdot \rfloor$ , 5
- $\varepsilon$ -log canonical ( $\varepsilon$ -lc) singularities, 6
- $\varepsilon$ -log terminal ( $\varepsilon$ -lt) singularities, 6
- $\{\cdot\}$ , 5
- $\mathfrak{A}_n$ , 55
- $\mathfrak{D}_n$ , 55
- $\mathfrak{S}_n$ , 55
- $\text{discrep}(X, D)$ , 6
- $\rho(X)$ , 5
- $\rho_{\text{num}}(X/Z)$ , 57
- $\lceil \cdot \rceil$ , 5
- $a(E, D)$ , 6
- $c_o(X, D)$ , 47
- $n$ -complement, 29
- $n$ -semicomplement, 29
- $r(X, D)$ , 110
- $\text{compl}'(X, D)$ , 32
- $\text{compl}(X, D)$ , 32
- Adjunction, 15
- blowdown, 5
- blowup, 5
- boundary, 5
- canonical singularities, 6
- center of log canonical singularities, 20
- complement, 29
- Connectedness Lemma, 19
- contraction, 5
- crepant pull back, 8
- different, 15
- discrepancy, 6
- divisorial log terminal (dlt), 6
- dlt model of elliptic fibration, 65
- elliptic fibration, 65
  - minimal, 65
- elliptic singularity, 54
- exceptional log variety, 37
- Fano index, 110
- index, 10
- inductive blowup, 23
- Inductive Theorem, 77
- Inversion of Adjunction, 15
- Kawamata log terminal (klt), 6
- locus of log canonical singularities, 20
- log Calabi-Yau variety, 40
- log canonical (lc) singularities, 6
- log canonical threshold, 47
- log del Pezzo surface, 40
- log Enriques surface, 40
- log Fano variety, 40
- log resolution, 6
- log terminal modification, 21
  - minimal, 22
- log variety (log pair), 5
- maximally log canonical, 43
- nodal curve, 29

purely log terminal (plt) blowup, 23  
purely log terminal (plt) singularities, 6  
  
rational singularity, 54  
regular complement, 31  
regular log surface, 44  
  
semilog canonical (slc) singularities, 29  
simple  $K3$  singularity, 38  
simple elliptic singularity, 38  
standard coefficient, 15  
strong  $n$ -complement, 29  
subboundary, 5  
  
terminal blowup, 23  
terminal singularities, 6  
toric pair, 18  
trivial complement, 34  
  
weighted blowup, 24  
weighted projective space, 24  
weights, 12