

INDEX OF NOTATIONS

$\mu(X, x)$ (1.3), (5.11)	O_D, O_{D_f} (4.E)
$\tau(X, x)$ (1.3), (6.1)	$v(D, 0)$ (4. ex. 5)
$X_{r \leq \epsilon}, X_{r < \epsilon}$ etc. (2.3)	$\Omega_X, \Omega_{A/k}, \Omega_f$ (6.A)
X, \bar{X} (2.7)	d_X, d_f (6.A)
∂X (2.7)	$\theta_X, \theta_{X, x}$ (6.A)
X_s, \bar{X}_s (2.7)	$\theta_f, \theta_{f, x}$ (6.A), (6.15)
X_A, \bar{X}_A (2.7)	$\theta(f), \theta(f)_x$ (6.1), (6.15)
C, C_f (2.7)	df (6.A)
D, D_f (2.7)	∂f (6.1)
ρ_{diff}, ρ_{geom} (2.C)	T_f, T_X (6.1)
reg (suffix) (2.7)	$\rho_f, \rho_{f, x}, \rho_f(x)$ (6.1)
sing (suffix) (2.7), (4.3)	$\theta_{S, 0} \langle D \rangle$ (6.13)
$var_*(h)$ (3.0)	Γ (7.4)
C_f (4.1)	Δ (7.6)
$O_{X^{sing}}$ (4.3)	$G, G^\#$ (7.12)
$O_C, O_{C_f}, O_{C_f, red}$ (4.3)	μ_+, μ_-, μ_0 (7.12)
$\Sigma_r(m, k), \bar{\Sigma}_r(m, k)$ (4.B)	var_α, Var_α (7.14)
$\Sigma_r(f), \bar{\Sigma}_r(f)$ (4.B)	$\tilde{\rho}$ (7.14)
\tilde{C}, \tilde{C}_f (4.C)	E, E^i (7.14)
\tilde{D}, \tilde{D}_f (4.C)	$\tilde{\Gamma}, \Gamma^i$ (7.14)
$F_k(M)$ (4.D)	Z, Z (7.14)
$F_k(M)$ (4.D)	$[(X, x)]$ (7.15)

$$[(X, x)] \rightarrow [(Y, y)] \quad (7.15)$$

$$\text{mod}[(X, x)] \quad (7.15)$$

$$\mathcal{C}is(n) \quad (7.15)$$

$$Hyp(n) \quad (7.15)$$

$$\mathbb{R}^P f_* F \quad (8.A)$$

$$\Omega_f^P \quad (8.4)$$

$$H^P \quad (8.4)$$

$$DR \quad (8.4)$$

$$C_X^\bullet \quad (8.4)$$

$$\mathcal{O}(V) \quad (8.9)$$

$$\nabla \quad (8.9)$$

$$R(\nabla) \quad (8.9)$$

$$\iota_\xi \quad (8.9)$$

$$L_\xi \quad (8.9)$$

$$\tilde{\theta}_f \quad (8.9)$$

$$H_Z^q \quad (8.13)$$

$$H_Z^q \quad (8.13)$$

$$\omega_f, \omega_X \quad (8.18)$$

$$\tau^1(X_0, x) \quad (8.23)$$

$$F^P \quad (8.25)$$

$$M(f) \quad (8.26)$$

$$\iota_V \quad (9.1)$$

SUBJECT INDEX

- adjacent (singularities) (7.15)
 analytic stratification (2.D)
 base change, commute with -
 (4,-), (4.3)
 bimodal singularity (7.15)
 bouquet of n -spheres (5.10)
 \mathbb{C}^∞ -monodromy, -group, -representation (2.C)
 cohomology with supports (8.13)
 complete intersection (1.5)
 complex reflection (1.C)
 cone (2.3)
 connection (8.9)
 contraction with a vector(field)
 (8.9), (9.1)
 covariant derivative (8.9)
 critical locus (2.7)
 critical space (4.3)
 curvature homomorphism (8.9)
 curve selection lemma (2.1)
 cusp singularity (1.E), (7.23)
 deformation, -category (6.4), (6.9)
 complete- (6.4)
 versal- (6.4)
 miniversal- (6.4)
 semi-universal- (6.4)
 De Rham cohomology sheaf (of a map)
 (8.4)
 De Rham complex (of a map) (8.4)
 De Rham evaluation map (8.4)
 derivation (6.A)
 development (4.C), (5.2)
 differentials, module of (relative,
 absolute) (6.A)
 discriminant (locus) (2.7)
 discriminant space (4.E)
 distinguished system of generators,
 -basis (7.5)
 dualizing sheaf (of an icis) (8.18)
 eigenvector (9.B)
 embedding codimension (1.9)
 embedding dimension (1.9)

- euler derivation (9.9)
- excellent (proper) representative (2.D)
- Fitting ideal, - -sheaf (4.D)
- function which defines an isolated singularity (2.7)
- function which defines a point of an analytic set (2.3)
- geometric complete intersection (1.5)
- geometric monodromy, - -group, --representation (2.C)
- good \mathbb{C}^* -action (9.B)
- good (proper) representative (2.7)
- hessian corank (7.15)
- holomorphic p -form relative a map (8.4)
- horizontal section (8.9)
- hypersurface germ (1.1)
- icis = isolated complete intersection singularity (1.9)
- integrable connection (8.9)
- intersection diagram (7.20)
- isolated hypersurface singularity (1.4)
- Kleinian singularity (1. ex. 2, 3)
- Kodaira-Spencer map (reduced -) (6.1)
- Lie-derivative (8.9)
- liftable vector field (8.9)
- link (2.4)
- local cohomology (8.13)
- (local) complete intersection algebra (1.9)
- local homotopy type, represent the - (7.3)
- Milnor fibration (2.8)
- Milnor fibre (2.8)
- Milnor lattice (7.9)
- Milnor number (1.4), (5.11)
- modality, k -modal (7.15)
- monodromy group (7.B)
- multiplicity (4. ex. 5)
- nilpotent of index $\leq m$ (5.C)
- period map (9.C)
- Picard-Lefschetz formulas (3.1 a-d), (3.3)
- Picard-Lefschetz transformation (3.3)
- primitive submodule (7.13)
- q.u. = quasi-unipotent (5.C)
- q.u. monodromy of index $\leq m$ (5.14)
- quadratic singularity (1.C), (3.1), (4.2)

- quasi-cone, quasi-conical
 - variety/singularity (1.D)
- quasi-unipotent of index $\leq m$ (5.C)
- quotient singularity (1.C)
- reduced form of a function germ
 - (7.17)
- regular singularity (of a
 - connection) (8.10)
- simple part of Γ (7.9)
- simple singularity (7.15)
- simply-elliptic singularity
 - (1. ex. 4), (7.23)
- singular space (4.3)
- smoothing (6.9)
- Stein morphism (8.3)
- stratum (2.D)
- tempered growth (of a section)
 - (8.10)
- Thom stratification (4.B)
- Thom stratum (4.B)
- Thom transversal (4.B)
- Tjurina number (1.4), (6.1)
- topological connection (8.9)
- triangle singularity (1. ex. 6),
 - (7.23)
 - non-quasi-homogeneous
 - companion of - (1. ex. 6
 - continued)
 - unimodal singularity (7.15)
 - unipotent of index $\leq m$ (5.C)
 - unipotent part of Γ (7.9)
 - vanishing cycle (3.4)
 - vanishing lattice (7.9)
 - variation extension (7.14)
 - variation (homomorphism) (3.1),
 - (7.13)
 - weight (9.B)
 - weighted homogeneous (1.4)
 - Whitney property (of a
 - stratification) (2.D)