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0521429994 - Curves and Singularities: A Geometrical Introduction to Singularity Theory, Second Edition - J. W. Bruce and P. J. Giblin

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'The object of those who invented the system has apparently been to conceal that these characters convey a message'
(*The Dancing Men*)

A_k	type of singularity
B	unit binormal vector
\mathcal{B}	bifurcation set
B_ε	product of discs D_ε
D_k	type of singularity
D_ε	disc in \mathbb{C}
\mathcal{D}	discriminant
Df	derivative of f
\mathcal{E}_n	ring of function germs $\mathbb{R}^n, 0 \rightarrow \mathbb{R}$
$\mathcal{E}_n \langle g_1, \dots, g_p \rangle$	ideal in \mathcal{E}_n generated by g_1, \dots, g_p
E_k	type of singularity
f_d	distance-squared function
f_h	height function
\mathcal{M}_n	ideal of functions in \mathcal{E}_n (resp. \mathcal{E}_{n+1}) vanishing at 0 (resp. on $0 \times \mathbb{R} \subset \mathbb{R}^n \times \mathbb{R}$)
\mathcal{M}_n^k	k th power of \mathcal{M}_n
N	unit normal/principal normal
(p)	potential
\mathcal{R}	right (equivalent)
\mathbb{R}^n	Euclidean space
\mathbb{R}_+	$\{t \in \mathbb{R}: t > 0\}$
\mathbb{R}_v^n	tangent space to \mathbb{R}^n at v
S_F	singular set of F
T	unit tangent vector
Tf	tangent map of f
V_k	polynomials of degree ≥ 2 and $\leq k$

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κ	curvature
τ	torsion
ρ	radius of curvature
ψ	tangent angle
Σ	fold set
$x \cdot y$	scalar product of vectors
$\ x\ $	length of a vector
$x \times y$	vector product of vectors
x_v	vector based at v
M_v	tangent space to M at v
F_u	function in the family F with u fixed
$F(-, u)$	same meaning as F_u
$f', f'', f''', f^{(i)}$	first, second, third, i th derivative of f
$f \circ g$	composite of f with g (g operates first)
$f: \mathbb{R}, a \rightarrow \mathbb{R}^p$	function or map f defined near $a \in \mathbb{R}^n$
$f: \mathbb{R}^n, a \rightarrow \mathbb{R}^p, c$	as above, with $f(a) = c$
$f: \mathbb{R}^n \rightarrow \mathbb{R}^p$	function with domain an open set of \mathbb{R}^n
$x \mapsto y$	$f(x) = y$ for an f given by the context
\perp	transversal to
\ll	relation between analytic functions
\square	end (or absence) of proof

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'In a morass, Watson?'
 'I am at my wits' end.'
 'Tut, tut; we have solved some worse problems.
 At least we have plenty of material, if we can
 only use it.'
 (*The Priory School*)

Note. Boldface references are to definitions and theorems. Italic references indicate the presence of a diagram, but do not exclude text material. The symbol \rightarrow indicates that the item is referenced elsewhere: unless otherwise stated this is under the first keyword in the line in which \rightarrow stands.

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