

Foundations of Arithmetic Differential Geometry: Errata

- p. 20, line 3: replace) by)'
- p. 20, after line 3 insert: “where the prime forgets the components of Y_p that do not dominate G via φ_p ,”
- p. 29, line 12: after “juxtaposition.” insert “Homomorphisms and antihomomorphisms will be assumed unital. Antihomomorphisms will often simply be referred to as *homomorphisms*. We will often use the same letter to denote an associative ring and its opposite.”
- p. 129, line 7: delete “compatible with all the operations introduced above” and insert instead the following: “It is defined by sending $\Gamma = (Y, \pi, \varphi)$ to Γ' where

$$Y_{\Gamma'} := (X' \times_{X, \pi} Y) \times_Y (Y \times_{X, \varphi} X')$$
 with the obvious two projections to X' .”
- p. 129, after line 11 insert: “By the way if $\Gamma = (X, \pi, \varphi)$ with X a regular integral scheme and π étale then $\Gamma \otimes E$ has the following simple description. First note that Y is a disjoint union of integral schemes so $\text{Spec } E \times_{X, \pi} Y$ is the disjoint union of the spectra of its residue fields. Then $Y_{\Gamma \otimes E}$ is easily seen to be the disjoint union of the spectra of all residue fields of Y at the points that are mapped by both π and φ to the generic point of X .”
- p. 135, line 6: replace all 3 occurrences of A by A_1 and insert “ $A = \mathbb{Z}$ ” at the beginning of the line.
- p. 135, line 11: replace “a connected component of” by “the union of all connected components of”; also replace “meets” by “meet”.
- p.135, lines 12 and 13: replace “an integral scheme (because it is connected)” by “a product of integral schemes”
- p. 135, line 14: before Y insert “each component of”
- p. 135, line 22: after E insert “via π_p ”
- p. 135, line - 16: replace “a connected” by “the connected”; also replace “meets” by “contains”
- p. 135, line - 15: replace “non-empty” by “irreducible”
- p. 195, last line: in $\Delta_j^{(\nu)t}$ change j by i
- p. 197, line 15: replace Γ_{ij} by Γ_{ik} and replace Γ_{ik} by Γ_{ij}
- p. 197, line 17: replace q_{ij} by q_{ik} and replace q_{ik} by q_{ij}
- p. 201, last line: in $\Delta_j^{(\nu)t}$ change j by i .
- p. 216, line 11: replace $\mathcal{O}(X)^\times$ by $\mathcal{O}(Y)^\times$.
- p. 303, line - 3: replace “degree 2^n ” by “degree $\leq 2^n$ ”
- p. 303, line - 2: after “irreducible” insert “of left degree 4”
- p. 307, line - 11: replace “ $Y_p =$ ” by “ $Y'_p :=$ ”; also after line - 11 insert “where Y is viewed over X via $\pi_{p/G}$ ”
- p. 307, lines - 5 and -1: replace Y_p by Y'_p
- p. 308, lines 1, 3, 4: replace Y_p by Y'_p ; also on line 4, after “irreducible” insert “(hence $Y_p = Y'_p$)”
- p. 311, line 3: replace “degree 2^n ” by “degree $\leq 2^n$ ”
- pp. 313-316: move Lemmas 6.89 and 6.90 after Lemma 6.93
- p. 317: on both the last and the next to the last line one needs to insert a minus before the expressions there.