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 $\varphi_p$.”

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 $\Gamma'$ 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 $\pi$ étale then $\Gamma \otimes E$ has the following simple description. First note that $Y$ is a disjoint union of integral schemes so $Spec E \times_{X,\pi} Y$ 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 $\pi$ and $\varphi$ 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 $\pi_p$”

p. 135, line 16: replace “a connected” by “the connected”; also replace “meets” by “contains” by “contains”

p. 135, line - 15: replace “non-empty” by “irreducible”

p. 195, last line: in $\Delta_j^{(v)t}$ change $j$ by $i$

p. 197, line 15: replace $\Gamma_{ij}$ by $\Gamma_{ik}$ and replace $\Gamma_{ik}$ by $\Gamma_{ij}$

p. 197, line 17: replace $q_{ij}$ by $q_{ik}$ and replace $q_{ik}$ by $q_{ij}$

p. 201, last line: in $\Delta_j^{(v)t}$ change $j$ by $i$.

p. 216, line 11: replace $O(X)^\times$ by $O(Y)^\times$.

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 “$Y_p \equiv "Y_p' := "$; 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.