Math 569 / David Dumas / Spring 2017

Textbook errata and clarifications

This document was last updated on 2017-02-09.

PDF page numbers refer to the version from https://www.math.u-psud.fr/~labourie/preprints/pdf/surfaces.pdf as retrieved on Jan 1, 2017; this PDF file has MD5 hash `0994b2e8f42087e613386bc5494e811b`.

Page number			
Book	PDF	Near	Comment
8	12	Def 2.2.1	A geometric edge should be a set $\{e, \bar{e}\}$ (i.e. unordered pair) rather than a tuple $(e, \bar{e})$ (ordered pair).
9	13	Exc 2.2.3	cyclic *ordering*
9	14	Fig 2.5	This graph is planar, but the ribbon graph is not.
n/a	30	Def 2.4.1	"finite sequence $(e_1, \ldots, e_n)$" (no capital E)
23	30	Def 2.4.2	The set $R_\Gamma^{v_0}$ of trivial loops based at v_0 must be defined so as to include faces which do not pass through v_0; here we make a loop based at v_0 by conjugating such a face by a path from v_0 to a vertex of the face. This is the correct interpretation of "normally generated" in the case of multiple vertices.
24	31	Def 2.4.4	$U_{i_j} \cap U_{i_{j+1}} \neq \emptyset$
24	31	Def 2.4.4-5	The free group on I would have inverses for the generators, which is not desirable here. One can instead work in the free monoid and introduce an inverse operation which reverses a word. On a suitable quotient this defines a group structure. The notion of trivial loop must also be modified to encode the normal closure of the subgroup generated by boundaries of 2-cells in the nerve.
34	42	Exc 2.5.23	Replace E_Γ with V_Γ.
38	47	-	Replace $\coprod \mathscr{U} \times U \times L$ with $\coprod U \times L$.
n/a	47	-	$g_{UV}(x).v$ means "apply the linear transformation $g_{UV}(x)$ to v". Elsewhere the same has been denoted $g_{UV}(x)v$ (i.e. with no dot).
42	51	Def. 3.2.6	This definition uses notation like σ_m for the value of a section σ at the point m. (e.g. a_m and $A(\sigma^1, \ldots, \sigma^n)_m$) Previously, the notation $\sigma(m)$ was used for this.
n/a	51	Def. 3.2.6	Replace $\mathrm{Hom}(\mathscr{L}_1 \otimes \mathscr{L}_n, \mathscr{F})$ with $\mathrm{Hom}(\bigotimes_{i=1}^n \mathscr{L}_i, \mathscr{F})$
	56	3.3.2	There are actually two kinds of pullback constructions here: Pullback by a smooth map of bases, and pullback by a gauge transformation of a fixed bundle. Only the first is discussed, but the latter type is implicitly used throughout section 3.3.3.
	60	Pf. of 3.3.16	Missing right parenthesis in the displayed equation.

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	62	Def. 3.4.2	One of g_{e+} or g_{e-} should be replaced with its inverse (depending on whether this definition is considered to be pullback or pushforward of a connection by gauge transformation g. Also, this definition violates the convention established in the previous one that $\nabla(e)$ is denoted g_e. Here it is instead called h_e.