Math 548 **Geometric Structures** **Winter 2008**

Corrections to Class Notes
March 17, 2008

(1/22/08) **Page 3, statement of Lemma 1.2, line 3:** Change "*rank p*" to "*rank k*."

(2/11/08) **Page 4, line 4 from bottom:** Change σ_n to σ_k.

(2/11/08) **Page 6, line 2:** Change $E_{f(p)}$ to $E'_{f(p)}$.

(2/11/08) **Page 6, line 7:** should read "if F is." (Change f to F.)

(1/22/08) **Page 6, second full paragraph, line 3:** Change $p \in E$ to $p \in M$.

(2/11/08) **Page 10, Example 1.16, first displayed equation:** Change E to $\mathrm{U}_k(V)$.

(2/11/08) **Page 11, last displayed equation:** There are two parenthesis mistakes. The display should read:

$$\begin{aligned}\widetilde{\Phi}' \circ \widetilde{\Phi}^{-1}(p,x) &= \widetilde{\Phi}'\big(p, \Phi^{-1}(f(p),x)\big)\\ &= \big(p, \pi_2(\Phi' \circ \Phi^{-1}(f(p),x))\big)\\ &= \big(p, \tau(f(p))x\big).\end{aligned}$$

(2/11/08) **Page 12, line 6 from the bottom:** Change Φ to $\widetilde{\Phi}$.

(2/11/08) **Page 13, proof of Proposition 1.21, third line:** Change both occurrences of "linear map" to "vector space isomorphism."

(2/11/08) **Page 16, line 5:** Change "and ρ yields a smooth isomorphism" to "and, when ρ is faithful, it yields a smooth isomorphism."

(2/11/08) **Page 16, Corollary 1.25, line 5:** "trivialized" is misspelled.

(2/18/08) **Page 19, Lemma 1.35:** Change "paracompact" to "paracompact Hausdorff."

(2/18/08) **Page 20, Problem 1-3(a):** For the case of $\operatorname{Im} F$, assume that $M_2 = M_1$ and that F is a bundle map over M_1.

(2/11/08) **Page 20, Problem 1-4(b):** Assume that M is a paracompact Hausdorff space.

(2/11/08) **Page 29, just above the first displayed equation:** Replace $\mathrm{GL}(k,\mathbb{R})$ by G.

(2/18/08) **Page 30, Example 2.20, line 4:** Change $E_x/\mathbb{R}^+$ to $(E_x \smallsetminus \{0\})/\mathbb{R}^+$.

(2/11/08) **Page 30, second line from the bottom:** Replace $\mathrm{SL}(n,\mathbb{R})$ by $\mathrm{GL}(n,\mathbb{R})/\mathbb{R}^+$.

(2/11/08) **Page 31, line 4:** Replace $\mathrm{SL}(n,\mathbb{R})$ by "the quotient group $\mathrm{GL}(n,\mathbb{R})/\mathbb{R}^+$."

(2/16/08) **Page 33, Example 2.30, line 4:** Replace $\mathrm{SL}(n,\mathbb{R})$ by $\mathrm{GL}(n,\mathbb{R})/\mathbb{R}^+$.

(2/16/08) **Page 46, Problem 2-4:** Change $\mathrm{SL}(n, \mathbb{R})$ to $\mathrm{GL}(n, \mathbb{R})/\mathbb{R}^+$ (twice). [See also the corrections to pages 30 and 31 above.]

(3/17/08) **Page 50, line 3 from the bottom:** Change "a n-smooth manifold" to "a smooth n-manifold."

(3/17/08) **Page 63, second paragraph, 9th line:** Change "contractible fibers" to "a contractible total space."

(3/17/08) **Page 64, line 5 from the bottom:** Change $\mathbb{R}_\infty$ to $\mathbb{R}^\infty$ (twice).