

Changes, typos and errata (Book version)

October 12, 2011

Page 25, suppress the sentence after equation (1.44), and replace by:

"An initial condition vector in the same direction as ξ_i , has a response in the direction of ξ_i with a "speed of response" of λ_i ."

Page 40, after (1.69) in line 3, replace " $\gamma_1 = a_1/\alpha$ " by " $\gamma_p = a_p/\alpha$ "

Page 40, in (1.71), change the index in the first sum " $\sum_{k=1}^{\infty}$ " by " $\sum_{k=p}^{\infty}$ ".

Page 107, in 1.27.2, instead of " $\phi_t = M \rightarrow M$ " write " $\phi_t : M \rightarrow M$ ".
instead of "the action of ϕ_{τ_1} and ϕ_{τ_2} " write "the action of φ_{τ_1} and φ_{τ_2} "

Page 109, line four, instead of " $2\pi/a$ " write " $2\pi/b$ ".

Page 164, after "if $|\lambda_i| > 1$ " delete: "then $\mathbf{D}^k \rightarrow \mathbf{0}$ as $k \rightarrow \infty$. Moreover,"

Page 165, Theorem 1.13, in (1.326) replace " $\dot{\mathbf{x}}_u = -\mathbf{x}_u$ " by " $\dot{\mathbf{x}}_u = +\mathbf{x}_u$ ".
Replace "if $\text{Det}\mathbf{A}_i > 0$ ($\text{Det}\mathbf{A}_i > 0$)." by "if $\text{Det}\mathbf{A}_i > 0$ ($\text{Det}\mathbf{A}_i < 0$)."

Page 166, In Theorem 1.15, replace " $N' \subseteq U$ " by " $N' \subseteq \mathbb{R}^n$ ".

Page 167, line 8 replace "to be hyperbolic point of \mathbf{g} " by "to be hyperbolic periodic point of \mathbf{g} ".

Page 171, line 4 replace " $(\overset{\sim}{\mathbf{g}} \cdot \overset{\sim}{\rho})_i(t) = \check{\mathbf{g}}_i \cdot (\check{\rho}_i(t))$ " by " $(\overset{\sim}{\mathbf{g}} \cdot \overset{\sim}{\rho})_i(t) = \check{\mathbf{g}}_i(\check{\rho}_i(t))$ ".

Pages 172,173,174, in eq. (1.340),(1.341),(1.343),(1.344),(1.346),(1.347), the signs of inequalities must be inverted.

Page 509: correct "whose structure are of nonlinear type" as follows:
"whose structures are of nonlinear type."

Page 221, in the paragraph, replace "*local map*" by "*local chart*",
" (Ω, φ) will be a *local map*", replace by " (Ω, φ) will be a *local chart* .."

Page 221 "The map f is C^r is it is C^r at any point .", please replace by "The map f is C^r if it is C^r at any point.

Page 260: please replace " $\lim_{x \rightarrow +\infty} F(x) = 0$ " by " $\lim_{x \rightarrow -\infty} F(x) = 0$ "

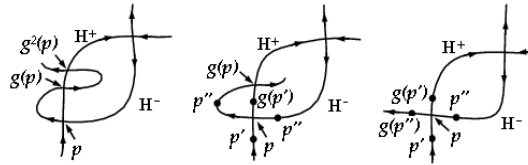
Page 720, please add the sign "-" in the exponent of:

$$c_n = \frac{1}{2\pi} \int_{\alpha}^{\alpha+2\pi} e^{i\omega t} f(t) dt, \text{ replace by: } c_n = \frac{1}{2\pi} \int_{\alpha}^{\alpha+2\pi} e^{-i\omega t} f(t) dt$$

Page 154, in the picture;

(middle-picture): at the bottom, the point p'' must be replaced by p' .

(right-picture): At the bottom, the point p'' must be replaced by p' ; that gives:



Page 654, after the word "real", please insert: " α_0 such that":

Hausdorff-Besicovitch dimension (or fractal dimension): It is for F the real α_0 such that $m_{\alpha}(F) = +\infty$ if $\alpha < \alpha_0$ and $m_{\alpha}(F) = 0$ if $\alpha > \alpha_0$. It is Besicovitch who showed the existence of such a *real number* α_0 ..

Page 697, in the 2nd theorem:

$$\text{replace } \left\| \frac{f(x) - f(a)}{(x-a)^n} \right\| \text{ by } \left\| \frac{f(x) - p(x)}{(x-a)^n} \right\|$$

Page 613, obviously, the entire sentence must be taken as a trivial short-cut: "A. Smith attributed an important responsibility to these leaders ... "

Page 655, after the def. of normed vector space, delete the "s" in "metrics": "The normed spaces are thus metrics,..."

Page 658, in (A.30), please replace \mathbf{x}_{n+1} by \mathbf{x}_m , which becomes then:

$$\|\mathbf{x}_m - \mathbf{x}_n\| \leq c^{n-1} \cdot \frac{\|\mathbf{x}_2 - \mathbf{x}_1\|}{1-c} \quad (\text{A.30})$$

Page 657, in the 3rd line, preferably replace $L^p[a, b]$ by $\mathcal{L}^p[a, b]$, thereby: ", and is denoted $\mathcal{L}^p[a, b]$."

Page 654, at the 8th line "(When F is a regular injective *nappe*.." must be replaced by (When F is a regular injective *patch* ...".

Footnote 11 concerned French book version, and must be deleted here.

Footnote 11 gives the def. of *nappe* and not that of *patch*, to disambiguate, French word "*nappe*" has two different meanings: (1) the same as *nappe* in Eng. (in geometry), (2) and *patch* in Eng. (in differential geometry).

Page 678, (see above) twice the term "patch" must replace "nappe"

Page 668, in 2nd Cauchy-Riemann condition, read " $\frac{\partial u}{\partial x_2}(a_1, a_2) = -\frac{\partial v}{\partial x_1}(a_1, a_2)$ " instead of " $\frac{\partial u}{\partial x_2}(a_1, a_2) = -\frac{\partial v}{\partial x_2}(a_1, a_2)$."

Page 680, read "extended complex plane" instead of "complete plane"
Page 681, idem as above.

Page 669, in the proposition A.4, replace " $|z - a| > r$," by " $|z - a| < r$ ".

Page 672, in the table, replace " $f(z) = e^{1/z^2}$ " by " $f(z) = e^{-1/z^2}$ ".

Page 673, in the Definition A.60 (Meromorphic function), " \mathbb{C} " must be obviously understood as " $\widehat{\mathbb{C}}$ ". That is, $\widehat{\mathbb{C}} = \mathbb{C} \cup \{\infty\}$.

Page 657, in line 3 replace "*and is noted* $\mathcal{L}^p[a, b]$." and add:
 $\mathcal{L}^p[a, b]$ is a vector space. It is also possible to define the function with positive real values: $\|f\|_p := (\int_a^b |f(t)|^p dt)^{\frac{1}{p}}$; this function is not a norm since $\|f\|_p = 0$ for any null function f almost everywhere, and so not necessarily zero everywhere. Let F be the subset of $\mathcal{L}^p[a, b]$ that consists of null functions almost everywhere. F is a *vector subspace*.

Theorem.A.9. The quotient space $L^p[a, b] := \mathcal{L}^p[a, b]/F$ is a Banach space if $p \in \mathbb{R}_+^* \setminus]0, 1[$.