

Page 2 – line 9 : the abbreviation “h” is changed to “hour” : With $\ell \cdot m = \frac{1}{10\,000} \text{J} \cdot \text{mile}^{-2} \cdot \text{hour}^2$, say, this amounts to 0.14 gallon.

Notice that it results in changes in both page 2 and page 3 (but not further).

Page 2 – line 14 : *Galilean* instead of *galilean*.

line 20 : *Galilean* instead of *galilean* (twice).

Page 3 – after the last formula: we use * as *labels* (instead of *exponents*).

Page 3 – line –1 : *Galilean* instead of *galilean*.

Page 4 – line 19 : *Galilean* instead of *galilean*.

line –2 : *Galilean* instead of *galilean*.

Page 6 – line 5 : *position* instead of *positive*.

line –3 : in particular (instead of *particular*).

Page 8 – line 6 : associated *with* (instead of *associated to*).

line 7 : *Now what is the value of A?* instead of *There remains to find the value of A*.

line 13 : *independent* instead of *independant*.

Page 9 – line –2 : *circuit* instead of *cicuit*.

Page 12 – line 4 : energy *sink* instead of *well*.

line 17 : *at the equator* instead of *at the level of the equator*.

Page 13 – first line of footnote: *example* instead of *exemple*.

Page 14 – line 8 : *Cauchy* instead of *Caucy*.

Page 53 – line –6 : I have added : *Joseph FOURIER (1768–1830) invented the notation “ \int_a^b ”*.

Page 53–67 – The *folio* has changed, not the text (it appeared that the Borel biography was still in a smaller font than the others).

Page 69 – line 12 : $\int f \, d\mu$ instead of $\int f d\mu$.

Page 71 – line –6 : An in-line formula has been displayed.

Page 109 – line 6 : articial singularity at $-1/2$ (instead of -1).

Page 111 – line 17 : $F(w) = f(1/w)$ instead of $f(1/z)$.

Page 114–116 – For sake of consistency, the variable a as been changed to z_0 ; the variable b_{-1} has been changed to a_{-1} . Only in Example 4.83 does a remain an “ a ”.

Page 115 – line 4 : An inline formula has been displayed.

line 12 : The formula should read $2\pi i a_{-1} \text{Ind}_\gamma(0)$ and not $2\pi i a_{-1} \text{Ind}_\gamma(z)$.

Page 116 – line 6 : The french word *où* is changed to *where*.

Page 120 – line –2 : The formula has been changed and a comment added :

$$\mathcal{I} = \int_{-\infty}^{\infty} \frac{e^{ikx}}{x^2 + a^2} dx,$$

the imaginary part being zero.

Page 121 – line 5 : The end of the formula has been changed (just a minus sign) to :

$$\lim_{z \rightarrow ia} \frac{e^{ikz}}{z + ia} = \frac{e^{-ka}}{2ia}$$

Page 122 – line 8 : On the figure, ξ and ξ' have been permuted.

line 13 : where f is a *meromorphic* function.

Page 141 – line 5 : Read “ $u : \mathcal{B} \rightarrow \mathbb{R}$ be a harmonic function.”

Page 150 – line 6–7 : A factor $\frac{1}{2}$ has been added to the right-hand side.

Page 155 – First line of text, the fonction has been named $f : (x, y) \mapsto (u, v) = \dots$.

Page 176 – Exercise 6.4: a source or a *sink* (instead of *well*).

Page 183 – last line of text, *independent* instead of *independant*.

Page 200 – line 5 : *Galilean* instead of *galilean*.

line –4 : j' has been changed to j'_x .

Page 231 – The function in the footnote should read

$$f_n(t) = \sum_{k=1}^n \frac{\cos 2kt}{k^2} \quad \text{for any } t \in \mathbb{R}.$$

Page 239 – line 13 : “The convolution inverse of $[\delta' + \alpha\delta]$ in \mathcal{D}'_+ ” (instead of $[\delta + \alpha\delta']$).

Page 264 – The last equality in Prop. 9.36 should read

$$\forall n \in \mathbb{Z}, \quad c_n(f_\tau) = e^{-2\pi i n \tau / a} c_n(f).$$

Page 265 – line 4 : Read $(e_n)_{n \in \mathbb{Z}}$ instead of $(e_n)_{n \in \mathbb{N}}$.

Page 266 – line 4 : the formulas should read:

$$f(t) = \frac{a_0}{2\sqrt{a}} + \frac{1}{\sqrt{a}} \sum_{n=1}^{+\infty} \left[a_n \cos\left(2\pi n \frac{t}{a}\right) + b_n \sin\left(2\pi n \frac{t}{a}\right) \right]$$

and

$$\frac{|a_0|^2}{4} + \frac{1}{2} \sum_{\substack{n=-\infty \\ n \neq 0}}^{+\infty} (|a_n|^2 + |b_n|^2) = \int_0^a |f(t)|^2 dt.$$

Page 274 – line 8 : *well-defined* instead of *welldefined*.

Page 278 – line 18 : *example* instead of *exemple*.

Page 308 – line 12 : The end of the proof should read:

Now, write

$$f(x) = \frac{a_0}{2} + \sum_{n=1}^{\infty} a_n \cos(2\pi nx) = \frac{1}{2} \sum_{n \in \mathbb{Z}} a_n e^{2i\pi nx}$$

and differentiate twice:

$$2 - 2\text{III}(x - \frac{1}{2}) = -2 \sum_{n \in \mathbb{Z}^*} (-1)^n e^{2i\pi nx}$$

$$\text{III}(x - \frac{1}{2}) = 1 + \sum_{n \in \mathbb{Z}^*} (-1)^n e^{2i\pi nx}$$

$$\text{III}(x) = 1 + \sum_{n \in \mathbb{Z}^*} (-1)^n e^{2i\pi nx} e^{i\pi n} = 1 + \sum_{n \in \mathbb{Z}^*} e^{2i\pi nx} = \sum_{n=-\infty}^{+\infty} e^{2i\pi nx}$$

(since III is even), which was to be proved.

Page 380 – line 20 : infinite potential *sink* (instead of *well*).

Page 393 – line –3 : infinite potential *sink* (instead of *well*).

Page 403 – line –4 : infinite potential *sink* (instead of *well*).

line –2 : $H\varphi$ instead of $H\psi$.

Page 405 – line 9 : A “ $\forall n \geq 1$ ” added:

$$\forall n \geq 1 \quad \langle \psi | \overline{H^2} \psi \rangle \stackrel{\text{def}}{=} \sum_{n=1}^{\infty} E_n^2 \langle \psi | \varphi_n \rangle \langle \varphi_n | \psi \rangle = \frac{15 \hbar^4}{8m^2 a^4},$$

Page 410 – In Equations (15.2) and next, π should be squared:

$$(-4\pi^2 v^2 + \omega_0^2) \tilde{G}(v) = 1 \quad (15.2)$$

$$\tilde{G}(v) = \frac{1}{\omega_0^2 - 4\pi^2 v^2}. \quad (\text{naive solution})$$

Page 414 – line –4 : The integration variables should be t' and r' :

$$\mathbf{A}(r, t) = [G * \mathbf{j}](r, t) = \iiint_{\mathbb{R}^3} \int_{-\infty}^{+\infty} G(r - r', t - t') \mathbf{j}(r', t') dt' d^3 r'$$

Page 416 – line 2 : $(2\pi)^3$ has been changed to $(2\pi)^4$.

Page 425 – line 11 : The integration variables should be t' and x' :

$$\mathcal{T}(x, t) = [G * \rho](x, t) = \int_{-\infty}^{\infty} \int_0^{+\infty} G(x', t') \rho(x - x', t - t') dt' dx'. \quad (15.14)$$

line –6 : The integration variable should be x' : the formula has been changed to

$$\mathcal{T}(x, t) = c T_0(x) \delta(t) * G(x, t) = c \int_{-\infty}^{+\infty} G(x - x', t) T_0(x') dx'.$$

Page 426 – line 21 : The integration variable is changed to r' .

Page 455 – line 8 : *Galilean* instead of *galilean*.

Page 470 – line 3 : Read

$$\omega^2 = f_{12} dx^1 \wedge dx^2 + f_{13} dx^1 \wedge dx^3 + \dots + f_{1n} dx^1 \wedge dx^n$$

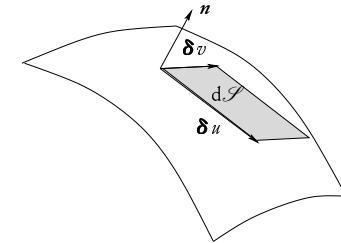
Page 473 – line 7 : After “may be integrated over the whole surface”, read:
Assume the parametrisation to be **regular**, *i.e.* at each point, the the vectors

$$\boldsymbol{\delta} u \stackrel{\text{def}}{=} \frac{\partial \boldsymbol{\sigma}}{\partial u} = \left(\frac{\partial x}{\partial u}, \frac{\partial y}{\partial u}, \frac{\partial z}{\partial u} \right) \quad \text{and} \quad \boldsymbol{\delta} v \stackrel{\text{def}}{=} \frac{\partial \boldsymbol{\sigma}}{\partial v} = \left(\frac{\partial x}{\partial v}, \frac{\partial y}{\partial v}, \frac{\partial z}{\partial v} \right)$$

are linearly independant. Define

$$\begin{aligned} \int_{\mathcal{S}} \omega^2 &\stackrel{\text{def}}{=} \int_{\Omega} [f_x dy \wedge dz (\boldsymbol{\delta} u, \boldsymbol{\delta} v) + f_y dz \wedge dx (\boldsymbol{\delta} u, \boldsymbol{\delta} v) + f_z dx \wedge dy (\boldsymbol{\delta} u, \boldsymbol{\delta} v)] du dv \\ &= \int_{\Omega} f_x [\delta u_y \delta v_z - \delta u_z \delta v_y] du dv + \text{CP} \\ &= \int_{\Omega} \mathbf{f} \cdot [\boldsymbol{\delta} u \wedge \boldsymbol{\delta} v] du dv = \int_{\mathcal{S}} (\mathbf{f} \cdot \mathbf{n}) d\mathcal{S} \end{aligned}$$

where “CP” stands for the terms obtained by circular permutations or the indices. The last equality comes from $\boldsymbol{\delta} u \wedge \boldsymbol{\delta} v = \mathbf{n} d\mathcal{S}$, where \mathbf{n} is the normal vector to the surface and $d\mathcal{S}$ is the surface integration element.



The first integration is about a *differential form* ω , while the last integration is about a *function*.

Page 481 – line 2 : Read “covariant” instead of “contravariant”.

Page 527 – line 15 : Definition 20.15: Read “ $X(\Omega) = \{x_k ; k \in I\} \cup D$ ”. Moreover, the **expectation** is defined “if this series converges *absolutely*.”

Page 548 – Lemma 20.71 is called **Markov inequality**.

Page 550 – line 4 : $2 \cdot 10^{-3}$ instead of $2 \cdot 10^{-3}$, and $4 \cdot 10^{-6}$ instead of $4 \cdot 10^{-6}$.

Page 554 – line 6 : Read “converges to $X(\omega)$.”

Page 558 – line 7 : A factor is lacking; read

$$P \left\{ \frac{S_n - n\mu}{\sigma \sqrt{n}} < x \right\} \xrightarrow{n \rightarrow \infty} \mathcal{N}(x) = \frac{1}{\sqrt{2\pi}} \int_{-\infty}^x e^{-t^2/2} dt.$$

Page 567 – line -2 : Read “ $\exp\left(- (a_1 + \cdots + a_n)|u|\right) = e^{-na|u|}$. The normalized sum S_n/\sqrt{n} a a characteristic function $\psi_n(u) = e^{-\sqrt{n}a|u|}$ and do not converge pointwise to the characteristic function of a normal random variable.”

Page 582 – line 15 : *boundedness* instead of *boundednes*.