ERRATA: FOURIER ANALYSIS

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- **(p.90 - Exercise 10)** The correct formula for $E(t)$ should refer to τ and not T:

$$E(t) = \frac{1}{2}\rho \int_0^L \left(\frac{\partial u}{\partial t}\right)^2 dx + \frac{1}{2}\tau \int_0^L \left(\frac{\partial u}{\partial x}\right)^2 dx.$$

- **(p.125 - Problem 1*)** One must assume (for part (b)) that Γ is also convex. Moreover, in the argument to establish part (b) one must pick a parametrization γ so that for each $t \in [-\pi, \pi]$ the tangent to the curve makes an angle t with the y-axis.

- **(p.136-137)** The last formula on page 136 should read:

$$\frac{\hat{f}(\xi + h) - \hat{f}(\xi)}{h} - (\widehat{-2\pi i x f})(\xi) =$$
$$\int_{-\infty}^{\infty} f(x) e^{-2\pi i x \xi} \left[\frac{e^{-2\pi i x h} - 1}{h} + 2\pi i x\right] dx.$$

Also, the estimate on line 7 from the top of page 137 should start with

$$\left|\frac{\hat{f}(\xi + h) - \hat{f}(\xi)}{h} - (\widehat{-2\pi i x f})(\xi)\right|.$$

- **(p.155)** In the last equation of the page, $\vartheta(s)$ should be replaced by $\vartheta(t)$.

- **(p.158 - Theorem 4.1 and its Proof)** The formula $A^2 = \sqrt{2B/\pi}$ should be replaced by $|A|^2 = \sqrt{2B/\pi}$

- **(p.166 - Exercise 19(b))** The formulas are valid for $0 < t < 1$.

- **(p.217 - Problem 7 Part (d))** The signs on the right hand side of the formulas are incorrect. These two formulas should read

$$(-\triangle)^{1/2} f(x) = -\lim_{y \to 0} \frac{\partial u}{\partial y}(x, y)$$

and

$$(-\triangle)^{k/2} f(x) = (-1)^k \lim_{y \to 0} \frac{\partial^k u}{\partial y^k}(x, y).$$