Errare humanum est, perseverare diabolicum.

September 25, 2018

Below I list some misprints and mistakes which can be found in my book.

- Definition 1.2: $u \in \text{Dom}(\mathfrak{L})$ should be replaced by $u \in H$.
- Theorem 1.15: $\tau_h f f$ should be $\tau_h f$.
- Theorem 1.20, last point, after "in other words": these are not other words: use your own words.
- Proof of Theorem 1.22: after "Now, let us assume that \mathfrak{L} is self-adjoint", one of the arguments is obviously wrong. The estimate on the resolvent follows upon observing that $(\mathfrak{L}-\lambda)^{-1}$ is a bounded and normal operator (thus the norm is given by the spectral radius).
- As a consequence of the previous horrible mistake, the proof of Theorem 1.26 is wrong. Prove it by yourself without looking in a book! Replace also "semi-group" by "group". As a punishment, the author wrote lecture notes for a Master course (available on his webpage).
- Proposition 1.32: there is a small problem with the indices. Easy to correct!
- Proposition 1.32: after the computation of the derivative of the Wronskian, the end of the proof is :

"Assume that u_n does not vanish on (z_0, z_1) . For instance $u_n > 0$ on (z_0, z_1) . Then, we get $W(u_{n-1}, u_n)' > 0$. We have $W(u_{n-1}, u_n)(z_0) \ge 0$ and $W(u_{n-1}, u_n)(z_1) \le 0$, and thus we get a contradiction."

- Exercise 1.40: replace L_{loc}^2 by L_{loc}^∞ .
- In the proof of Theorem 2.33: $\zeta \mapsto A(\zeta)\psi$ is analytic for $\psi \in H$.
- Proposition 4.12: multiply the series by h...
- Theorem 5.4: $(2n-1)h \le h^{\frac{1}{2}}$ should be replaced by $(2n-1)h \le h^{\frac{3}{4}}$.