Errata

for

"Sturm–Liouville Operators and Hilbert Spaces: A Brief Introduction"

Updated May 3, 2001

- **p. 2, line 11 from below.** Should read $\phi_2' = \psi'' = (V - E)\psi = (V - E)\phi_1$.
- **p. 3, line 7 from above.** Remove ", see (1)"
- **p. 11, first equation from above.** Replace d/dt by d/dx.
- **p. 22, equation (4.10).** Replace $=$ by $) =$.
- **p. 58, Exercise 2.** Equation should read

$$(1 - x^2)y'' - xy' + \alpha^2 y = 0.$$

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- **p. 69, after third equality in eq. (9.53)** Should read

$$= \int_{\mathbb{R}} \overline{\Psi(x)} \left(\frac{\hbar}{i} \frac{d}{dx} - \langle p \rangle \right)^2 \Psi(x)\, dx$$

- **p. 69, after fourth equality in eq. (9.53)** The second integral hould read

$$-2\frac{\hbar}{i}\langle p \rangle \int_{\mathbb{R}} \overline{\Psi(x)}\Psi'(x)\, dx$$

- **p. 80, line 7 from top.** Should read $L_k^{(\alpha)}$.
- **Løsningsforslag 22.05.00, oppg. 6 b).** I tredje linje i utregningen av den deriverte av h skal det siste summetegnet være

$$+(\alpha + 1 - x) \sum_{n=2}^{\infty} L_{n-1} w^{n-1},$$

og i linjen under skal den siste summen være

$$-(\alpha + 1) \sum_{n=2}^{\infty} L_{n-2} w^{n-1},$$

og i den siste linjen skal det siste uttrykket være

$$-(\alpha + 1)(h - 1).$$

- **Løsningsforslag 7.08.00, oppg. 3 a).** Andre linje skal være

$$(-1)^n \int_{-\infty}^{\infty} \frac{d^n}{dx^n} \left((\frac{d^n}{dx^n} e^{-x^2}) e^{x^2} \right) e^{-x^2}\, dx$$