

Errata for the Book
*Strongly Elliptic Systems
and Boundary Integral Equations*

Bill McLean

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- 28(-10) Here, it would be better to say “any (bounded) linear operator”.
- 60(5) One usually proves $\omega_p(t, u) \rightarrow 0$ first for $u \in C_{\text{comp}}^0(\Omega)$ and then uses density of $C_{\text{comp}}^0(\Omega)$ in $L_p(\mathbb{R}^n)$ ($1 \leq p < \infty$).
- 64(7) Note that the constant C depends on α but not on ϵ .
- 66(-7,-10) “largest relatively closed set” should be “smallest relatively closed set”.
- 71(-2) Here, continuity of \hat{u} is not needed.
- 72(8) $x^\alpha \partial_j^\beta \phi(x)$ should be $x^\alpha \partial^\beta \phi_j(x)$.
- 73(-10) $\mathcal{F}_{\xi \rightarrow x}$ should be $\mathcal{F}_{x \rightarrow \xi}$.
- 78(2) The second inclusion is true for $s \geq 0$, although $\|u|_\Omega\|_{H_0^s(\Omega)} \leq \|u\|_{\tilde{H}^s(\Omega)}$ holds for all $s \in \mathbb{R}$. If $s < -1/2$ then Lemma 3.39 shows that $u \mapsto u|_\Omega$ is not injective, even for smooth Ω .
- 79(7) $\mathcal{D}(\mathbb{R}^n \setminus \Omega)$ should be $\mathcal{D}(\mathbb{R}^n \setminus \bar{\Omega})$.
- 89(-7) Equation (3.26) should read
- $$\Omega = \{x \in \mathbb{R}^n : x_n < \zeta(x') \text{ and } x' = (x_1, \dots, x_{n-1}) \in \mathbb{R}^{n-1}\}.$$
- 100(6) The definition of γ should read $\gamma u(x') = u(x', 0)$.
- 112(-9) $k \geq 0$ should be $k \geq 1$.

116(-8) The conditions (4.6) are sufficient to ensure $\mathcal{P}^* = \mathcal{P}$, but they are not necessary. It would be better to change the definition (4.1) of \mathcal{P} to

$$\mathcal{P} = - \sum_{j=1}^n \sum_{k=1}^n \partial_j (A_{jk} \partial_k u - A_j u) + \sum_{j=1}^n A_j \partial_j u + Au.$$

Anything of this form can be written in the form (4.1), and vice versa, since we assume all coefficients are smooth. The advantage of the new definition is that

$$\mathcal{P}^* = - \sum_{j=1}^n \sum_{k=1}^n \partial_j (A_{kj}^* \partial_k u + A_j^* u) - \sum_{j=1}^n A_j^* \partial_j u + A^* u,$$

and so $\mathcal{P}^* = \mathcal{P}$ iff

$$A_{kj}^* = A_{jk}, \quad A_j^* = -A_j, \quad A^* = A.$$

Moreover, the conormal derivatives for \mathcal{P} and \mathcal{P}^* now look more symmetric:

$$\mathcal{B}_\nu u = \sum_{j=1}^n \nu_j \left(\sum_{k=1}^n A_{jk} \partial_k u - A_j u \right)$$

and

$$\tilde{\mathcal{B}}_\nu u = \sum_{j=1}^n \nu_j \left(\sum_{k=1}^n A_{kj}^* \partial_k u + A_j^* u \right).$$

Moreover, the conormal derivative for $(\mathcal{P}^*)^*$ becomes the same as that for \mathcal{P} , i.e., \mathcal{B}_ν .