ERRATA TO:

SINGULAR VALUES OF COMPACT PSEUDODIFFERENTIAL OPERATORS

C. HEIL, J. RAMANATHAN, AND P. TOPIWALA

Note: This errata is not included in the published version of this paper.

(1) Let $\phi(x) = 2^{n/4}e^{-\pi x^2}$ be the normalized Gaussian function. The statement in Theorem 3.3 that $\{\rho(\alpha)\phi\}_{\alpha\in\Lambda}$ is a frame for $L^2(\mathbf{R}^n)$ whenever Λ is a rectangular lattice in $\mathbf{R}^n$ with density $d(\Lambda) > 1$ is incorrect.

The tensor product proof of this theorem only shows that this is true if the lattice $\Lambda = a_1\mathbf{Z} \times \cdots \times a_{2n}\mathbf{Z}$ has the property that $a_i \cdot a_{N+i} < 1$ for $i = 1, \ldots, n$. In fact, if $a_i \cdot a_{N+i} > 1$ for any i, then $\{\rho(\alpha)\phi\}_{\alpha\in\Lambda}$ is incomplete in $L^2(\mathbf{R}^n)$, cf. [Hei06].

This misstatement does not effect the main results of the paper. The proofs of most results of the paper only require that there exist a square rectangular lattice Λ such that $\{\rho(\alpha)\phi\}_{\alpha\in\Lambda}$ is a frame for $L^2(\mathbf{R}^n)$. By the above remarks, for a square lattice $\Lambda = a\mathbf{Z}^{2n}$ it is true that $\{\rho(\alpha)\phi\}_{\alpha\in\Lambda}$ is a frame for $L^2(\mathbf{R}^n)$ whenever $d(\Lambda) > 1$.

(2) The statement in the introduction to Section 7 that $L^p(\mathbf{R}^{2n}) = B^0_{pp}(\mathbf{R}^{2n})$ is incorrect. L^p lies in the Triebel–Lizorkin class, not the Besov class, specifically, $L^p(\mathbf{R}^{2n}) = F^0_{p2}(\mathbf{R}^{2n})$ for $1 < p < \infty$. However, for $p = 2$ we do have $L^2(\mathbf{R}^{2n}) = F^0_{22}(\mathbf{R}^{2n}) = B^0_{22}(\mathbf{R}^{2n})$.

References

[Hei06] C. Heil, On the history and evolution of the Density Theorem for Gabor frames, preprint (2006).