ERRATA TO:
BASS AND TOPOLOGICAL STABLE RANKS OF COMPLEX AND REAL ALGEBRAS OF MEASURES, FUNCTIONS AND SEQUENCES

K.M. MIKKOLA AND A.J. SASANE, CAOT, 4:401-448, NO.2, 2010.

(1) Page 405, line -12: "$\mathcal{F}^{-1}A(\mathbb{D})_{\mathbb{R}}$" should be replaced by "$A(\mathbb{D})_{\mathbb{R}}$".
(2) Page 410, Remark 3.3: This should be: "...is also a constructive bsr $\mathcal{A} \leq n$ result ...".
(3) Lemma 3.9: the assumption "with $\mathbb{K}J \subset J$" is redundant and can hence be removed.
(4) Proof of 1. in Lemma 3.9.: add the assumption that "$J \neq \mathcal{A}$".
(5) Page 425, line 4 in the Notes: "in the range" should be "not in the range".

Indeed, for example if f is in $C(\mathbb{T})$, then $m(f(\mathbb{T})) = 0$ and hence (by Lemma A.2) there exists an arbitrarily small complex constant c such that $-c$ is not in $f(\mathbb{T})$. Thus 0 is not in the range of $f + c$, and so $f + c$ is invertible. Consequently, tsr $C(\mathbb{T}) \leq 1$.

The cases of the other three algebras are similar. Indeed, add a small constant to the Z-transforms of an arbitrary element of ℓ^1 or to the Laplace transform of an arbitrary measure to make it invertible etc.

(6) Page 422, line 2 (that is, line 2 below the statement of Theorem 5.16): "$A... = C...$" should be replaced by "$A... = A(\mathbb{D}^n) \cap C...$".

Note that the definition for $C(K)_{\mathbb{R}}$, given on page 422, line 1, and used in Theorem 5.16, is nonstandard. If $K = \overline{K}$ (for example, when K equals $\mathbb{D}^n$ or $\mathbb{T}^n$), then also the standard definition of $C(K)_{\mathbb{R}}$ is meaningful (it is given for $\mathcal{A}_{\mathbb{R}}$ on page 404, the first displaymath formula after formula (2)), and then it defines a subset of this nonstandard set, so then both the above corrected equality and Theorem 5.16 hold for this standard definition of $C(K)_{\mathbb{R}}$ too.

Of course, we should have used here (Theorem 5.16, its proof, and in between) some other symbol, such as $C(K)'_{\mathbb{R}}$, to avoid confusion.

(7) Page 443: the formula for the bsr and tsr of $\mathcal{A}^{n\times n}$ is

$$\lceil (\text{bsr } \mathcal{A} - 1)/n \rceil + 1.$$